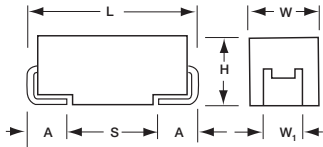
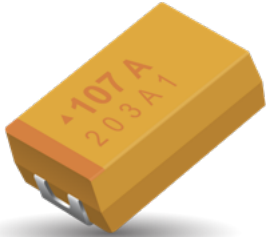


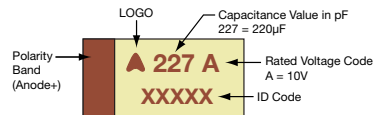
# TBJ SERIES

## COTS-Plus – Space Level



### MARKING

#### A, B, C, D, E, U CASE



The TBJ Space Level series have been refined to incorporate specially selected COTS-Plus products suitable for additional upscreened ratings deemed for mission critical and space level under LEO - Low Earth Orbit specification (SRC8000), or Space Level specification (SRC9000 and T Level).

These capacitors have a more conservative design approach when compared to other up-screened components utilizing established CV powders and higher dielectric formation ratios. The DCL is typically 25% lower while still offering aggressive ESR values.

Currently there are 6 case sizes available with a wide capacitance range available in a given voltage range.

These ratings are optional with Weibull grading (B and C), surge current testing MIL-PRF-55365 (A, B, C), and additional screening for Space applications.

For moisture sensitivity levels please refer to the High Reliability Tantalum MSL section located in the back of the High Reliability Tantalum Catalog.

### CASE DIMENSIONS: millimeters (inches)

| Code | EIA Code | EIA Metric | L±0.20 (0.008) | W±0.20 (0.008)<br>-0.10 (0.004) | H±0.20 (0.008)<br>-0.10 (0.004) | W <sub>1</sub> ±0.20 (0.008) | A±0.30 (0.012)<br>-0.20 (0.008) | S Min.       |
|------|----------|------------|----------------|---------------------------------|---------------------------------|------------------------------|---------------------------------|--------------|
| A    | 1206     | 3216-18    | 3.20 (0.126)   | 1.60 (0.063)                    | 1.60 (0.063)                    | 1.20 (0.047)                 | 0.80 (0.031)                    | 1.10 (0.043) |
| B    | 1210     | 3528-21    | 3.50 (0.138)   | 2.80 (0.110)                    | 1.90 (0.075)                    | 2.20 (0.087)                 | 0.80 (0.031)                    | 1.40 (0.055) |
| C    | 2312     | 6032-28    | 6.00 (0.236)   | 3.20 (0.126)                    | 2.60 (0.102)                    | 2.20 (0.087)                 | 1.30 (0.051)                    | 2.90 (0.114) |
| D    | 2917     | 7343-31    | 7.30 (0.287)   | 4.30 (0.169)                    | 2.90 (0.114)                    | 2.40 (0.094)                 | 1.30 (0.051)                    | 4.40 (0.173) |
| E    | 2917     | 7343-43    | 7.30 (0.287)   | 4.30 (0.169)                    | 4.10 (0.162)                    | 2.40 (0.094)                 | 1.30 (0.051)                    | 4.40 (0.173) |
| U    | 2924     | 7361-43    | 7.30 (0.287)   | 6.10 (0.240)                    | 4.10 (0.162)                    | 3.10 (0.122)                 | 1.30 (0.051)                    | 4.40 (0.173) |

W<sub>1</sub> dimension applies to the termination width for A dimensional area only.

### CAPACITANCE AND RATED VOLTAGE, V<sub>R</sub> (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

| Capacitance |      | Rated Voltage DC (V <sub>R</sub> ) at 85°C |                                              |                                              |                                  |                                  |                                  |
|-------------|------|--------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| µF          | Code | 6V (J)                                     | 10V (A)                                      | 16V (C)                                      | 20V (D)                          | 25V (E)                          | 50V (T)                          |
| 0.10        | 104  |                                            |                                              |                                              |                                  | A (20000)                        |                                  |
| 0.15        | 154  |                                            |                                              |                                              |                                  | A (6000, 16470)                  |                                  |
| 0.22        | 224  |                                            |                                              |                                              |                                  | A (6000, 13710)                  | A (7000, 7500)                   |
| 0.33        | 334  |                                            |                                              |                                              |                                  | A (6000, 11280)                  | A (7000)                         |
| 0.47        | 474  |                                            |                                              |                                              |                                  | A (7000, 9530)                   | B (5000)                         |
| 0.68        | 684  |                                            |                                              |                                              |                                  | A (6000, 7980)                   | B (2000, 4000)                   |
| 1.0         | 105  |                                            |                                              |                                              | A (3000, 6630)                   | A (3000, 6630)                   | B (2000, 3400)<br>C (3000)       |
| 1.5         | 155  |                                            | A (7000)                                     |                                              | A (3000, 5640)                   | A (3000, 5640)                   | C (1500, 2500)                   |
| 2.2         | 225  |                                            | A (7000)                                     | A (3500, 4550)                               | A (3000, 4550)                   | A (1600, 2900)<br>B (1200, 4550) | C (1000, 1700)<br>D (1200, 2000) |
| 3.3         | 335  |                                            |                                              | A (3500, 3750)<br>B (4500)                   | A (2500, 3750)<br>B (1300, 3740) | B (2000, 3740)                   | C (1000, 1400)<br>D (800, 1100)  |
| 4.7         | 475  |                                            | A (2000, 2900)                               | A (2000, 3160)<br>B (1500, 3160)             | A (1800, 2500)<br>B (1000, 3160) | B (1000, 3160)                   | D (600, 900)                     |
| 6.8         | 685  |                                            | A (1800, 4000)<br>B (3000)                   | A (1500, 2000)<br>B (1200, 2650)<br>C (2500) | B (1000, 2650)<br>C (2000)       | B (1000, 1500)<br>C (600, 1070)  | D (700)                          |
| 10          | 106  | A (1500, 2000)<br>B (3000)                 | A (1800, 2200)<br>B (800, 2200)              | B (800, 2200)<br>C (2000)                    | B (1000, 2200)<br>C (500, 800)   | C (600, 800)<br>D (250, 800)     | E (300, 700)                     |
| 15          | 156  | A (1500, 2030)<br>B (700, 2030)            | A (1000, 1800)<br>B (600, 2030)<br>C (2000)  | B (800, 2000)                                | B (500, 1400)<br>C (400, 750)    | C (500, 720)<br>D (300, 720)     | U (500)                          |
| 22          | 226  | A (900, 1700)<br>B (600, 1880)<br>C (2000) | B (700, 1800)                                | B (600, 1100)<br>C (350, 700)<br>D (1100)    | C (400, 650)<br>D (150, 650)     | D (300, 650)                     | U (500)                          |
| 33          | 336  | B (600, 1740)<br>C (1800)                  | B (650, 1000)<br>C (300, 590)<br>D (1100)    | C (300, 590)                                 | C (300, 590)<br>D (250, 590)     | D (400, 590)                     | E (250, 590)                     |
| 47          | 476  | B (500, 1620)<br>C (250, 540)              | C (300, 540)<br>D (400)                      | C (350, 540)<br>D (200, 340)                 | D (200, 540)                     | D (250, 540)<br>E (150, 540)     | U (200, 400)                     |
| 68          | 686  | C (200, 490)                               | C (300, 490)                                 | D (150, 490)                                 | D (200, 490)<br>E (125, 490)     | U (500)                          |                                  |
| 100         | 107  | C (300, 440)                               | C (200, 500)<br>D (150, 440)<br>E (100, 440) | D (150, 450)<br>E (150, 450)                 | E (150, 300)                     | U (500)                          |                                  |
| 150         | 157  | C (300, 500)<br>D (150, 400)               | D (150, 400)<br>E (150, 400)                 | E (150, 300)                                 | U (250, 500)                     |                                  |                                  |
| 220         | 227  | D (150, 360)                               | D (500)<br>E (150, 360)                      | U (200, 500)                                 |                                  |                                  |                                  |
| 330         | 337  | D (400)<br>E (150, 330)                    | E (100, 300)                                 | U (200, 400)                                 |                                  |                                  |                                  |
| 470         | 477  | E (200, 250)                               | U (200, 400)                                 |                                              |                                  |                                  |                                  |
| 680         | 687  | U (250, 500)                               |                                              |                                              |                                  |                                  |                                  |

Available Ratings: (ESR ratings in mOhms in brackets)

Note: Voltage ratings are minimum values. KYOCERA AVX reserves the right to supply higher ratings in the same case size, to the same reliability standards.

# TBJ SERIES

## COTS-Plus – Space Level



### HOW TO ORDER

#### COTS-PLUS OPTION

| TBJ  | D         | 227                                                                                                                                       | *                                             | 035                                                                                                                  | R                                 | B                                                                | S                                                       | Z                                                                                                            | 0                                          | A                                                                                                                                               | ++                                                                                                                                          |
|------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Type | Case Size | Capacitance Code<br>pF code:<br>1st two digits represent significant figures. 3rd digit represents multiplier (number of zeros to follow) | Capacitance Tolerance<br>K = ±10%<br>M = ±20% | Voltage Code<br>006 = 6Vdc<br>010 = 10Vdc<br>016 = 16Vdc<br>020 = 20Vdc<br>025 = 25Vdc<br>035 = 35Vdc<br>050 = 50Vdc | ESR<br>R = Std ESR<br>J = Low ESR | Packaging<br>B = Bulk<br>R = 7" T&R<br>S = 13" T&R<br>W = Waffle | Inspection Level<br>S = Std. Conformance<br>L = Group A | Reliability Grade<br>Weibull:<br>B = 0.1%/1000 hrs. 90% conf.<br>C = 0.01%/1000 hrs. 90% conf.<br>Z = Non-ER | Qualification Level<br>0 = N/A (COTS-Plus) | Termination Finish<br>H = Solder Plated<br>0 = Fused Solder Plated<br>8 = Hot Solder Dipped<br>9 = Gold Plated<br>7 = Matte Sn (COTS-Plus only) | Surge Test Option<br>00 = None<br>23 = 10 Cycles, +25°C<br>24 = 10 Cycles, -55°C & +85°C<br>45 = 10 Cycles, -55°C & +85°C<br>Before Weibull |

\*Waffle packaging not available for the TBJ U case

\*The product in this series is non-QPL. See Test Options chart for screening available.

\*For Gold Plated Termination Finish, contact the factory for availability.



#### SRC8000 LOW EARTH ORBIT (LEO) OPTION

| TBJ  | D         | 227                                                                                                                                       | *                                             | 035                                                                                                                  | R                                 | B                                                                | S                               | B                                                                                              | 0                                  | A                                                                                                              | ++                                                                                                                             |
|------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Type | Case Size | Capacitance Code<br>pF code:<br>1st two digits represent significant figures. 3rd digit represents multiplier (number of zeros to follow) | Capacitance Tolerance<br>K = ±10%<br>M = ±20% | Voltage Code<br>006 = 6Vdc<br>010 = 10Vdc<br>016 = 16Vdc<br>020 = 20Vdc<br>025 = 25Vdc<br>035 = 35Vdc<br>050 = 50Vdc | ESR<br>R = Std ESR<br>J = Low ESR | Packaging<br>B = Bulk<br>R = 7" T&R<br>S = 13" T&R<br>W = Waffle | Inspection Level<br>L = Group A | Reliability Grade<br>Weibull:<br>B = 0.1%/1000 hrs. 90% conf.<br>C = 0.01%/1000 hrs. 90% conf. | Qualification Level<br>8 = SRC8000 | Termination Finish<br>H = Solder Plated<br>0 = Fused Solder Plated<br>8 = Hot Solder Dipped<br>9 = Gold Plated | Surge Test Option<br>23 = 10 Cycles, +25°C<br>24 = 10 Cycles, -55°C & +85°C<br>45 = 10 Cycles, -55°C & +85°C<br>Before Weibull |

\*Waffle packaging not available for the TBJ U case

\*The product in this series is non-QPL. See Test Options chart for screening available.

\*For Gold Plated Termination Finish, contact the factory for availability.



#### SPACE LEVEL OPTIONS (SRC9000 and T-LEVEL)

| TBJ  | D         | 227                                                                                                                                       | *                                             | 035          | R                                 | B                                                                                                                    | L                               | C                                                  | #                                                 | A                                                                                                              | ++                                                                                                                         |
|------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------|---------------------------------|----------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Type | Case Size | Capacitance Code<br>pF code:<br>1st two digits represent significant figures. 3rd digit represents multiplier (number of zeros to follow) | Capacitance Tolerance<br>K = ±10%<br>M = ±20% | Voltage Code | ESR<br>R = Std ESR<br>J = Low ESR | Packaging<br>B = Bulk<br>R = 7" T&R<br>S = 13" T&R<br>W = Waffle<br><br>See page 8 for additional packaging options. | Inspection Level<br>L = Group A | Reliability Grade<br>C = 0.01%/1000 hrs. 90% conf. | Qualification Level<br>9 = SRC9000<br>T = T Level | Termination Finish<br>H = Solder Plated<br>0 = Fused Solder Plated<br>8 = Hot Solder Dipped<br>9 = Gold Plated | Surge Test Option<br>45 = 10 Cycles, -55°C & +85°C<br>GC = Group C Testing and Data<br>OR = TOR compliant testing and data |

\*Waffle packaging not available for the TBJ U case

\*The product in this series is non-QPL. See Test Options chart for screening available.

