



X7R RF By-Pass Capacitors

2225X (0.220" x 0.250")

≠ Product Features

- High Q
- High RF Current/Voltage
- Ultra Stable Performance
- Capacitance Range:
10nF to 1μF

≠ Product Applications

Typical Functional Applications:

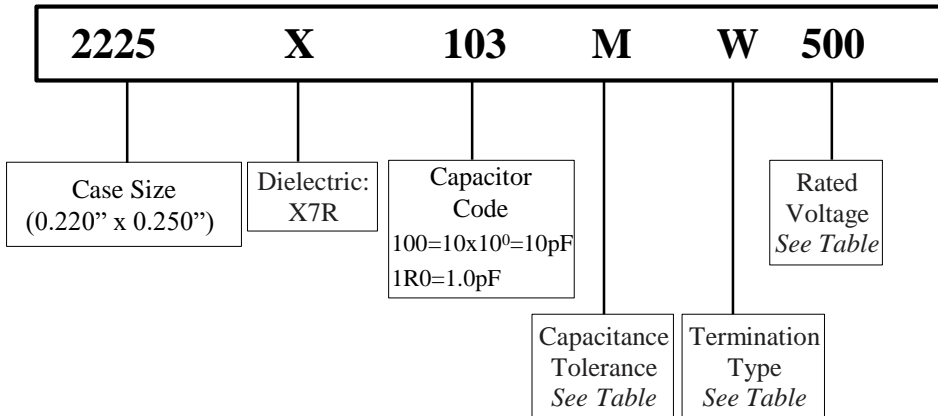
- Tuning • Bypass • Coupling
- D.C. Blocking • Impedance Matching

Typical Circuit Applications

- UHF/Microwave RF Power Amplifiers
- Antenna Tuning • Plasma Chambers
- Medical Equipment



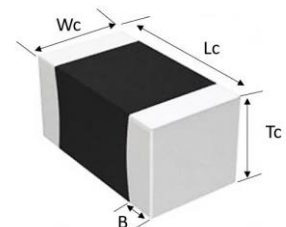
≠ Part Numbering



≠ Capacitor Dimensions

Unit: inch (millimeter)

Length	Width	Thickness	Overlap
Lc	Wc	Tc	B
0.230+0.020 ~ -0.012 (5.84+0.51 ~ -0.30)	0.250 ± 0.015 (6.35 ± 0.38)	0.165 (4.19 max)	0.030 ± 0.015 (0.762 ± 0.380)





≠ 2225X Capacitance Values

Cap. uF	Code	Tol.	Rated WVDC	Cap. uF	Code	Tol.	Rated WVDC	Cap. uF	Code	Tol.	Rated WVDC
0.010	103		300V	0.082	823		200V	0.330	334		150V
0.012	123		Code	0.100	104		Code	0.470	474		Code
0.015	153		301	0.120	124	K,M	Code	0.560	564		151
0.022	223	K,M		0.150	154		201	0.680	684	K,M	
0.033	333		250V	0.220	224			0.820	824		100V
0.047	473		Code					1.000	105		101
0.068	683		251								

Special capacitances, tolerances and WVDC are available. Please contact PPI.

≠ Capacitance Tolerance Codes

Code	K	M
Tol.	±10%	±20%

≠ Termination Types

Termination Code	Plated Material
W	Sn/Ni
L	90% Sn10%Pb
P (Non-Magnetic)	Sn/ Cu
C	Ag/Pb
G	Au/Ni

