

Specification and test methods

No	Item	Test Method	Specification										
1	Capacitance	The capacitance/DF shall be measured at 25℃ at the frequency and voltage shown below	Within the specifide tolerance										
2	Dissipation Factor		<table><tr><td>Type Item</td><td>NPO(≤1nf)</td><td>NPO(>1nf) X7R,X5R,Y5V,Z5U</td></tr><tr><td>Frequency</td><td>1±0.1MHz</td><td>1±0.1KHz</td></tr><tr><td>Voltage</td><td>1±0.2Vrms</td><td>1±0.1Vrms 0.1±0.02Vrms (Y5V)</td></tr></table>	Type Item	NPO(≤1nf)	NPO(>1nf) X7R,X5R,Y5V,Z5U	Frequency	1±0.1MHz	1±0.1KHz	Voltage	1±0.2Vrms	1±0.1Vrms 0.1±0.02Vrms (Y5V)	NPO:DF≤0.1% X7R/X5R:Vr=50V~4KV DF≤5% Vr=25V, DF≤7% Vr=16V, DF≤9% Vr=10V, DF≤11% Vr=6.3V, DF≤13% Y5V:Vr=25V/50V, DF≤8% Vr=16V, DF≤10% Vr=6.3V/10V, DF≤13% Z5U:Vr=100V/250V, DF≤5%
Type Item	NPO(≤1nf)		NPO(>1nf) X7R,X5R,Y5V,Z5U										
Frequency	1±0.1MHz	1±0.1KHz											
Voltage	1±0.2Vrms	1±0.1Vrms 0.1±0.02Vrms (Y5V)											
3	Insulation Resistance	Test voltage:rated voltage Charge time:2 minutes max. Charge current:less than 50mA	NPO:≥10GΩ Y5V:≥1GΩ X7R:≥5GΩ Z5U:≥1GΩ X5R:≥3GΩ										
4	Dielectric Strength	Test voltage(Vt): Vt=Vr×250% for NPO(Vr=25V/50V/100V) Vt=Vr×250% forX7R,X5R,Y5V/Z5U (Vr=10V/16V/25V/50V/100V) Vt=Vr×150%+100 for product Vr=250V Vt=Vr×150% for product Vr=500V Vt=Vr×120% for product Vr=1KV~4KV Y2:2500VAC/5KVDC-250VAC Y3:1500VAC/3KVDC-250VAC Test time:1~5 seconds Charge current:less than 50mA	No defect or abnormality Ir ≤ 1uA										
5	Breakdown Voltage	The DC voltage is applied between the terminations until the leakage current more than 10uA	Vr=10V/16V/25V/50V, BDV≥700%× Vr Vr=100V/200V/250V. BDV≥500%× Vr Vr>250V BDV≥300%× Vr Vr>1KV BDV≥200%× Vr Vr≥3KV BDV≥150%× Vr Y2:3000VAC/6KVDC Y3:2000VAC/4KVDC										
6	Appearance	X8 magnification glass	No defect or abnormalities										
7	Dimension	Using calipers	Within the specified dimension										
8	Solder ability of Termination	The capacitors are dipped into the solder bath at 225±5℃ for 2±0.5 seconds, then check the soldering by measuring the areas cover with solder.	95% of the terminations is to be soldered evenly and continuously.										
9	Leaching (endurance of Ni to soldering heat)	The capacitors are dipped into the solder bath at 260±5℃ for 30±1 seconds, then check the soldering by measuring the areas cover with solder.	95% of the terminations are to be soldered evenly and continuously.										