\*For Gold Plated Termination Finish, contact the factory for availability.



### TECHNICAL SPECIFICATIONS

|                                    |          |                                                             |    |    |    |    |    |    |  |
|------------------------------------|----------|-------------------------------------------------------------|----|----|----|----|----|----|--|
| Technical Data:                    |          | All technical data relate to an ambient temperature of 25°C |    |    |    |    |    |    |  |
| Capacitance Range:                 |          | 0.10 µF to 680 µF                                           |    |    |    |    |    |    |  |
| Capacitance Tolerance:             |          | ±10%; ±20%                                                  |    |    |    |    |    |    |  |
| Leakage Current DCL:               |          | 0.0075CV                                                    |    |    |    |    |    |    |  |
| Rated Voltage (V <sub>R</sub> )    | ≤ 85°C:  | 6                                                           | 10 | 16 | 20 | 25 | 35 | 50 |  |
| Category Voltage (V <sub>C</sub> ) | ≤ 125°C: | 4                                                           | 7  | 10 | 13 | 17 | 23 | 33 |  |
| Surge Voltage (V <sub>S</sub> )    | ≤ 85°C:  | 8                                                           | 13 | 20 | 26 | 32 | 46 | 65 |  |
| Surge Voltage (V <sub>S</sub> )    | ≤ 125°C: | 5                                                           | 8  | 13 | 16 | 20 | 28 | 40 |  |
| Temperature Range:                 |          | -55°C to +125°C                                             |    |    |    |    |    |    |  |



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at [www.kyocera-avx.com/disclaimer/](http://www.kyocera-avx.com/disclaimer/) by reference and should be reviewed in full before placing any order.

TDS-HIRELTANT-0022 | Rev 3

– HIGH RELIABILITY TANTALUM CAPACITORS –

# TBJ SERIES

## COTS-Plus – Space Level



| RATING & PART NUMBER REFERENCE |                             |      | Parametric Specifications by Rating |                     |                    |         |       |        |        |                 |       | Typical RMS Ripple Data by Rating |                |                |                 |                |                |                 |
|--------------------------------|-----------------------------|------|-------------------------------------|---------------------|--------------------|---------|-------|--------|--------|-----------------|-------|-----------------------------------|----------------|----------------|-----------------|----------------|----------------|-----------------|
|                                |                             |      | Cap<br>@ 120Hz                      | DC Rated<br>Voltage | ESR<br>@<br>100kHz | DCL max |       |        | DF Max |                 |       | Power<br>Dissipation              | 25°C<br>Ripple | 85°C<br>Ripple | 125°C<br>Ripple | 25°C<br>Ripple | 85°C<br>Ripple | 125°C<br>Ripple |
|                                |                             |      |                                     |                     |                    | +25°C   | +85°C | +125°C | +25°C  | +(85/125)<br>°C | -55°C |                                   |                |                |                 |                |                |                 |
| P/N                            | Space Level P/N             | Case | µF<br>@ 25°C                        | V<br>@ +85°C        | mOhms<br>@ +25°C   | (µA)    | (µA)  | (µA)   | (%)    | (%)             | (%)   | W                                 | mA<br>(100kHz) | mA<br>(100kHz) | mA<br>(100kHz)  | mV<br>(100kHz) | mV<br>(100kHz) | mV<br>(100kHz)  |
| TBJA106 *006 R □ # @ 0 ^ ++    | TBJA106 *006 R □ L C # ^ ++ | A    | 10                                  | 6                   | 2200               | 0.45    | 4.5   | 9      | 6      | 9               | 10    | 0.075                             | 185            | 166            | 74              | 406            | 366            | 162             |
| TBJA106 *006 J □ # @ 0 ^ ++    | TBJA106 *006 J □ L C # ^ ++ | A    | 10                                  | 6                   | 1500               | 0.45    | 4.5   | 9      | 6      | 9               | 10    | 0.075                             | 224            | 201            | 89              | 335            | 302            | 134             |
| TBJB106 *006 R □ # @ 0 ^ ++    | TBJB106 *006 R □ L C # ^ ++ | B    | 10                                  | 6                   | 3000               | 0.45    | 4.5   | 9      | 6      | 9               | 10    | 0.085                             | 168            | 151            | 67              | 505            | 454            | 202             |
| TBJA156 *006 R □ # @ 0 ^ ++    | TBJA156 *006 R □ L C # ^ ++ | A    | 15                                  | 6                   | 2030               | 0.68    | 6.8   | 13.6   | 6      | 9               | 10    | 0.075                             | 192            | 173            | 77              | 390            | 351            | 156             |
| TBJA156 *006 J □ # @ 0 ^ ++    | TBJA156 *006 J □ L C # ^ ++ | A    | 15                                  | 6                   | 1500               | 0.68    | 6.8   | 13.6   | 6      | 9               | 10    | 0.075                             | 224            | 201            | 89              | 335            | 302            | 134             |
| TBJB156 *006 R □ # @ 0 ^ ++    | TBJB156 *006 R □ L C # ^ ++ | B    | 15                                  | 6                   | 2030               | 0.68    | 6.8   | 13.6   | 6      | 9               | 10    | 0.085                             | 205            | 184            | 82              | 415            | 374            | 166             |
| TBJB156 *006 J □ # @ 0 ^ ++    | TBJB156 *006 J □ L C # ^ ++ | B    | 15                                  | 6                   | 700                | 0.68    | 6.8   | 13.6   | 6      | 9               | 10    | 0.085                             | 348            | 314            | 139             | 244            | 220            | 98              |
| TBJA226 *006 R □ # @ 0 ^ ++    | TBJA226 *006 R □ L C # ^ ++ | A    | 22                                  | 6                   | 1700               | 0.99    | 9.9   | 19.8   | 6      | 9               | 10    | 0.075                             | 210            | 189            | 84              | 357            | 321            | 143             |
| TBJA226 *006 J □ # @ 0 ^ ++    | TBJA226 *006 J □ L C # ^ ++ | A    | 22                                  | 6                   | 900                | 0.99    | 9.9   | 19.8   | 6      | 9               | 10    | 0.075                             | 289            | 260            | 115             | 260            | 234            | 104             |
| TBJB226 *006 R □ # @ 0 ^ ++    | TBJB226 *006 R □ L C # ^ ++ | B    | 22                                  | 6                   | 1880               | 0.99    | 9.9   | 19.8   | 6      | 9               | 10    | 0.085                             | 213            | 191            | 85              | 400            | 360            | 160             |
| TBJB226 *006 J □ # @ 0 ^ ++    | TBJB226 *006 J □ L C # ^ ++ | B    | 22                                  | 6                   | 600                | 0.99    | 9.9   | 19.8   | 6      | 9               | 10    | 0.085                             | 376            | 339            | 151             | 226            | 203            | 90              |
| TBJC226 *006 R □ # @ 0 ^ ++    | TBJC226 *006 R □ L C # ^ ++ | C    | 22                                  | 6                   | 2000               | 0.99    | 9.9   | 19.8   | 6      | 9               | 10    | 0.110                             | 235            | 211            | 94              | 469            | 422            | 188             |
| TBJB336 *006 R □ # @ 0 ^ ++    | TBJB336 *006 R □ L C # ^ ++ | B    | 33                                  | 6                   | 1740               | 1.5     | 15    | 30     | 6      | 9               | 10    | 0.085                             | 221            | 199            | 88              | 385            | 346            | 154             |
| TBJB336 *006 J □ # @ 0 ^ ++    | TBJB336 *006 J □ L C # ^ ++ | B    | 33                                  | 6                   | 600                | 1.5     | 15    | 30     | 6      | 9               | 10    | 0.085                             | 376            | 339            | 151             | 226            | 203            | 90              |
| TBJC336 *006 R □ # @ 0 ^ ++    | TBJC336 *006 R □ L C # ^ ++ | C    | 33                                  | 6                   | 1800               | 1.5     | 15    | 30     | 6      | 9               | 10    | 0.110                             | 247            | 222            | 99              | 445            | 400            | 178             |
| TBJB476 *006 R □ # @ 0 ^ ++    | TBJB476 *006 R □ L C # ^ ++ | B    | 47                                  | 6                   | 1620               | 2.1     | 21    | 42     | 6      | 9               | 10    | 0.085                             | 229            | 206            | 92              | 371            | 334            | 148             |
| TBJB476 *006 J □ # @ 0 ^ ++    | TBJB476 *006 J □ L C # ^ ++ | B    | 47                                  | 6                   | 500                | 2.1     | 21    | 42     | 6      | 9               | 10    | 0.085                             | 412            | 371            | 165             | 206            | 186            | 82              |
| TBJC476 *006 R □ # @ 0 ^ ++    | TBJC476 *006 R □ L C # ^ ++ | C    | 47                                  | 6                   | 540                | 2.1     | 21    | 42     | 6      | 9               | 10    | 0.110                             | 451            | 406            | 181             | 244            | 219            | 97              |
| TBJC476 *006 J □ # @ 0 ^ ++    | TBJC476 *006 J □ L C # ^ ++ | C    | 47                                  | 6                   | 250                | 2.1     | 21    | 42     | 6      | 9               | 10    | 0.110                             | 663            | 597            | 265             | 166            | 149            | 66              |
| TBJC686 *006 R □ # @ 0 ^ ++    | TBJC686 *006 R □ L C # ^ ++ | C    | 68                                  | 6                   | 490                | 3.1     | 31    | 62     | 6      | 9               | 10    | 0.110                             | 474            | 426            | 190             | 232            | 209            | 93              |
| TBJC686 *006 J □ # @ 0 ^ ++    | TBJC686 *006 J □ L C # ^ ++ | C    | 68                                  | 6                   | 200                | 3.1     | 31    | 62     | 6      | 9               | 10    | 0.110                             | 742            | 667            | 297             | 148            | 133            | 59              |
| TBJC107 *006 R □ # @ 0 ^ ++    | TBJC107 *006 R □ L C # ^ ++ | C    | 100                                 | 6                   | 440                | 4.5     | 45    | 90     | 6      | 9               | 10    | 0.110                             | 500            | 450            | 200             | 220            | 198            | 88              |
| TBJC107 *006 J □ # @ 0 ^ ++    | TBJC107 *006 J □ L C # ^ ++ | C    | 100                                 | 6                   | 300                | 4.5     | 45    | 90     | 6      | 9               | 10    | 0.110                             | 606            | 545            | 242             | 182            | 163            | 73              |
| TBJC157 *006 R □ # @ 0 ^ ++    | TBJC157 *006 R □ L C # ^ ++ | C    | 150                                 | 6                   | 500                | 6.8     | 68    | 136    | 8      | 10              | 12    | 0.110                             | 469            | 422            | 188             | 235            | 211            | 94              |
