

X5R介质电容器

X5R DIELECTRIC CAPACITORS

X7R類介質電容器是在工業中廣泛使用的一種溫度穩定型電容器，屬於Ⅱ類介質材料，具有中等介電常數，在使用溫度（-55℃~+125℃）範圍內容值變化率在±15%以內，容值老化率為1%。

X7R formulations are called “temperature stable” ceramics and fall into eia class Ⅱ dielectric materials.

X7R is the most popular of these intermediate dielectric constant materials. Its temperature variation of capacitance is within ±15% from -55to 125℃. Its aging rate is 1%.

主要性能参数 PERFORMANCE CHARACTERISTICS

容值範圍 Capacitance Range	100pF~47μF
容差 Capacitance Tolerance	通常: ±10%, ±20%. Preferred ±10%, ±20%
使用溫度 Operating Temperature Range	-55~85℃
溫度特性 Temperature Characteristics	±15%以內 within±15%
額定電壓 Rated Voltage	6.3V,10V,16V,25V ,50v,100v
損耗 Dissipation Factor	額定電壓6.3V時, DF≤5.0% For 6.3V: DF≤5.0% 額定電壓16V和10V時, DF≤3.5% For 16V and 10v: DF≤3.5% 額定電壓25V以上時, DF≤2.5% For 25V min: DF≤2.5%
絕緣電阻 Insulation Resistance	100GΩ或500Ω以上, 取最小值以上 100GΩ min.or500Ω F min whichever is less
耐壓 Dielectric Withstanding Voltage	2.5倍額定電壓 250% rated voltage
測試電壓 Test Voltage	1±0.2Vrms
測試頻率 Test Frequency	CR≤1.0μF時,1KHz CR≥1.0μF時,120Hz

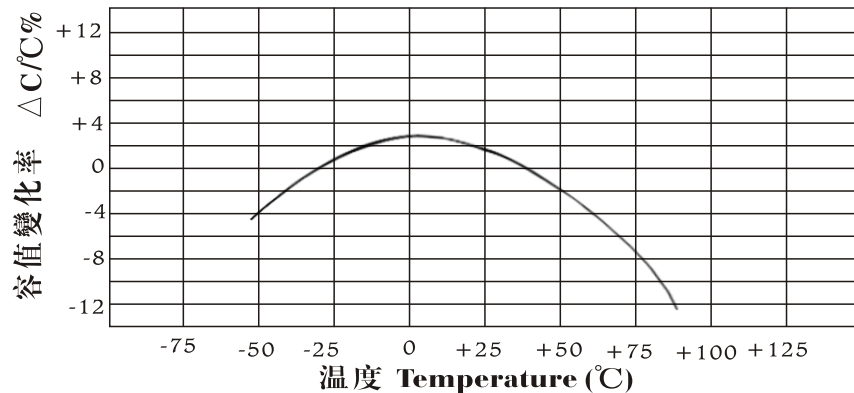
尺寸与容值范围 CAPACITANCE RANGE VS.CHIP SIZE

尺寸 Size	10V	16V	25V	50V	100V
0201	100pF~10nF	100pF~10nF	100pF~10nF	100pF~1.0nF	--
0402	100pF~1μF	100pF~1μF	100pF~1μF	100pF~100nF	100pF~100nF
0603	100pF~4.7μF	100pF~4.7μF	100pF~2.2μF	100pF~2.2μF	100pF~1μF
0805	220pF~22μF	220pF~22μF	220pF~10μF	220pF~10μF	220pF~4.7μF
1206	220pF~47μF	220pF~47μF	220pF~22μF	220pF~22μF	220pF~10μF
1210	220pF~47μF	220pF~47μF	220pF~22μF	220pF~22μF	220pF~10μF

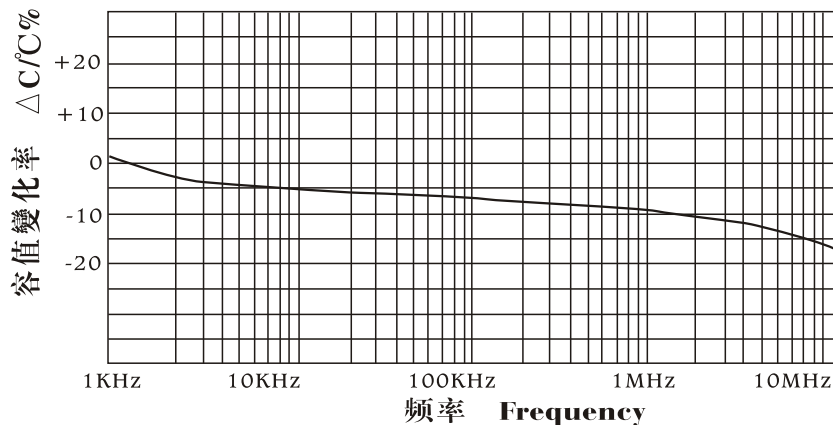
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特征曲綫 TYPICAL CHARACTERISTIC CURVES

溫度特性 Temperature Characteristic



容值與頻率關係曲綫 Capacitance vs. Frequency



絕緣電阻與溫度關係曲綫

Insulation Resistance vs. Temperature

