X5R DIELECTRIC CAPACITOR



FEATURES:

X5R DIELECTRIC CAPACITOR IS A KIND OF TEMPERATURE STABLE CAPACITOR WIDELY USED IN INDUSTRY. IT BELONGS TO CLASS II DIELECTRIC MATERIAL AND HAS HIGH DIELECTRIC CONSTANT. THE CHANGE RATE OF CAPACITY VALUE IS WITHIN 15% AND THE AGING RATE IS 3% PER TEN YEARS IN THE RANGE OF OPERATION TEMPERATURE (-55 °C \sim + 85 °C)

RATED VOLTAGE AND CAPACITANCE RANGE

SIZE	6.3V	10V	16V	25V	35V	50V
0201	180pF~1uF	180pF~220nF	180pF~100nF	180pF~100nF	180pF~10nF	180pF~10nF
0402	100pF~10uF	100pF~2.2uF	100pF~2.2uF	100pF~2.2uF	100pF~1uF	100pF~220nF
0603	100pF~22uF	100pF~10uF	100pF~10uF	100pF~10uF	100pF~2.2uF	100pF~1uF
0805	100pF~47uF	100pF~22uF	100pF~22uF	100pF~22uF	100pF~10uF	100pF~4.7uF
1206	100pF~100uF	100pF~47uF	100pF~22uF	100pF~22uF	100pF~10uF	100pF~10uF
1210	220pF~100uF	220pF~47uF	220pF~47uF	220pF~22uF	220pF~10uF	220pF~10uF
1812	470pF~47uF	470pF~47uF	470pF~47uF	470pF~22uF	470pF~4.7uF	470pF~4.7uF
2220	220pF~47uF	220pF~47uF	220pF~47uF	220pF~47uF	220pF~10uF	220pF~10uF

MAIN PERFORMANCE CHARACTERISTICS

Capacitance Range	100pF~100uF
Capacitance Tolerance	Usually±10%, ±20%
Operating Temperature Range	-55°C~+85°C
Temperature Coefficient	Within \pm 15%
Rated Voltage	6.3V/10V/16V/25V/35V/50V
Dissipation Factor	Refer to the X5R dissipation standard worksheet
Insulation Resistance	Choose the smaller value if over $10G\Omega$ or 100Ω .F
Withstanding Voltage	U₅≤50V; 2.5*U₅(Rated Voltage)
Testing Voltage	$10\mu\text{F},1\pm0.2\text{Vrms}$ > $10\mu\text{F},0.5\pm0.1\text{Vrms}$
Testing Frequency	10μF,1Khz ±10% >10μF,120±24Hz

X5R DISSIPATION STANDARD WORKSHEET

SIZE	UR	CAPACITANCE RANGE	DF
0201	/	C≤0.01μF	≤7%
		C>0.01µF	≤10%
0402	/	C≤0.1μF	≤7%
		C>0.1µF	≤10%
0603	≤25V	C≤0.47μF	≤7%
		C>0.47µF	≤10%
	>25V	C≤0.1µF	≤5%
		0.1μF <c≤0.22μf< td=""><td>≤7%</td></c≤0.22μf<>	≤7%
		C>0.22µF	≤10%
		C<1F	< 70%

0805 -	≤25V	< ±µ₁	~1./0
		C>1µF	≤10%
	>25V	C≤0.47μF	€7%
		C>0.47µF	≤10%
1206	≤25V	C<2.2µF	≤7%
		2.2μF≪C≪47μF	≤10%
	>25V	C<1µF	€7%
		1μF≤C≤47μF	≤10%
1210	/	C<2.2μF	≤7%
		2.2µF≪C≪47µF	≤10%
1812	/	C<2.2µF	≤7%
		2.2μF≪C≪47μF	≤10%
2225	/	C<2.2µF	≤7%
		2.2μF≪C≪47μF	≤10%

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Module

Electronic materials



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