| TBJC157 *006 J □ # @ 0 ^ ++    | TBJC157 *006 J □ L C # ^ ++ | C    | 150                                 | 6                   | 300                | 6.8     | 68    | 136    | 8      | 10              | 12    | 0.110                             | 606            | 545            | 242             | 182            | 163            | 73              |
| TBJD157 *006 R □ # @ 0 ^ ++    | TBJD157 *006 R □ L C # ^ ++ | D    | 150                                 | 6                   | 400                | 6.8     | 68    | 136    | 6      | 9               | 10    | 0.150                             | 612            | 551            | 245             | 245            | 220            | 98              |
| TBJD157 *006 J □ # @ 0 ^ ++    | TBJD157 *006 J □ L C # ^ ++ | D    | 150                                 | 6                   | 150                | 6.8     | 68    | 136    | 6      | 9               | 10    | 0.150                             | 1000           | 900            | 400             | 150            | 135            | 60              |
| TBJD227 *006 R □ # @ 0 ^ ++    | TBJD227 *006 R □ L C # ^ ++ | D    | 220                                 | 6                   | 360                | 9.9     | 99    | 198    | 8      | 10              | 12    | 0.150                             | 645            | 581            | 258             | 232            | 209            | 93              |
| TBJD227 *006 J □ # @ 0 ^ ++    | TBJD227 *006 J □ L C # ^ ++ | D    | 220                                 | 6                   | 150                | 9.9     | 99    | 198    | 8      | 10              | 12    | 0.150                             | 1000           | 900            | 400             | 150            | 135            | 60              |
| TBJD337 *006 R □ # @ 0 ^ ++    | TBJD337 *006 R □ L C # ^ ++ | D    | 330                                 | 6                   | 400                | 14      | 140   | 280    | 8      | 10              | 12    | 0.150                             | 612            | 551            | 245             | 245            | 220            | 98              |
| TBJE337 *006 R □ # @ 0 ^ ++    | TBJE337 *006 R □ L C # ^ ++ | E    | 330                                 | 6                   | 330                | 14      | 140   | 280    | 8      | 10              | 12    | 0.165                             | 707            | 636            | 283             | 233            | 210            | 93              |
| TBJE337 *006 J □ # @ 0 ^ ++    | TBJE337 *006 J □ L C # ^ ++ | E    | 330                                 | 6                   | 150                | 14      | 140   | 280    | 8      | 10              | 12    | 0.165                             | 1049           | 944            | 420             | 157            | 142            | 63              |
| TBJE477 *006 R □ # @ 0 ^ ++    | TBJE477 *006 R □ L C # ^ ++ | E    | 470                                 | 6                   | 250                | 21      | 210   | 420    | 8      | 10              | 12    | 0.165                             | 812            | 731            | 325             | 203            | 183            | 81              |
| TBJE477 *006 J □ # @ 0 ^ ++    | TBJE477 *006 J □ L C # ^ ++ | E    | 470                                 | 6                   | 200                | 21      | 210   | 420    | 8      | 10              | 12    | 0.165                             | 908            | 817            | 363             | 182            | 163            | 73              |
| TBJU687 *006 R □ # @ 0 ^ ++    | TBJU687 *006 R □ L C # ^ ++ | U    | 680                                 | 6                   | 500                | 30      | 300   | 600    | 30     | 45              | 45    | 0.165                             | 574            | 517            | 230             | 287            | 259            | 115             |
| TBJU687 *006 J □ # @ 0 ^ ++    | TBJU687 *006 J □ L C # ^ ++ | U    | 680                                 | 6                   | 250                | 30      | 300   | 600    | 30     | 45              | 45    | 0.165                             | 812            | 731            | 325             | 203            | 183            | 81              |
| TBJA155 *010 R □ # @ 0 ^ ++    | TBJA155 *010 R □ L C # ^ ++ | A    | 1.5                                 | 10                  | 7000               | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 104            | 93             | 41              | 725            | 652            | 290             |
| TBJA225 *010 R □ # @ 0 ^ ++    | TBJA225 *010 R □ L C # ^ ++ | A    | 2.2                                 | 10                  | 7000               | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 104            | 93             | 41              | 725            | 652            | 290             |
| TBJA475 *010 R □ # @ 0 ^ ++    | TBJA475 *010 R □ L C # ^ ++ | A    | 4.7                                 | 10                  | 2900               | 0.35    | 3.5   | 7      | 6      | 9               | 10    | 0.075                             | 161            | 145            | 64              | 466            | 420            | 187             |
| TBJA475 *010 J □ # @ 0 ^ ++    | TBJA475 *010 J □ L C # ^ ++ | A    | 4.7                                 | 10                  | 2000               | 0.35    | 3.5   | 7      | 6      | 9               | 10    | 0.075                             | 194            | 174            | 77              | 387            | 349            | 155             |
| TBJA685 *010 R □ # @ 0 ^ ++    | TBJA685 *010 R □ L C # ^ ++ | A    | 6.8                                 | 10                  | 2650               | 0.51    | 5.1   | 10.2   | 6      | 9               | 10    | 0.075                             | 168            | 151            | 67              | 446            | 401            | 178             |
| TBJA685 *010 J □ # @ 0 ^ ++    | TBJA685 *010 J □ L C # ^ ++ | A    | 6.8                                 | 10                  | 1800               | 0.51    | 5.1   | 10.2   | 6      | 9               | 10    | 0.075                             | 204            | 184            | 82              | 367            | 331            | 147             |
| TBJB685 *010 R □ # @ 0 ^ ++    | TBJB685 *010 R □ L C # ^ ++ | B    | 6.8                                 | 10                  | 3000               | 0.51    | 5.1   | 10.2   | 6      | 9               | 10    | 0.085                             | 168            | 151            | 67              | 505            | 454            | 202             |
| TBJA106 *010 R □ # @ 0 ^ ++    | TBJA106 *010 R □ L C # ^ ++ | A    | 10                                  | 10                  | 2200               | 0.75    | 7.5   | 15     | 6      | 9               | 10    | 0.075                             | 185            | 166            | 74              | 406            | 366            | 162             |
| TBJA106 *010 J □ # @ 0 ^ ++    | TBJA106 *010 J □ L C # ^ ++ | A    | 10                                  | 10                  | 1800               | 0.75    | 7.5   | 15     | 6      | 9               | 10    | 0.075                             | 204            | 184            | 82              | 367            | 331            | 147             |
| TBJB106 *010 R □ # @ 0 ^ ++    | TBJB106 *010 R □ L C # ^ ++ | B    | 10                                  | 10                  | 2200               | 0.75    | 7.5   | 15     | 6      | 9               | 10    | 0.085                             | 197            | 177            | 79              | 432            | 389            | 173             |
| TBJB106 *010 J □ # @ 0 ^ ++    | TBJB106 *010 J □ L C # ^ ++ | B    | 10                                  | 10                  | 800                | 0.75    | 7.5   | 15     | 6      | 9               | 10    | 0.085                             | 326            | 293            | 130             | 261            | 235            | 104             |
| TBJA156 *010 R □ # @ 0 ^ ++    | TBJA156 *010 R □ L C # ^ ++ | A    | 15                                  | 10                  | 1800               | 1.1     | 11    | 22     | 6      | 9               | 10    | 0.075                             | 204            | 184            | 82              | 367            | 331            | 147             |
| TBJA156 *010 J □ # @ 0 ^ ++    | TBJA156 *010 J □ L C # ^ ++ | A    | 15                                  | 10                  | 1000               | 1.1     | 11    | 22     | 6      | 9               | 10    | 0.075                             | 274            | 246            | 110             | 274            | 246            | 110             |
| TBJB156 *010 R □ # @ 0 ^ ++    | TBJB156 *010 R □ L C # ^ ++ | B    | 15                                  | 10                  | 2030               | 1.1     | 11    | 22     | 6      | 9               | 10    | 0.085                             | 205            | 184            | 82              | 415            | 374            | 166             |
| TBJB156 *010 J □ # @ 0 ^ ++    | TBJB156 *010 J □ L C # ^ ++ | B    | 15                                  | 10                  | 600                | 1.1     | 11    | 22     | 6      | 9               | 10    | 0.085                             | 376            | 339            | 151             | 226            | 203            | 90              |
| TBJC156 *010 R □ # @ 0 ^ ++    | TBJC156 *010 R □ L C # ^ ++ | C    | 15                                  | 10                  | 2000               | 1.1     | 11    | 22     | 6      | 9               | 10    | 0.110                             | 235            | 211            | 94              | 469            | 422            | 188             |
| TBJB226 *010 R □ # @ 0 ^ ++    | TBJB226 *010 R □ L C # ^ ++ | B    | 22                                  | 10                  | 1880               | 1.7     | 17    | 34     | 6      | 9               | 10    | 0.085                             | 213            | 191            | 85              | 400            | 360            | 160             |
| TBJB226 *010 J □ # @ 0 ^ ++    | TBJB226 *010 J □ L C # ^ ++ | B    | 22                                  | 10                  | 700                | 1.7     | 17    | 34     | 6      | 9               | 10    | 0.085                             | 348            | 314            | 139             | 244            | 220            | 98              |
| TBJB336 *010 R □ # @ 0 ^ ++    | TBJB336 *010 R □ L C # ^ ++ | B    | 33                                  | 10                  | 1000               | 2.5     | 25    | 50     | 6      | 9               | 10    | 0.085                             | 292            | 262            | 117             | 292            | 262            | 117             |
| TBJB336 *010 J □ # @ 0 ^ ++    | TBJB336 *010 J □ L C # ^ ++ | B    | 33                                  | 10                  | 650                | 2.5     | 25    | 50     | 6      | 9               | 10    | 0.085                             | 362            | 325            | 145             | 235            | 212            | 94              |
| TBJC336 *010 R □ # @ 0 ^ ++    | TBJC336 *010 R □ L C # ^ ++ | C    | 33                                  | 10                  | 590                | 2.5     | 25    | 50     | 6      | 9               | 10    | 0.110                             | 432            | 389            | 173             | 255            | 229            | 102             |
| TBJC336 *010 J □ # @ 0 ^ ++    | TBJC336 *010 J □ L C # ^ ++ | C    | 33                                  | 10                  | 300                | 2.5     | 25    | 50     | 6      | 9               | 10    | 0.110                             | 606            | 545            | 242             | 182            | 163            | 73              |

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

**NOTE: KYOCERA AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.**

# TBJ SERIES

## COTS-Plus – Space Level



| RATING & PART NUMBER REFERENCE |                          |      | Parametric Specifications by Rating |                                  |                                  |         |       |        |        |                 |       | Typical RMS Ripple Data by Rating |                               |                               |                                |                               |                               |                                |
|--------------------------------|--------------------------|------|-------------------------------------|----------------------------------|----------------------------------|---------|-------|--------|--------|-----------------|-------|-----------------------------------|-------------------------------|-------------------------------|--------------------------------|-------------------------------|-------------------------------|--------------------------------|
|                                |                          |      | Cap<br>@ 120Hz<br>µF @ 25°C         | DC Rated<br>Voltage<br>V @ +85°C | ESR<br>@ 100kHz<br>mOhms @ +25°C | DCL max |       |        | DF Max |                 |       | Power<br>Dissipation<br>W         | 25°C<br>Ripple<br>mA (100kHz) | 85°C<br>Ripple<br>mA (100kHz) | 125°C<br>Ripple<br>mA (100kHz) | 25°C<br>Ripple<br>mV (100kHz) | 85°C<br>Ripple<br>mV (100kHz) | 125°C<br>Ripple<br>mV (100kHz) |
|                                |                          |      |                                     |                                  |                                  | +25°C   | +85°C | +125°C | +25°C  | +(85/125)<br>°C | -55°C |                                   |                               |                               |                                |                               |                               |                                |
| P/N                            | Space Level P/N          | Case |                                     |                                  |                                  | (µA)    | (µA)  | (µA)   | (%)    | (%)             | (%)   |                                   |                               |                               |                                |                               |                               |                                |
| TBJD336*010 R □ # @ 0^++       | TBJD336*010 R □ L C #^++ | D    | 33                                  | 10                               | 1100                             | 2.5     | 25    | 50     | 6      | 9               | 10    | 0.150                             | 369                           | 332                           | 148                            | 406                           | 366                           | 162                            |
| TBJC476*010 R □ # @ 0^++       | TBJC476*010 R □ L C #^++ | C    | 47                                  | 10                               | 540                              | 3.5     | 35    | 70     | 6      | 9               | 10    | 0.110                             | 451                           | 406                           | 181                            | 244                           | 219                           | 97                             |
| TBJC476*010 J □ # @ 0^++       | TBJC476*010 J □ L C #^++ | C    | 47                                  | 10                               | 300                              | 3.5     | 35    | 70     | 6      | 9               | 10    | 0.110                             | 606                           | 545                           | 242                            | 182                           | 163                           | 73                             |
| TBJD476*010 R □ # @ 0^++       | TBJD476*010 R □ L C #^++ | D    | 47                                  | 10                               | 400                              | 3.5     | 35    | 70     | 6      | 9               | 10    | 0.150                             | 612                           | 551                           | 245                            | 245                           | 220                           | 98                             |
| TBJC686*010 R □ # @ 0^++       | TBJC686*010 R □ L C #^++ | C    | 68                                  | 10                               | 490                              | 5.1     | 51    | 102    | 6      | 9               | 10    | 0.110                             | 474                           | 426                           | 190                            | 232                           | 209                           | 93                             |
| TBJC686*010 J □ # @ 0^++       | TBJC686*010 J □ L C #^++ | C    | 68                                  | 10                               | 300                              | 5.1     | 51    | 102    | 6      | 9               | 10    | 0.110                             | 606                           | 545                           | 242                            | 182                           | 163                           | 73                             |
| TBJC107*010 R □ # @ 0^++       | TBJC107*010 R □ L C #^++ | C    | 100                                 | 10                               | 500                              | 7.5     | 75    | 150    | 8      | 10              | 12    | 0.110                             | 469                           | 422                           | 188                            | 235                           | 211                           | 94                             |
| TBJC107*010 J □ # @ 0^++       | TBJC107*010 J □ L C #^++ | C    | 100                                 | 10                               | 200                              | 7.5     | 75    | 150    | 8      | 10              | 12    | 0.110                             | 742                           | 667                           | 297                            | 148                           | 133                           | 59                             |
| TBJD107*010 R □ # @ 0^++       | TBJD107*010 R □ L C #^++ | D    | 100                                 | 10                               | 440                              | 7.5     | 75    | 150    | 6      | 9               | 10    | 0.150                             | 584                           | 525                           | 234                            | 257                           | 231                           | 103                            |
| TBJD107*010 J □ # @ 0^++       | TBJD107*010 J □ L C #^++ | D    | 100                                 | 10                               | 150                              | 7.5     | 75    | 150    | 6      | 9               | 10    | 0.150                             | 1000                          | 900                           | 400                            | 150                           | 135                           | 60                             |
| TBJE107*010 R □ # @ 0^++       | TBJE107*010 R □ L C #^++ | E    | 100                                 | 10                               | 440                              | 7.5     | 75    | 150    | 6      | 9               | 10    | 0.165                             | 612                           | 551                           | 245                            | 269                           | 242                           | 108                            |
| TBJE107*010 J □ # @ 0^++       | TBJE107*010 J □ L C #^++ | E    | 100                                 | 10                               | 100                              | 7.5     | 75    | 150    | 6      | 9               | 10    | 0.165                             | 1285                          | 1156                          | 514                            | 128                           | 116                           | 51                             |
| TBJD157*010 R □ # @ 0^++       | TBJD157*010 R □ L C #^++ | D    | 150                                 | 10                               | 400                              | 11      | 110   | 220    | 8      | 10              | 12    | 0.150                             | 612                           | 551                           | 245                            | 245                           | 220                           | 98                             |
| TBJD157*010 J □ # @ 0^++       | TBJD157*010 J □ L C #^++ | D    | 150                                 | 10                               | 150                              | 11      | 110   | 220    | 8      | 10              | 12    | 0.150                             | 1000                          | 900                           | 400                            | 150                           | 135                           | 60                             |
| TBJE157*010 R □ # @ 0^++       | TBJE157*010 R □ L C #^++ | E    | 150                                 | 10                               | 400                              | 11      | 110   | 220    | 8      | 10              | 12    | 0.165                             | 642                           | 578                           | 257                            | 257                           | 231                           | 103                            |
| TBJE157*010 J □ # @ 0^++       | TBJE157*010 J □ L C #^++ | E    | 150                                 | 10                               | 150                              | 11      | 110   | 220    | 8      | 10              | 12    | 0.165                             | 1049                          | 944                           | 420                            | 157                           | 142                           | 63                             |
| TBJD227*010 R □ # @ 0^++       | TBJD227*010 R □ L C #^++ | D    | 220                                 | 10                               | 500                              | 17      | 170   | 340    | 8      | 10              | 12    | 0.150                             | 548                           | 493                           | 219                            | 274                           | 246                           | 110                            |
| TBJE227*010 R □ # @ 0^++       | TBJE227*010 R □ L C #^++ | E    | 220                                 | 10                               | 360                              | 17      | 170   | 340    | 8      | 10              | 12    | 0.165                             | 677                           | 609                           | 271                            | 244                           | 219                           | 97                             |
| TBJE227*010 J □ # @ 0^++       | TBJE227*010 J □ L C #^++ | E    | 220                                 | 10                               | 150                              | 17      | 170   | 340    | 8      | 10              | 12    | 0.165                             | 1049                          | 944                           | 420                            | 157                           | 142                           | 63                             |
| TBJE337*010 R □ # @ 0^++       | TBJE337*010 R □ L C #^++ | E    | 330                                 | 10                               | 300                              | 25      | 250   | 500    | 8      | 10              | 12    | 0.165                             | 742                           | 667                           | 297                            | 222                           | 200                           | 89                             |
| TBJE337*010 J □ # @ 0^++       | TBJE337*010 J □ L C #^++ | E    | 330                                 | 10                               | 100                              | 25      | 250   | 500    | 8      | 10              | 12    | 0.165                             | 1285                          | 1156                          | 514                            | 128                           | 116                           | 51                             |
| TBJU477*010 R □ # @ 0^++       | TBJU477*010 R □ L C #^++ | U    | 470                                 | 10                               | 400                              | 35      | 350   | 700    | 30     | 45              | 45    | 0.165                             | 642                           | 578                           | 257                            | 257                           | 231                           | 103                            |
| TBJU477*010 J □ # @ 0^++       | TBJU477*010 J □ L C #^++ | U    | 470                                 | 10                               | 200                              | 35      | 350   | 700    | 30     | 45              | 45    | 0.165                             | 908                           | 817                           | 363                            | 182                           | 163                           | 73                             |
| TBJA105*016 R □ # @ 0^++       | TBJA105*016 R □ L C #^++ | A    | 1                                   | 16                               | 10000                            | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 87                            | 78                            | 35                             | 866                           | 779                           | 346                            |
| TBJA225*016 R □ # @ 0^++       | TBJA225*016 R □ L C #^++ | A    | 2.2                                 | 16                               | 4550                             | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 128                           | 116                           | 51                             | 584                           | 526                           | 234                            |
| TBJA225*016 J □ # @ 0^++       | TBJA225*016 J □ L C #^++ | A    | 2.2                                 | 16                               | 3500                             | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 146                           | 132                           | 59                             | 512                           | 461                           | 205                            |
| TBJA335*016 R □ # @ 0^++       | TBJA335*016 R □ L C #^++ | A    | 3.3                                 | 16                               | 3740                             | 0.4     | 4     | 8      | 6      | 9               | 10    | 0.075                             | 142                           | 127                           | 57                             | 530                           | 477                           | 212                            |
| TBJA335*016 J □ # @ 0^++       | TBJA335*016 J □ L C #^++ | A    | 3.3                                 | 16                               | 3500                             | 0.4     | 4     | 8      | 6      | 9               | 10    | 0.075                             | 146                           | 132                           | 59                             | 512                           | 461                           | 205                            |
| TBJB335*016 R □ # @ 0^++       | TBJB335*016 R □ L C #^++ | B    | 3.3                                 | 16                               | 4500                             | 0.4     | 4     | 8      | 6      | 9               | 10    | 0.085                             | 137                           | 124                           | 55                             | 618                           | 557                           | 247                            |
| TBJA475*016 R □ # @ 0^++       | TBJA475*016 R □ L C #^++ | A    | 4.7                                 | 16                               | 3160                             | 0.56    | 5.6   | 11.2   | 6      | 9               | 10    | 0.075                             | 154                           | 139                           | 62                             | 487                           | 438                           | 195                            |
| TBJA475*016 J □ # @ 0^++       | TBJA475*016 J □ L C #^++ | A    | 4.7                                 | 16                               | 2000                             | 0.56    | 5.6   | 11.2   | 6      | 9               | 10    | 0.075                             | 194                           | 174                           | 77                             | 387                           | 349                           | 155                            |
| TBJB475*016 R □ # @ 0^++       | TBJB475*016 R □ L C #^++ | B    | 4.7                                 | 16                               | 3160                             | 0.56    | 5.6   | 11.2   | 6      | 9               | 10    | 0.085                             | 164                           | 148                           | 66                             | 518                           | 466                           | 207                            |
| TBJB475*016 J □ # @ 0^++       | TBJB475*016 J □ L C #^++ | B    | 4.7                                 | 16                               | 1500                             | 0.56    | 5.6   | 11.2   | 6      | 9               | 10    | 0.085                             | 238                           | 214                           | 95                             | 357                           | 321                           | 143                            |
| TBJA685*016 R □ # @ 0^++       | TBJA685*016 R □ L C #^++ | A    | 6.8                                 | 16                               | 2000                             | 0.82    | 8.2   | 16.4   | 4      | 6               | 8     | 0.075                             | 194                           | 174                           | 77                             | 387                           | 349                           | 155                            |
| TBJA685*016 J □ # @ 0^++       | TBJA685*016 J □ L C #^++ | A    | 6.8                                 | 16                               | 1500                             | 0.82    | 8.2   | 16.4   | 4      | 6               | 8     | 0.075                             | 224                           | 201                           | 89                             | 335                           | 302                           | 134                            |
| TBJB685*016 R □ # @ 0^++       | TBJB685*016 R □ L C #^++ | B    | 6.8                                 | 16                               | 2650                             | 0.82    | 8.2   | 16.4   | 6      | 9               | 10    | 0.085                             | 179                           | 161                           | 72                             | 475                           | 427                           | 190                            |
| TBJB685*016 J □ # @ 0^++       | TBJB685*016 J □ L C #^++ | B    | 6.8                                 | 16                               | 1200                             | 0.82    | 8.2   | 16.4   | 6      | 9               | 10    | 0.085                             | 266                           | 240                           | 106                            | 319                           | 287                           | 128                            |
| TBJC685*016 R □ # @ 0^++       | TBJC685*016 R □ L C #^++ | C    | 6.8                                 | 16                               | 2500                             | 0.82    | 8.2   | 16.4   | 6      | 9               | 10    | 0.110                             | 210                           | 189                           | 84                             | 524                           | 472                           | 210                            |
| TBJB106*016 R □ # @ 0^++       | TBJB106*016 R □ L C #^++ | B    | 10                                  | 16                               | 2200                             | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.085                             | 197                           | 177                           | 79                             | 432                           | 389                           | 173                            |
| TBJB106*016 J □ # @ 0^++       | TBJB106*016 J □ L C #^++ | B    | 10                                  | 16                               | 800                              | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.085                             | 326                           | 293                           | 130                            | 261                           | 235                           | 104                            |
| TBJC106*016 R □ # @ 0^++       | TBJC106*016 R □ L C #^++ | C    | 10                                  | 16                               | 2000                             | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.110                             | 235                           | 211                           | 94                             | 469                           | 422                           | 188                            |
| TBJB156*016 R □ # @ 0^++       | TBJB156*016 R □ L C #^++ | B    | 15                                  | 16                               | 2030                             | 1.8     | 18    | 36     | 6      | 9               | 10    | 0.085                             | 205                           | 184                           | 82                             | 415                           | 374                           | 166                            |
| TBJB156*016 J □ # @ 0^++       | TBJB156*016 J □ L C #^++ | B    | 15                                  | 16                               | 800                              | 1.8     | 18    | 36     | 6      | 9               | 10    | 0.085                             | 326                           | 293                           | 130                            | 261                           | 235                           | 104                            |
| TBJB226*016 R □ # @ 0^++       | TBJB226*016 R □ L C #^++ | B    | 22                                  | 16                               | 1100                             | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.085                             | 278                           | 250                           | 111                            | 306                           | 275                           | 122                            |
| TBJB226*016 J □ # @ 0^++       | TBJB226*016 J □ L C #^++ | B    | 22                                  | 16                               | 600                              | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.085                             | 376                           | 339                           | 151                            | 226                           | 203                           | 90                             |
| TBJC226*016 R □ # @ 0^++       | TBJC226*016 R □ L C #^++ | C    | 22                                  | 16                               | 700                              | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.110                             | 396                           | 357                           | 159                            | 277                           | 250                           | 111                            |
| TBJC226*016 J □ # @ 0^++       | TBJC226*016 J □ L C #^++ | C    | 22                                  | 16                               | 350                              | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.110                             | 561                           | 505                           | 224                            | 196                           | 177                           | 78                             |
| TBJD226*016 R □ # @ 0^++       | TBJD226*016 R □ L C #^++ | D    | 22                                  | 16                               | 1100                             | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.150                             | 369                           | 332                           | 148                            | 406                           | 366                           | 162                            |
| TBJC336*016 R □ # @ 0^++       | TBJC336*016 R □ L C #^++ | C    | 33                                  | 16                               | 590                              | 4       | 40    | 80     | 6      | 9               | 10    | 0.110                             | 432                           | 389                           | 173                            | 255                           | 229                           | 102                            |
| TBJC336*016 J □ # @ 0^++       | TBJC336*016 J □ L C #^++ | C    | 33                                  | 16                               | 300                              | 4       | 40    | 80     | 6      | 9               | 10    | 0.110                             | 606                           | 545                           | 242                            | 182                           | 163                           | 73                             |
| TBJC476*016 R □ # @ 0^++       | TBJC476*016 R □ L C #^++ | C    | 47                                  | 16                               | 540                              | 5.6     | 56    | 112    | 6      | 9               | 10    | 0.110                             | 451                           | 406                           | 181                            | 244                           | 219                           | 97                             |
| TBJC476*016 J □ # @ 0^++       | TBJC476*016 J □ L C #^++ | C    | 47                                  | 16                               | 350                              | 5.6     | 56    | 112    | 6      | 9               | 10    | 0.110                             | 561                           | 505                           | 224                            | 196                           | 177                           | 78                             |
| TBJD476*016 R □ # @ 0^++       | TBJD476*016 R □ L C #^++ | D    | 47                                  | 16                               | 540                              | 5.6     | 56    | 112    | 6      | 9               | 10    | 0.150                             | 527                           | 474                           | 211                            | 285                           | 256                           | 114                            |
| TBJD476*016 J □ # @ 0^++       | TBJD476*016 J □ L C #^++ | D    | 47                                  | 16                               | 200                              | 5.6     | 56    | 112    | 6      | 9               | 10    | 0.150                             | 866                           | 779                           | 346                            | 173                           | 156                           | 69                             |
| TBJD686*016 R □ # @ 0^++       | TBJD686*016 R □ L C #^++ | D    | 68                                  | 16                               | 490                              | 8.2     | 82    | 164    | 6      | 9               | 10    | 0.150                             | 553                           | 498                           | 221                            | 271                           | 244                           | 108                            |
| TBJD686*016 J □ # @ 0^++       | TBJD686*016 J □ L C #^++ | D    | 68                                  | 16                               | 150                              | 8.2     | 82    | 164    | 6      | 9               | 10    | 0.150                             | 1000                          | 900                           | 400                            | 150                           | 135                           | 60                             |
| TBJD107*016 R □ # @ 0^++       | TBJD107*016 R □ L C #^++ | D    | 100                                 | 16                               | 440                              | 12      | 120   | 240    | 6      | 9               | 10    | 0.150                             | 584                           | 525                           | 234                            | 257                           | 231                           | 103                            |
| TBJD107*016 J □ # @ 0^++       | TBJD107*016 J □ L C #^++ | D    | 100                                 | 16                               | 150                              | 12      | 120   | 240    | 6      | 9               | 10    | 0.150                             | 1000                          | 900                           | 400                            | 150                           | 135                           | 60                             |

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

**NOTE:** KYOCERA AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.



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TDS-HIRELTANT-0022 | Rev 3

– HIGH RELIABILITY TANTALUM CAPACITORS –

# TBJ SERIES

## COTS-Plus – Space Level



| RATING & PART NUMBER REFERENCE |                            |      | Parametric Specifications by Rating |                          |                          |         |       |        |        |                 |       | Typical RMS Ripple Data by Rating |                                  |                                  |                                   |                                  |                                  |                                   |
|--------------------------------|----------------------------|------|-------------------------------------|--------------------------|--------------------------|---------|-------|--------|--------|-----------------|-------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
|                                |                            |      | Cap<br>@ 120Hz<br>µF                | DC Rated<br>Voltage<br>V | ESR<br>@ 100kHz<br>mOhms | DCL max |       |        | DF Max |                 |       | Power<br>Dissipation<br>W         | 25°C<br>Ripple<br>mA<br>(100kHz) | 85°C<br>Ripple<br>mA<br>(100kHz) | 125°C<br>Ripple<br>mA<br>(100kHz) | 25°C<br>Ripple<br>mV<br>(100kHz) | 85°C<br>Ripple<br>mV<br>(100kHz) | 125°C<br>Ripple<br>mV<br>(100kHz) |
|                                |                            |      |                                     |                          |                          | +25°C   | +85°C | +125°C | +25°C  | +(85/125)<br>°C | -55°C |                                   |                                  |                                  |                                   |                                  |                                  |                                   |
| P/N                            | Space Level P/N            | Case | µF<br>@ 25°C                        | V<br>@ +85°C             | mOhms<br>@ +25°C         | (µA)    | (µA)  | (µA)   | (%)    | (%)             | (%)   | W                                 | mA<br>(100kHz)                   | mA<br>(100kHz)                   | mA<br>(100kHz)                    | mV<br>(100kHz)                   | mV<br>(100kHz)                   | mV<br>(100kHz)                    |
| TBJE107 *016 R □ # @ 0 ^ ++    | TBJE107 *016 R □ LC # ^ ++ | E    | 100                                 | 16                       | 440                      | 12      | 120   | 240    | 6      | 9               | 10    | 0.165                             | 612                              | 551                              | 245                               | 269                              | 242                              | 108                               |
| TBJE107 *016 J □ # @ 0 ^ ++    | TBJE107 *016 J □ LC # ^ ++ | E    | 100                                 | 16                       | 150                      | 12      | 120   | 240    | 6      | 9               | 10    | 0.165                             | 1049                             | 944                              | 420                               | 157                              | 142                              | 63                                |
| TBJE157 *016 R □ # @ 0 ^ ++    | TBJE157 *016 R □ LC # ^ ++ | E    | 150                                 | 16                       | 300                      | 16      | 160   | 320    | 6      | 9               | 10    | 0.165                             | 742                              | 667                              | 297                               | 222                              | 200                              | 89                                |
| TBJE157 *016 J □ # @ 0 ^ ++    | TBJE157 *016 J □ LC # ^ ++ | E    | 150                                 | 16                       | 150                      | 16      | 160   | 320    | 6      | 9               | 10    | 0.165                             | 1049                             | 944                              | 420                               | 157                              | 142                              | 63                                |
| TBJU227 *016 R □ # @ 0 ^ ++    | TBJU227 *016 R □ LC # ^ ++ | U    | 220                                 | 16                       | 500                      | 26.4    | 264   | 528    | 12     | 15              | 15    | 0.165                             | 574                              | 517                              | 230                               | 287                              | 259                              | 115                               |
| TBJU227 *016 J □ # @ 0 ^ ++    | TBJU227 *016 J □ LC # ^ ++ | U    | 220                                 | 16                       | 200                      | 26.4    | 264   | 528    | 12     | 15              | 15    | 0.165                             | 908                              | 817                              | 363                               | 182                              | 163                              | 73                                |
| TBJU337 *016 R □ # @ 0 ^ ++    | TBJU337 *016 R □ LC # ^ ++ | U    | 330                                 | 16                       | 400                      | 39      | 390   | 780    | 30     | 45              | 45    | 0.165                             | 642                              | 578                              | 257                               | 257                              | 231                              | 103                               |
| TBJU337 *016 J □ # @ 0 ^ ++    | TBJU337 *016 J □ LC # ^ ++ | U    | 330                                 | 16                       | 200                      | 39      | 390   | 780    | 30     | 45              | 45    | 0.165                             | 908                              | 817                              | 363                               | 182                              | 163                              | 73                                |
| TBJA105 *020 R □ # @ 0 ^ ++    | TBJA105 *020 R □ LC # ^ ++ | A    | 1                                   | 20                       | 6630                     | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 106                              | 96                               | 43                                | 705                              | 635                              | 282                               |
| TBJA105 *020 J □ # @ 0 ^ ++    | TBJA105 *020 J □ LC # ^ ++ | A    | 1                                   | 20                       | 3000                     | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 158                              | 142                              | 63                                | 474                              | 427                              | 190                               |
| TBJA155 *020 R □ # @ 0 ^ ++    | TBJA155 *020 R □ LC # ^ ++ | A    | 1.5                                 | 20                       | 5460                     | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 117                              | 105                              | 47                                | 640                              | 576                              | 256                               |
| TBJA155 *020 J □ # @ 0 ^ ++    | TBJA155 *020 J □ LC # ^ ++ | A    | 1.5                                 | 20                       | 3000                     | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 158                              | 142                              | 63                                | 474                              | 427                              | 190                               |
| TBJA225 *020 R □ # @ 0 ^ ++    | TBJA225 *020 R □ LC # ^ ++ | A    | 2.2                                 | 20                       | 4550                     | 0.33    | 3.3   | 6.6    | 6      | 9               | 10    | 0.075                             | 128                              | 116                              | 51                                | 584                              | 526                              | 234                               |
| TBJA225 *020 J □ # @ 0 ^ ++    | TBJA225 *020 J □ LC # ^ ++ | A    | 2.2                                 | 20                       | 3000                     | 0.33    | 3.3   | 6.6    | 6      | 9               | 10    | 0.075                             | 158                              | 142                              | 63                                | 474                              | 427                              | 190                               |
| TBJA335 *020 R □ # @ 0 ^ ++    | TBJA335 *020 R □ LC # ^ ++ | A    | 3.3                                 | 20                       | 3740                     | 0.5     | 5     | 10     | 6      | 9               | 10    | 0.075                             | 142                              | 127                              | 57                                | 530                              | 477                              | 212                               |
| TBJA335 *020 J □ # @ 0 ^ ++    | TBJA335 *020 J □ LC # ^ ++ | A    | 3.3                                 | 20                       | 2500                     | 0.5     | 5     | 10     | 6      | 9               | 10    | 0.075                             | 173                              | 156                              | 69                                | 433                              | 390                              | 173                               |
| TBJB335 *020 R □ # @ 0 ^ ++    | TBJB335 *020 R □ LC # ^ ++ | B    | 3.3                                 | 20                       | 3740                     | 0.5     | 5     | 10     | 6      | 9               | 10    | 0.085                             | 151                              | 136                              | 60                                | 564                              | 507                              | 226                               |
| TBJB335 *020 J □ # @ 0 ^ ++    | TBJB335 *020 J □ LC # ^ ++ | B    | 3.3                                 | 20                       | 1300                     | 0.5     | 5     | 10     | 6      | 9               | 10    | 0.085                             | 256                              | 230                              | 102                               | 332                              | 299                              | 133                               |
| TBJA475 *020 R □ # @ 0 ^ ++    | TBJA475 *020 R □ LC # ^ ++ | A    | 4.7                                 | 20                       | 2500                     | 0.71    | 7.1   | 14.2   | 5      | 8               | 10    | 0.075                             | 173                              | 156                              | 69                                | 433                              | 390                              | 173                               |
| TBJA475 *020 J □ # @ 0 ^ ++    | TBJA475 *020 J □ LC # ^ ++ | A    | 4.7                                 | 20                       | 1800                     | 0.71    | 7.1   | 14.2   | 5      | 8               | 10    | 0.075                             | 204                              | 184                              | 82                                | 367                              | 331                              | 147                               |
| TBJB475 *020 R □ # @ 0 ^ ++    | TBJB475 *020 R □ LC # ^ ++ | B    | 4.7                                 | 20                       | 3160                     | 0.71    | 7.1   | 14.2   | 6      | 9               | 10    | 0.085                             | 164                              | 148                              | 66                                | 518                              | 466                              | 207                               |
| TBJB475 *020 J □ # @ 0 ^ ++    | TBJB475 *020 J □ LC # ^ ++ | B    | 4.7                                 | 20                       | 1000                     | 0.71    | 7.1   | 14.2   | 6      | 9               | 10    | 0.085                             | 292                              | 262                              | 117                               | 292                              | 262                              | 117                               |
| TBJB685 *020 R □ # @ 0 ^ ++    | TBJB685 *020 R □ LC # ^ ++ | B    | 6.8                                 | 20                       | 2650                     | 1       | 10    | 20     | 6      | 9               | 10    | 0.085                             | 179                              | 161                              | 72                                | 475                              | 427                              | 190                               |
| TBJB685 *020 J □ # @ 0 ^ ++    | TBJB685 *020 J □ LC # ^ ++ | B    | 6.8                                 | 20                       | 1000                     | 1       | 10    | 20     | 6      | 9               | 10    | 0.085                             | 292                              | 262                              | 117                               | 292                              | 262                              | 117                               |
| TBJC685 *020 R □ # @ 0 ^ ++    | TBJC685 *020 R □ LC # ^ ++ | C    | 6.8                                 | 20                       | 2000                     | 1       | 10    | 20     | 6      | 9               | 10    | 0.110                             | 235                              | 211                              | 94                                | 469                              | 422                              | 188                               |
| TBJB106 *020 R □ # @ 0 ^ ++    | TBJB106 *020 R □ LC # ^ ++ | B    | 10                                  | 20                       | 2200                     | 1.5     | 15    | 30     | 6      | 9               | 10    | 0.085                             | 197                              | 177                              | 79                                | 432                              | 389                              | 173                               |
| TBJB106 *020 J □ # @ 0 ^ ++    | TBJB106 *020 J □ LC # ^ ++ | B    | 10                                  | 20                       | 1000                     | 1.5     | 15    | 30     | 6      | 9               | 10    | 0.085                             | 292                              | 262                              | 117                               | 292                              | 262                              | 117                               |
| TBJC106 *020 R □ # @ 0 ^ ++    | TBJC106 *020 R □ LC # ^ ++ | C    | 10                                  | 20                       | 800                      | 1.5     | 15    | 30     | 6      | 9               | 10    | 0.110                             | 371                              | 334                              | 148                               | 297                              | 267                              | 119                               |
| TBJC106 *020 J □ # @ 0 ^ ++    | TBJC106 *020 J □ LC # ^ ++ | C    | 10                                  | 20                       | 500                      | 1.5     | 15    | 30     | 6      | 9               | 10    | 0.110                             | 469                              | 422                              | 188                               | 235                              | 211                              | 94                                |
| TBJB156 *020 R □ # @ 0 ^ ++    | TBJB156 *020 R □ LC # ^ ++ | B    | 15                                  | 20                       | 1400                     | 2.3     | 23    | 46     | 6      | 9               | 10    | 0.085                             | 246                              | 222                              | 99                                | 345                              | 310                              | 138                               |
| TBJB156 *020 J □ # @ 0 ^ ++    | TBJB156 *020 J □ LC # ^ ++ | B    | 15                                  | 20                       | 500                      | 2.3     | 23    | 46     | 6      | 9               | 10    | 0.085                             | 412                              | 371                              | 165                               | 206                              | 186                              | 82                                |
| TBJC156 *020 R □ # @ 0 ^ ++    | TBJC156 *020 R □ LC # ^ ++ | C    | 15                                  | 20                       | 720                      | 2.3     | 23    | 46     | 6      | 9               | 10    | 0.110                             | 391                              | 352                              | 156                               | 281                              | 253                              | 113                               |
| TBJC156 *020 J □ # @ 0 ^ ++    | TBJC156 *020 J □ LC # ^ ++ | C    | 15                                  | 20                       | 400                      | 2.3     | 23    | 46     | 6      | 9               | 10    | 0.110                             | 524                              | 472                              | 210                               | 210                              | 189                              | 84                                |
| TBJD156 *020 R □ # @ 0 ^ ++    | TBJD156 *020 R □ LC # ^ ++ | D    | 15                                  | 20                       | 1100                     | 2.3     | 23    | 46     | 6      | 9               | 10    | 0.150                             | 369                              | 332                              | 148                               | 406                              | 366                              | 162                               |
| TBJC226 *020 R □ # @ 0 ^ ++    | TBJC226 *020 R □ LC # ^ ++ | C    | 22                                  | 20                       | 650                      | 3.3     | 33    | 66     | 6      | 9               | 10    | 0.110                             | 411                              | 370                              | 165                               | 267                              | 241                              | 107                               |
| TBJC226 *020 J □ # @ 0 ^ ++    | TBJC226 *020 J □ LC # ^ ++ | C    | 22                                  | 20                       | 400                      | 3.3     | 33    | 66     | 6      | 9               | 10    | 0.110                             | 524                              | 472                              | 210                               | 210                              | 189                              | 84                                |
| TBJD226 *020 R □ # @ 0 ^ ++    | TBJD226 *020 R □ LC # ^ ++ | D    | 22                                  | 20                       | 650                      | 3.3     | 33    | 66     | 6      | 9               | 10    | 0.150                             | 480                              | 432                              | 192                               | 312                              | 281                              | 125                               |
| TBJD226 *020 J □ # @ 0 ^ ++    | TBJD226 *020 J □ LC # ^ ++ | D    | 22                                  | 20                       | 150                      | 3.3     | 33    | 66     | 6      | 9               | 10    | 0.150                             | 1000                             | 900                              | 400                               | 150                              | 135                              | 60                                |
| TBJC336 *020 R □ # @ 0 ^ ++    | TBJC336 *020 R □ LC # ^ ++ | C    | 33                                  | 20                       | 590                      | 5       | 50    | 100    | 6      | 9               | 10    | 0.110                             | 432                              | 389                              | 173                               | 255                              | 229                              | 102                               |
| TBJC336 *020 J □ # @ 0 ^ ++    | TBJC336 *020 J □ LC # ^ ++ | C    | 33                                  | 20                       | 300                      | 5       | 50    | 100    | 6      | 9               | 10    | 0.110                             | 606                              | 545                              | 242                               | 182                              | 163                              | 73                                |
| TBJD336 *020 R □ # @ 0 ^ ++    | TBJD336 *020 R □ LC # ^ ++ | D    | 33                                  | 20                       | 590                      | 5       | 50    | 100    | 6      | 9               | 10    | 0.150                             | 504                              | 454                              | 202                               | 297                              | 268                              | 119                               |
| TBJD336 *020 J □ # @ 0 ^ ++    | TBJD336 *020 J □ LC # ^ ++ | D    | 33                                  | 20                       | 250                      | 5       | 50    | 100    | 6      | 9               | 10    | 0.150                             | 775                              | 697                              | 310                               | 194                              | 174                              | 77                                |
| TBJD476 *020 R □ # @ 0 ^ ++    | TBJD476 *020 R □ LC # ^ ++ | D    | 47                                  | 20                       | 540                      | 7.1     | 71    | 142    | 6      | 9               | 10    | 0.150                             | 527                              | 474                              | 211                               | 285                              | 256                              | 114                               |
| TBJD476 *020 J □ # @ 0 ^ ++    | TBJD476 *020 J □ LC # ^ ++ | D    | 47                                  | 20                       | 200                      | 7.1     | 71    | 142    | 6      | 9               | 10    | 0.150                             | 866                              | 779                              | 346                               | 173                              | 156                              | 69                                |
| TBJD686 *020 R □ # @ 0 ^ ++    | TBJD686 *020 R □ LC # ^ ++ | D    | 68                                  | 20                       | 490                      | 10      | 100   | 200    | 6      | 9               | 10    | 0.150                             | 553                              | 498                              | 221                               | 271                              | 244                              | 108                               |
| TBJD686 *020 J □ # @ 0 ^ ++    | TBJD686 *020 J □ LC # ^ ++ | D    | 68                                  | 20                       | 200                      | 10      | 100   | 200    | 6      | 9               | 10    | 0.150                             | 866                              | 779                              | 346                               | 173                              | 156                              | 69                                |
| TBJE686 *020 R □ # @ 0 ^ ++    | TBJE686 *020 R □ LC # ^ ++ | E    | 68                                  | 20                       | 490                      | 10      | 100   | 200    | 6      | 9               | 10    | 0.165                             | 580                              | 522                              | 232                               | 284                              | 256                              | 114                               |
| TBJE686 *020 J □ # @ 0 ^ ++    | TBJE686 *020 J □ LC # ^ ++ | E    | 68                                  | 20                       | 120                      | 10      | 100   | 200    | 6      | 9               | 10    | 0.165                             | 1173                             | 1055                             | 469                               | 141                              | 127                              | 56                                |
| TBJE107 *020 R □ # @ 0 ^ ++    | TBJE107 *020 R □ LC # ^ ++ | E    | 100                                 | 20                       | 300                      | 15      | 150   | 300    | 6      | 9               | 10    | 0.165                             | 742                              | 667                              | 297                               | 222                              | 200                              | 89                                |
| TBJE107 *020 J □ # @ 0 ^ ++    | TBJE107 *020 J □ LC # ^ ++ | E    | 100                                 | 20                       | 150                      | 15      | 150   | 300    | 6      | 9               | 10    | 0.165                             | 1049                             | 944                              | 420                               | 157                              | 142                              | 63                                |
| TBJU157 *020 R □ # @ 0 ^ ++    | TBJU157 *020 R □ LC # ^ ++ | U    | 150                                 | 20                       | 500                      | 22      | 220   | 440    | 30     | 45              | 45    | 0.165                             | 574                              | 517                              | 230                               | 287                              | 259                              | 115                               |
| TBJU157 *020 J □ # @ 0 ^ ++    | TBJU157 *020 J □ LC # ^ ++ | U    | 150                                 | 20                       | 250                      | 22      | 220   | 440    | 30     | 45              | 45    | 0.165                             | 812                              | 731                              | 325                               | 203                              | 183                              | 81                                |
| TBJA474 *025 R □ # @ 0 ^ ++    | TBJA474 *025 R □ LC # ^ ++ | A    | 0.47                                | 25                       | 9530                     | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 89                               | 80                               | 35                                | 845                              | 761                              | 338                               |
| TBJA474 *025 J □ # @ 0 ^ ++    | TBJA474 *025 J □ LC # ^ ++ | A    | 0.47                                | 25                       | 7000                     | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 104                              | 93                               | 41                                | 725                              | 652                              | 290                               |
| TBJA684 *025 R □ # @ 0 ^ ++    | TBJA684 *025 R □ LC # ^ ++ | A    | 0.68                                | 25                       | 7980                     | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 97                               | 87                               | 39                                | 774                              | 696                              | 309                               |
| TBJA684 *025 J □ # @ 0 ^ ++    | TBJA684 *025 J □ LC # ^ ++ | A    | 0.68                                | 25                       | 6000                     | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 112                              | 101                              | 45                                | 671                              | 604                              | 268                               |
| TBJA105 *025 R □ # @ 0 ^ ++    | TBJA105 *025 R □ LC # ^ ++ | A    | 1                                   | 25                       | 6630                     | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 106                              | 96                               | 43                                | 705                              | 635                              | 282                               |
| TBJA105 *025 J □ # @ 0 ^ ++    | TBJA105 *025 J □ LC # ^ ++ | A    | 1                                   | 25                       | 3000                     | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 158                              | 142                              | 63                                | 474                              | 427                              | 190                               |
| TBJA155 *025 R □ # @ 0 ^ ++    | TBJA155 *025 R □ LC # ^ ++ | A    | 1.5                                 | 25                       | 5460                     | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 117                              | 105                              | 47                                | 640                              | 576                              | 256                               |

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

**NOTE:** KYOCERA AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.



# TBJ SERIES

## COTS-Plus – Space Level



| RATING & PART NUMBER REFERENCE |                             |      | Parametric Specifications by Rating |                                     |                                     |         |       |        |        |                 |       | Typical RMS Ripple Data by Rating |                                  |                                  |                                   |                                  |                                  |                                   |
|--------------------------------|-----------------------------|------|-------------------------------------|-------------------------------------|-------------------------------------|---------|-------|--------|--------|-----------------|-------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
|                                |                             |      | Cap<br>@ 120Hz<br>µF @<br>25°C      | DC Rated<br>Voltage<br>V @<br>+85°C | ESR<br>@ 100kHz<br>mOhms<br>@ +25°C | DCL max |       |        | DF Max |                 |       | Power<br>Dissipation<br>W         | 25°C<br>Ripple<br>mA<br>(100kHz) | 85°C<br>Ripple<br>mA<br>(100kHz) | 125°C<br>Ripple<br>mA<br>(100kHz) | 25°C<br>Ripple<br>mV<br>(100kHz) | 85°C<br>Ripple<br>mV<br>(100kHz) | 125°C<br>Ripple<br>mV<br>(100kHz) |
|                                |                             |      |                                     |                                     |                                     | +25°C   | +85°C | +125°C | +25°C  | +(85/125)<br>°C | -55°C |                                   |                                  |                                  |                                   |                                  |                                  |                                   |
| P/N                            | Space Level P/N             | Case |                                     |                                     |                                     | (µA)    | (µA)  | (µA)   | (%)    | (%)             | (%)   |                                   |                                  |                                  |                                   |                                  |                                  |                                   |
| TBJA155 *025 J □ # @ 0 ° ++    | TBJA155 *025 J □ L C # ^ ++ | A    | 1.5                                 | 25                                  | 3000                                | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.075                             | 158                              | 142                              | 63                                | 474                              | 427                              | 190                               |
| TBJB155 *025 R □ # @ 0 ° ++    | TBJB155 *025 R □ L C # ^ ++ | B    | 1.5                                 | 25                                  | 5000                                | 0.3     | 3     | 6      | 6      | 9               | 10    | 0.085                             | 130                              | 117                              | 52                                | 652                              | 587                              | 261                               |
| TBJA225 *025 R □ # @ 0 ° ++    | TBJA225 *025 R □ L C # ^ ++ | A    | 2.2                                 | 25                                  | 2900                                | 0.41    | 4.1   | 8.2    | 6      | 9               | 10    | 0.075                             | 161                              | 145                              | 64                                | 466                              | 420                              | 187                               |
| TBJA225 *025 J □ # @ 0 ° ++    | TBJA225 *025 J □ L C # ^ ++ | A    | 2.2                                 | 25                                  | 1600                                | 0.41    | 4.1   | 8.2    | 6      | 9               | 10    | 0.075                             | 217                              | 195                              | 87                                | 346                              | 312                              | 139                               |
| TBJB225 *025 R □ # @ 0 ° ++    | TBJB225 *025 R □ L C # ^ ++ | B    | 2.2                                 | 25                                  | 4550                                | 0.41    | 4.1   | 8.2    | 6      | 9               | 10    | 0.085                             | 137                              | 123                              | 55                                | 622                              | 560                              | 249                               |
| TBJB225 *025 J □ # @ 0 ° ++    | TBJB225 *025 J □ L C # ^ ++ | B    | 2.2                                 | 25                                  | 1200                                | 0.41    | 4.1   | 8.2    | 6      | 9               | 10    | 0.085                             | 266                              | 240                              | 106                               | 319                              | 287                              | 128                               |
| TBJB335 *025 R □ # @ 0 ° ++    | TBJB335 *025 R □ L C # ^ ++ | B    | 3.3                                 | 25                                  | 3740                                | 0.62    | 6.2   | 12.4   | 6      | 9               | 10    | 0.085                             | 151                              | 136                              | 60                                | 564                              | 507                              | 226                               |
| TBJB335 *025 J □ # @ 0 ° ++    | TBJB335 *025 J □ L C # ^ ++ | B    | 3.3                                 | 25                                  | 2000                                | 0.62    | 6.2   | 12.4   | 6      | 9               | 10    | 0.085                             | 206                              | 186                              | 82                                | 412                              | 371                              | 165                               |
| TBJB475 *025 R □ # @ 0 ° ++    | TBJB475 *025 R □ L C # ^ ++ | B    | 4.7                                 | 25                                  | 3160                                | 0.88    | 8.8   | 17.6   | 6      | 9               | 10    | 0.085                             | 164                              | 148                              | 66                                | 518                              | 466                              | 207                               |
| TBJB475 *025 J □ # @ 0 ° ++    | TBJB475 *025 J □ L C # ^ ++ | B    | 4.7                                 | 25                                  | 1000                                | 0.88    | 8.8   | 17.6   | 6      | 9               | 10    | 0.085                             | 292                              | 262                              | 117                               | 292                              | 262                              | 117                               |
| TBJB685 *025 R □ # @ 0 ° ++    | TBJB685 *025 R □ L C # ^ ++ | B    | 6.8                                 | 25                                  | 1500                                | 1.3     | 13    | 26     | 6      | 9               | 10    | 0.085                             | 238                              | 214                              | 95                                | 357                              | 321                              | 143                               |
| TBJB685 *025 J □ # @ 0 ° ++    | TBJB685 *025 J □ L C # ^ ++ | B    | 6.8                                 | 25                                  | 1000                                | 1.3     | 13    | 26     | 6      | 9               | 10    | 0.085                             | 292                              | 262                              | 117                               | 292                              | 262                              | 117                               |
| TBJC685 *025 R □ # @ 0 ° ++    | TBJC685 *025 R □ L C # ^ ++ | C    | 6.8                                 | 25                                  | 1070                                | 1.3     | 13    | 26     | 6      | 9               | 10    | 0.110                             | 321                              | 289                              | 128                               | 343                              | 309                              | 137                               |
| TBJC685 *025 J □ # @ 0 ° ++    | TBJC685 *025 J □ L C # ^ ++ | C    | 6.8                                 | 25                                  | 600                                 | 1.3     | 13    | 26     | 6      | 9               | 10    | 0.110                             | 428                              | 385                              | 171                               | 257                              | 231                              | 103                               |
| TBJC106 *025 R □ # @ 0 ° ++    | TBJC106 *025 R □ L C # ^ ++ | C    | 10                                  | 25                                  | 800                                 | 1.9     | 19    | 38     | 6      | 9               | 10    | 0.110                             | 371                              | 334                              | 148                               | 297                              | 267                              | 119                               |
| TBJC106 *025 J □ # @ 0 ° ++    | TBJC106 *025 J □ L C # ^ ++ | C    | 10                                  | 25                                  | 600                                 | 1.9     | 19    | 38     | 6      | 9               | 10    | 0.110                             | 428                              | 385                              | 171                               | 257                              | 231                              | 103                               |
| TBJD106 *025 R □ # @ 0 ° ++    | TBJD106 *025 R □ L C # ^ ++ | D    | 10                                  | 25                                  | 1200                                | 1.9     | 19    | 38     | 6      | 9               | 10    | 0.150                             | 354                              | 318                              | 141                               | 424                              | 382                              | 170                               |
| TBJC156 *025 R □ # @ 0 ° ++    | TBJC156 *025 R □ L C # ^ ++ | C    | 15                                  | 25                                  | 720                                 | 2.8     | 28    | 56     | 6      | 9               | 10    | 0.110                             | 391                              | 352                              | 156                               | 281                              | 253                              | 113                               |
| TBJC156 *025 J □ # @ 0 ° ++    | TBJC156 *025 J □ L C # ^ ++ | C    | 15                                  | 25                                  | 500                                 | 2.8     | 28    | 56     | 6      | 9               | 10    | 0.110                             | 469                              | 422                              | 188                               | 235                              | 211                              | 94                                |
| TBJD156 *025 R □ # @ 0 ° ++    | TBJD156 *025 R □ L C # ^ ++ | D    | 15                                  | 25                                  | 720                                 | 2.8     | 28    | 56     | 6      | 9               | 10    | 0.150                             | 456                              | 411                              | 183                               | 329                              | 296                              | 131                               |
| TBJD156 *025 J □ # @ 0 ° ++    | TBJD156 *025 J □ L C # ^ ++ | D    | 15                                  | 25                                  | 300                                 | 2.8     | 28    | 56     | 6      | 9               | 10    | 0.150                             | 707                              | 636                              | 283                               | 212                              | 191                              | 85                                |
| TBJD226 *025 R □ # @ 0 ° ++    | TBJD226 *025 R □ L C # ^ ++ | D    | 22                                  | 25                                  | 650                                 | 4.1     | 41    | 82     | 6      | 9               | 10    | 0.150                             | 480                              | 432                              | 192                               | 312                              | 281                              | 125                               |
| TBJD226 *025 J □ # @ 0 ° ++    | TBJD226 *025 J □ L C # ^ ++ | D    | 22                                  | 25                                  | 300                                 | 4.1     | 41    | 82     | 6      | 9               | 10    | 0.150                             | 707                              | 636                              | 283                               | 212                              | 191                              | 85                                |
| TBJD336 *025 R □ # @ 0 ° ++    | TBJD336 *025 R □ L C # ^ ++ | D    | 33                                  | 25                                  | 590                                 | 6.2     | 62    | 124    | 6      | 9               | 10    | 0.150                             | 504                              | 454                              | 202                               | 297                              | 268                              | 119                               |
| TBJD336 *025 J □ # @ 0 ° ++    | TBJD336 *025 J □ L C # ^ ++ | D    | 33                                  | 25                                  | 400                                 | 6.2     | 62    | 124    | 6      | 9               | 10    | 0.150                             | 612                              | 551                              | 245                               | 245                              | 220                              | 98                                |
| TBJD476 *025 R □ # @ 0 ° ++    | TBJD476 *025 R □ L C # ^ ++ | D    | 47                                  | 25                                  | 540                                 | 8.8     | 88    | 176    | 6      | 9               | 10    | 0.150                             | 527                              | 474                              | 211                               | 285                              | 256                              | 114                               |
| TBJD476 *025 J □ # @ 0 ° ++    | TBJD476 *025 J □ L C # ^ ++ | D    | 47                                  | 25                                  | 250                                 | 8.8     | 88    | 176    | 6      | 9               | 10    | 0.150                             | 775                              | 697                              | 310                               | 194                              | 174                              | 77                                |
| TBJE476 *025 R □ # @ 0 ° ++    | TBJE476 *025 R □ L C # ^ ++ | E    | 47                                  | 25                                  | 540                                 | 8.8     | 88    | 176    | 6      | 9               | 10    | 0.165                             | 553                              | 497                              | 221                               | 298                              | 269                              | 119                               |
| TBJE476 *025 J □ # @ 0 ° ++    | TBJE476 *025 J □ L C # ^ ++ | E    | 47                                  | 25                                  | 150                                 | 8.8     | 88    | 176    | 6      | 9               | 10    | 0.165                             | 1049                             | 944                              | 420                               | 157                              | 142                              | 63                                |
| TBJU686 *025 R □ # @ 0 ° ++    | TBJU686 *025 R □ L C # ^ ++ | U    | 68                                  | 25                                  | 500                                 | 12      | 120   | 240    | 30     | 45              | 45    | 0.165                             | 574                              | 517                              | 230                               | 287                              | 259                              | 115                               |
| TBJU107 *025 R □ # @ 0 ° ++    | TBJU107 *025 R □ L C # ^ ++ | U    | 100                                 | 25                                  | 500                                 | 18      | 180   | 360    | 30     | 45              | 45    | 0.165                             | 574                              | 517                              | 230                               | 287                              | 259                              | 115                               |
| TBJA104 *035 R □ # @ 0 ° ++    | TBJA104 *035 R □ L C # ^ ++ | A    | 0.1                                 | 35                                  | 20000                               | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 61                               | 55                               | 24                                | 1225                             | 1102                             | 490                               |
| TBJA154 *035 R □ # @ 0 ° ++    | TBJA154 *035 R □ L C # ^ ++ | A    | 0.15                                | 35                                  | 16470                               | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 67                               | 61                               | 27                                | 1111                             | 1000                             | 445                               |
| TBJA154 *035 J □ # @ 0 ° ++    | TBJA154 *035 J □ L C # ^ ++ | A    | 0.15                                | 35                                  | 6000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 112                              | 101                              | 45                                | 671                              | 604                              | 268                               |
| TBJA224 *035 R □ # @ 0 ° ++    | TBJA224 *035 R □ L C # ^ ++ | A    | 0.22                                | 35                                  | 13710                               | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 74                               | 67                               | 30                                | 1014                             | 913                              | 406                               |
| TBJA224 *035 J □ # @ 0 ° ++    | TBJA224 *035 J □ L C # ^ ++ | A    | 0.22                                | 35                                  | 6000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 112                              | 101                              | 45                                | 671                              | 604                              | 268                               |
| TBJA334 *035 R □ # @ 0 ° ++    | TBJA334 *035 R □ L C # ^ ++ | A    | 0.33                                | 35                                  | 11280                               | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 82                               | 73                               | 33                                | 920                              | 828                              | 368                               |
| TBJA334 *035 J □ # @ 0 ° ++    | TBJA334 *035 J □ L C # ^ ++ | A    | 0.33                                | 35                                  | 6000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 112                              | 101                              | 45                                | 671                              | 604                              | 268                               |
| TBJA474 *035 R □ # @ 0 ° ++    | TBJA474 *035 R □ L C # ^ ++ | A    | 0.47                                | 35                                  | 9530                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 89                               | 80                               | 35                                | 845                              | 761                              | 338                               |
| TBJA474 *035 J □ # @ 0 ° ++    | TBJA474 *035 J □ L C # ^ ++ | A    | 0.47                                | 35                                  | 4000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 137                              | 123                              | 55                                | 548                              | 493                              | 219                               |
| TBJA684 *035 R □ # @ 0 ° ++    | TBJA684 *035 R □ L C # ^ ++ | A    | 0.68                                | 35                                  | 7980                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 97                               | 87                               | 39                                | 774                              | 696                              | 309                               |
| TBJA684 *035 J □ # @ 0 ° ++    | TBJA684 *035 J □ L C # ^ ++ | A    | 0.68                                | 35                                  | 6000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 112                              | 101                              | 45                                | 671                              | 604                              | 268                               |
| TBJA105 *035 R □ # @ 0 ° ++    | TBJA105 *035 R □ L C # ^ ++ | A    | 1                                   | 35                                  | 6630                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 106                              | 96                               | 43                                | 705                              | 635                              | 282                               |
| TBJA105 *035 J □ # @ 0 ° ++    | TBJA105 *035 J □ L C # ^ ++ | A    | 1                                   | 35                                  | 3000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 158                              | 142                              | 63                                | 474                              | 427                              | 190                               |
| TBJB105 *035 R □ # @ 0 ° ++    | TBJB105 *035 R □ L C # ^ ++ | B    | 1                                   | 35                                  | 3400                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.085                             | 158                              | 142                              | 63                                | 538                              | 484                              | 215                               |
| TBJB105 *035 J □ # @ 0 ° ++    | TBJB105 *035 J □ L C # ^ ++ | B    | 1                                   | 35                                  | 2000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.085                             | 206                              | 186                              | 82                                | 412                              | 371                              | 165                               |
| TBJA155 *035 R □ # @ 0 ° ++    | TBJA155 *035 R □ L C # ^ ++ | A    | 1.5                                 | 35                                  | 3100                                | 0.39    | 3.9   | 7.8    | 6      | 9               | 10    | 0.075                             | 156                              | 140                              | 62                                | 482                              | 434                              | 193                               |
| TBJA155 *035 J □ # @ 0 ° ++    | TBJA155 *035 J □ L C # ^ ++ | A    | 1.5                                 | 35                                  | 2000                                | 0.39    | 3.9   | 7.8    | 6      | 9               | 10    | 0.075                             | 194                              | 174                              | 77                                | 387                              | 349                              | 155                               |
| TBJB155 *035 R □ # @ 0 ° ++    | TBJB155 *035 R □ L C # ^ ++ | B    | 1.5                                 | 35                                  | 5460                                | 0.39    | 3.9   | 7.8    | 6      | 9               | 10    | 0.085                             | 125                              | 112                              | 50                                | 681                              | 613                              | 272                               |
| TBJB155 *035 J □ # @ 0 ° ++    | TBJB155 *035 J □ L C # ^ ++ | B    | 1.5                                 | 35                                  | 2500                                | 0.39    | 3.9   | 7.8    | 6      | 9               | 10    | 0.085                             | 184                              | 166                              | 74                                | 461                              | 415                              | 184                               |
| TBJB225 *035 R □ # @ 0 ° ++    | TBJB225 *035 R □ L C # ^ ++ | B    | 2.2                                 | 35                                  | 4550                                | 0.58    | 5.8   | 11.6   | 6      | 9               | 10    | 0.085                             | 137                              | 123                              | 55                                | 622                              | 560                              | 249                               |
| TBJB225 *035 J □ # @ 0 ° ++    | TBJB225 *035 J □ L C # ^ ++ | B    | 2.2                                 | 35                                  | 2000                                | 0.58    | 5.8   | 11.6   | 6      | 9               | 10    | 0.085                             | 206                              | 186                              | 82                                | 412                              | 371                              | 165                               |
| TBJB335 *035 R □ # @ 0 ° ++    | TBJB335 *035 R □ L C # ^ ++ | B    | 3.3                                 | 35                                  | 3740                                | 0.87    | 8.7   | 17.4   | 6      | 9               | 10    | 0.085                             | 151                              | 136                              | 60                                | 564                              | 507                              | 226                               |
| TBJB335 *035 J □ # @ 0 ° ++    | TBJB335 *035 J □ L C # ^ ++ | B    | 3.3                                 | 35                                  | 1000                                | 0.87    | 8.7   | 17.4   | 6      | 9               | 10    | 0.085                             | 292                              | 262                              | 117                               | 292                              | 262                              | 117                               |
| TBJC335 *035 R □ # @ 0 ° ++    | TBJC335 *035 R □ L C # ^ ++ | C    | 3.3                                 | 35                                  | 1840                                | 0.87    | 8.7   | 17.4   | 6      | 9               | 10    | 0.110                             | 245                              | 220                              | 98                                | 450                              | 405                              | 180                               |
| TBJC335 *035 J □ # @ 0 ° ++    | TBJC335 *035 J □ L C # ^ ++ | C    | 3.3                                 | 35                                  | 800                                 | 0.87    | 8.7   | 17.4   | 6      | 9               | 10    | 0.110                             | 371                              | 334                              | 148                               | 297                              | 267                              | 119                               |
| TBJD335 *035 R □ # @ 0 ° ++    | TBJD335 *035 R □ L C # ^ ++ | D    | 3.3                                 | 35                                  | 2000                                | 0.87    | 8.7   | 17.4   | 6      | 9               | 10    | 0.150                             | 274                              | 246                              | 110                               | 548                              | 493                              | 219                               |
| TBJB475 *035 R □ # @ 0 ° ++    | TBJB475 *035 R □ L C # ^ ++ | B    | 4.7                                 | 35                                  | 2200                                | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.085                             | 197                              | 177                              | 79                                | 432                              | 389                              | 173                               |
| TBJB475 *035 J □ # @ 0 ° ++    | TBJB475 *035 J □ L C # ^ ++ | B    | 4.7                                 | 35                                  | 1500                                | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.085                             | 238                              | 214                              | 95                                | 357                              | 321                              | 143                               |

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

**NOTE:** KYOCERA AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.



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# TBJ SERIES

## COTS-Plus – Space Level



| RATING & PART NUMBER REFERENCE |                          |      | Parametric Specifications by Rating |                                     |                                     |         |       |        |        |                 |       | Typical RMS Ripple Data by Rating |                                  |                                  |                                   |                                  |                                  |                                   |
|--------------------------------|--------------------------|------|-------------------------------------|-------------------------------------|-------------------------------------|---------|-------|--------|--------|-----------------|-------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
|                                |                          |      | Cap<br>@ 120Hz<br>µF @<br>25°C      | DC Rated<br>Voltage<br>V @<br>+85°C | ESR<br>@ 100kHz<br>mOhms<br>@ +25°C | DCL max |       |        | DF Max |                 |       | Power<br>Dissipation<br>W         | 25°C<br>Ripple<br>mA<br>(100kHz) | 85°C<br>Ripple<br>mA<br>(100kHz) | 125°C<br>Ripple<br>mA<br>(100kHz) | 25°C<br>Ripple<br>mV<br>(100kHz) | 85°C<br>Ripple<br>mV<br>(100kHz) | 125°C<br>Ripple<br>mV<br>(100kHz) |
|                                |                          |      |                                     |                                     |                                     | +25°C   | +85°C | +125°C | +25°C  | +(85/125)<br>°C | -55°C |                                   |                                  |                                  |                                   |                                  |                                  |                                   |
| P/N                            | Space Level P/N          | Case |                                     |                                     |                                     | (µA)    | (µA)  | (µA)   | (%)    | (%)             | (%)   |                                   |                                  |                                  |                                   |                                  |                                  |                                   |
| TBJC475*035 R □ # @ 0^++       | TBJC475*035 R □ L C #^++ | C    | 4.7                                 | 35                                  | 1410                                | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.110                             | 279                              | 251                              | 112                               | 394                              | 354                              | 158                               |
| TBJC475*035 J □ # @ 0^++       | TBJC475*035 J □ L C #^++ | C    | 4.7                                 | 35                                  | 600                                 | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.110                             | 428                              | 385                              | 171                               | 257                              | 231                              | 103                               |
| TBJD475*035 R □ # @ 0^++       | TBJD475*035 R □ L C #^++ | D    | 4.7                                 | 35                                  | 1500                                | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.150                             | 316                              | 285                              | 126                               | 474                              | 427                              | 190                               |
| TBJC685*035 R □ # @ 0^++       | TBJC685*035 R □ L C #^++ | C    | 6.8                                 | 35                                  | 1070                                | 1.8     | 18    | 36     | 6      | 9               | 10    | 0.110                             | 321                              | 289                              | 128                               | 343                              | 309                              | 137                               |
| TBJC685*035 J □ # @ 0^++       | TBJC685*035 J □ L C #^++ | C    | 6.8                                 | 35                                  | 600                                 | 1.8     | 18    | 36     | 6      | 9               | 10    | 0.110                             | 428                              | 385                              | 171                               | 257                              | 231                              | 103                               |
| TBJD685*035 R □ # @ 0^++       | TBJD685*035 R □ L C #^++ | D    | 6.8                                 | 35                                  | 1300                                | 1.8     | 18    | 36     | 6      | 9               | 10    | 0.150                             | 340                              | 306                              | 136                               | 442                              | 397                              | 177                               |
| TBJC106*035 R □ # @ 0^++       | TBJC106*035 R □ L C #^++ | C    | 10                                  | 35                                  | 800                                 | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.110                             | 371                              | 334                              | 148                               | 297                              | 267                              | 119                               |
| TBJC106*035 J □ # @ 0^++       | TBJC106*035 J □ L C #^++ | C    | 10                                  | 35                                  | 600                                 | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.110                             | 428                              | 385                              | 171                               | 257                              | 231                              | 103                               |
| TBJD106*035 R □ # @ 0^++       | TBJD106*035 R □ L C #^++ | D    | 10                                  | 35                                  | 800                                 | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.150                             | 433                              | 390                              | 173                               | 346                              | 312                              | 139                               |
| TBJD106*035 J □ # @ 0^++       | TBJD106*035 J □ L C #^++ | D    | 10                                  | 35                                  | 250                                 | 2.6     | 26    | 52     | 6      | 9               | 10    | 0.150                             | 775                              | 697                              | 310                               | 194                              | 174                              | 77                                |
| TBJD156*035 R □ # @ 0^++       | TBJD156*035 R □ L C #^++ | D    | 15                                  | 35                                  | 720                                 | 3.9     | 39    | 78     | 6      | 9               | 10    | 0.150                             | 456                              | 411                              | 183                               | 329                              | 296                              | 131                               |
| TBJD156*035 J □ # @ 0^++       | TBJD156*035 J □ L C #^++ | D    | 15                                  | 35                                  | 225                                 | 3.9     | 39    | 78     | 6      | 9               | 10    | 0.150                             | 816                              | 735                              | 327                               | 184                              | 165                              | 73                                |
| TBJD226*035 R □ # @ 0^++       | TBJD226*035 R □ L C #^++ | D    | 22                                  | 35                                  | 650                                 | 5.8     | 58    | 116    | 6      | 9               | 10    | 0.150                             | 480                              | 432                              | 192                               | 312                              | 281                              | 125                               |
| TBJD226*035 J □ # @ 0^++       | TBJD226*035 J □ L C #^++ | D    | 22                                  | 35                                  | 200                                 | 5.8     | 58    | 116    | 6      | 9               | 10    | 0.150                             | 866                              | 779                              | 346                               | 173                              | 156                              | 69                                |
| TBJE336*035 R □ # @ 0^++       | TBJE336*035 R □ L C #^++ | E    | 33                                  | 35                                  | 590                                 | 8.7     | 87    | 174    | 6      | 9               | 10    | 0.165                             | 529                              | 476                              | 212                               | 312                              | 281                              | 125                               |
| TBJE336*035 J □ # @ 0^++       | TBJE336*035 J □ L C #^++ | E    | 33                                  | 35                                  | 250                                 | 8.7     | 87    | 174    | 6      | 9               | 10    | 0.165                             | 812                              | 731                              | 325                               | 203                              | 183                              | 81                                |
| TBJU476*035 R □ # @ 0^++       | TBJU476*035 R □ L C #^++ | U    | 47                                  | 35                                  | 400                                 | 12.3    | 123   | 246    | 10     | 12              | 12    | 0.165                             | 642                              | 578                              | 257                               | 257                              | 231                              | 103                               |
| TBJU476*035 J □ # @ 0^++       | TBJU476*035 J □ L C #^++ | U    | 47                                  | 35                                  | 200                                 | 12.3    | 123   | 246    | 10     | 12              | 12    | 0.165                             | 908                              | 817                              | 363                               | 182                              | 163                              | 73                                |
| TBJA224*050 R □ # @ 0^++       | TBJA224*050 R □ L C #^++ | A    | 0.22                                | 50                                  | 7500                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 100                              | 90                               | 40                                | 750                              | 675                              | 300                               |
| TBJA224*050 J □ # @ 0^++       | TBJA224*050 J □ L C #^++ | A    | 0.22                                | 50                                  | 7000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 104                              | 93                               | 41                                | 725                              | 652                              | 290                               |
| TBJA334*050 R □ # @ 0^++       | TBJA334*050 R □ L C #^++ | A    | 0.33                                | 50                                  | 7000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.075                             | 104                              | 93                               | 41                                | 725                              | 652                              | 290                               |
| TBJB474*050 R □ # @ 0^++       | TBJB474*050 R □ L C #^++ | B    | 0.47                                | 50                                  | 5000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.085                             | 130                              | 117                              | 52                                | 652                              | 587                              | 261                               |
| TBJB684*050 R □ # @ 0^++       | TBJB684*050 R □ L C #^++ | B    | 0.68                                | 50                                  | 4000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.085                             | 146                              | 131                              | 58                                | 583                              | 525                              | 233                               |
| TBJB684*050 J □ # @ 0^++       | TBJB684*050 J □ L C #^++ | B    | 0.68                                | 50                                  | 2000                                | 0.3     | 3     | 6      | 4      | 6               | 8     | 0.085                             | 206                              | 186                              | 82                                | 412                              | 371                              | 165                               |
| TBJB105*050 R □ # @ 0^++       | TBJB105*050 R □ L C #^++ | B    | 1                                   | 50                                  | 3400                                | 0.4     | 4     | 8      | 4      | 6               | 8     | 0.085                             | 158                              | 142                              | 63                                | 538                              | 484                              | 215                               |
| TBJB105*050 J □ # @ 0^++       | TBJB105*050 J □ L C #^++ | B    | 1                                   | 50                                  | 2000                                | 0.4     | 4     | 8      | 4      | 6               | 8     | 0.085                             | 206                              | 186                              | 82                                | 412                              | 371                              | 165                               |
| TBJC105*050 R □ # @ 0^++       | TBJC105*050 R □ L C #^++ | C    | 1                                   | 50                                  | 3000                                | 0.4     | 4     | 8      | 4      | 6               | 8     | 0.110                             | 191                              | 172                              | 77                                | 574                              | 517                              | 230                               |
| TBJC155*050 R □ # @ 0^++       | TBJC155*050 R □ L C #^++ | C    | 1.5                                 | 50                                  | 2500                                | 0.6     | 6     | 12     | 6      | 9               | 10    | 0.110                             | 210                              | 189                              | 84                                | 524                              | 472                              | 210                               |
| TBJC155*050 J □ # @ 0^++       | TBJC155*050 J □ L C #^++ | C    | 1.5                                 | 50                                  | 1500                                | 0.6     | 6     | 12     | 6      | 9               | 10    | 0.110                             | 271                              | 244                              | 108                               | 406                              | 366                              | 162                               |
| TBJC225*050 R □ # @ 0^++       | TBJC225*050 R □ L C #^++ | C    | 2.2                                 | 50                                  | 1700                                | 0.8     | 8     | 16     | 6      | 9               | 10    | 0.110                             | 254                              | 229                              | 102                               | 432                              | 389                              | 173                               |
| TBJC225*050 J □ # @ 0^++       | TBJC225*050 J □ L C #^++ | C    | 2.2                                 | 50                                  | 1000                                | 0.8     | 8     | 16     | 6      | 9               | 10    | 0.110                             | 332                              | 298                              | 133                               | 332                              | 298                              | 133                               |
| TBJD225*050 R □ # @ 0^++       | TBJD225*050 R □ L C #^++ | D    | 2.2                                 | 50                                  | 2000                                | 0.8     | 8     | 16     | 4.5    | 7               | 9     | 0.150                             | 274                              | 246                              | 110                               | 548                              | 493                              | 219                               |
| TBJD225*050 J □ # @ 0^++       | TBJD225*050 J □ L C #^++ | D    | 2.2                                 | 50                                  | 1200                                | 0.8     | 8     | 16     | 4.5    | 7               | 9     | 0.150                             | 354                              | 318                              | 141                               | 424                              | 382                              | 170                               |
| TBJC335*050 R □ # @ 0^++       | TBJC335*050 R □ L C #^++ | C    | 3.3                                 | 50                                  | 1400                                | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.110                             | 280                              | 252                              | 112                               | 392                              | 353                              | 157                               |
| TBJC335*050 J □ # @ 0^++       | TBJC335*050 J □ L C #^++ | C    | 3.3                                 | 50                                  | 1000                                | 1.2     | 12    | 24     | 6      | 9               | 10    | 0.110                             | 332                              | 298                              | 133                               | 332                              | 298                              | 133                               |
| TBJD335*050 R □ # @ 0^++       | TBJD335*050 R □ L C #^++ | D    | 3.3                                 | 50                                  | 1100                                | 1.2     | 12    | 24     | 4.5    | 7               | 9     | 0.150                             | 369                              | 332                              | 148                               | 406                              | 366                              | 162                               |
| TBJD335*050 J □ # @ 0^++       | TBJD335*050 J □ L C #^++ | D    | 3.3                                 | 50                                  | 800                                 | 1.2     | 12    | 24     | 4.5    | 7               | 9     | 0.150                             | 433                              | 390                              | 173                               | 346                              | 312                              | 139                               |
| TBJD475*050 R □ # @ 0^++       | TBJD475*050 R □ L C #^++ | D    | 4.7                                 | 50                                  | 900                                 | 1.8     | 18    | 36     | 4.5    | 7               | 9     | 0.150                             | 408                              | 367                              | 163                               | 367                              | 331                              | 147                               |
| TBJD475*050 J □ # @ 0^++       | TBJD475*050 J □ L C #^++ | D    | 4.7                                 | 50                                  | 600                                 | 1.8     | 18    | 36     | 4.5    | 7               | 9     | 0.150                             | 500                              | 450                              | 200                               | 300                              | 270                              | 120                               |
| TBJD685*050 R □ # @ 0^++       | TBJD685*050 R □ L C #^++ | D    | 6.8                                 | 50                                  | 700                                 | 2.6     | 26    | 52     | 4.5    | 7               | 9     | 0.150                             | 463                              | 417                              | 185                               | 324                              | 292                              | 130                               |
| TBJE106*050 R □ # @ 0^++       | TBJE106*050 R □ L C #^++ | E    | 10                                  | 50                                  | 700                                 | 3.8     | 38    | 76     | 4.5    | 7               | 9     | 0.165                             | 486                              | 437                              | 194                               | 340                              | 306                              | 136                               |
| TBJE106*050 J □ # @ 0^++       | TBJE106*050 J □ L C #^++ | E    | 10                                  | 50                                  | 300                                 | 3.8     | 38    | 76     | 4.5    | 7               | 9     | 0.165                             | 742                              | 667                              | 297                               | 222                              | 200                              | 89                                |
| TBJU156*050 R □ # @ 0^++       | TBJU156*050 R □ L C #^++ | U    | 15                                  | 50                                  | 500                                 | 5.6     | 56    | 112    | 30     | 45              | 45    | 0.165                             | 574                              | 517                              | 230                               | 287                              | 259                              | 115                               |
| TBJU226*050R □ # @ 0^++        | TBJU226*050 R □ L C #^++ | U    | 22                                  | 50                                  | 500                                 | 8.2     | 82    | 164    | 30     | 45              | 45    | 0.165                             | 574                              | 517                              | 230                               | 287                              | 259                              | 115                               |

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

**NOTE: KYOCERA AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.**