≠ Voltage Codes

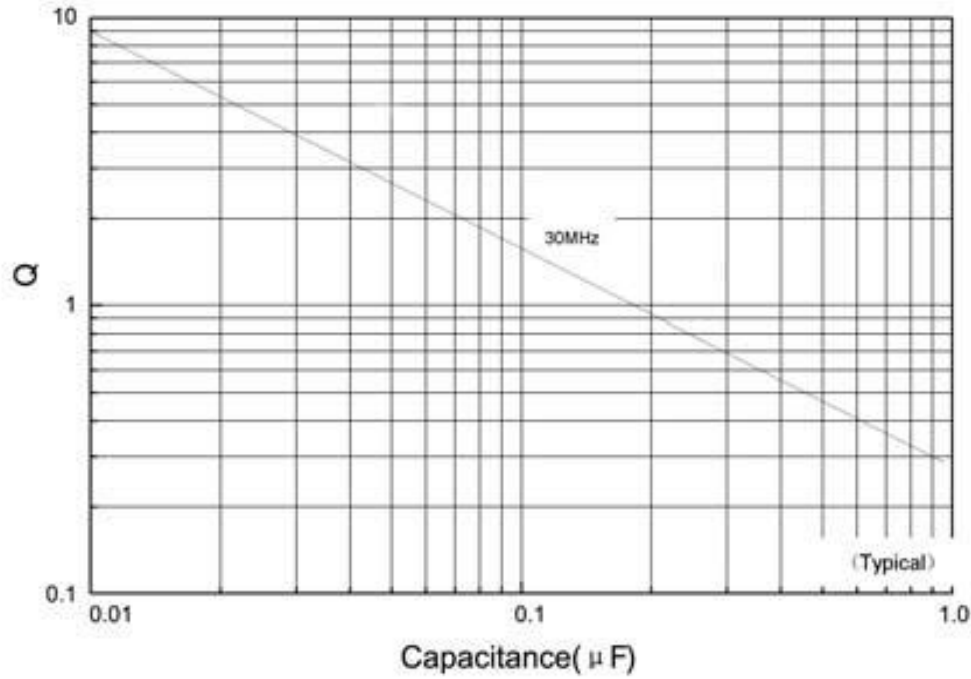
Voltage	Code
100V	101
150V	151
200V	201
250V	251
300V	301

Note: "Non-Magnetic" means no magnetic materials.

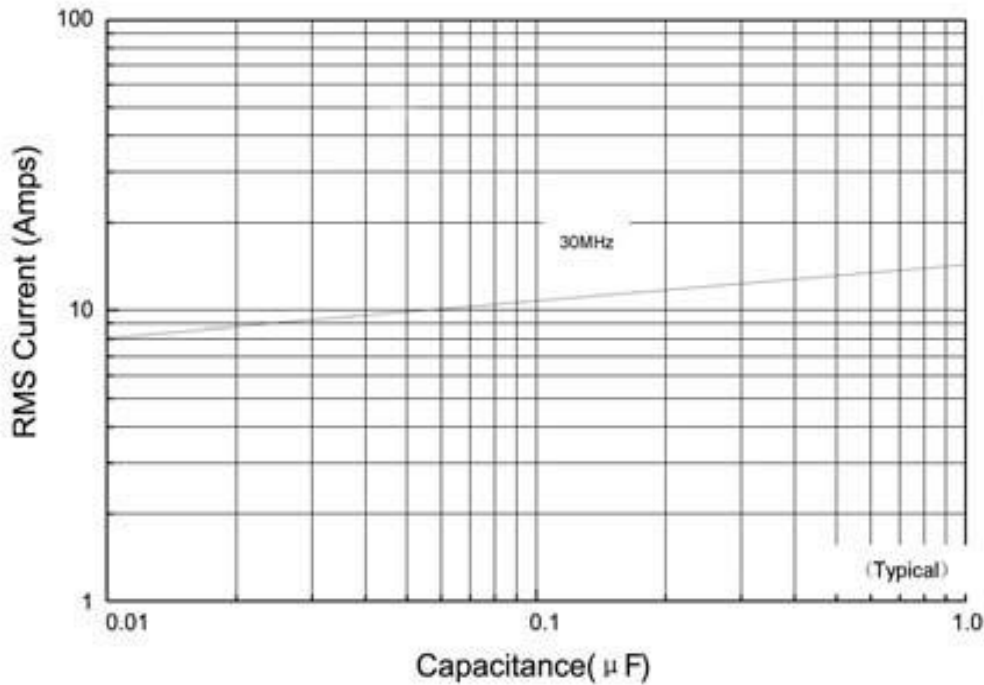
≠ Electrical Specifications

Operating Temperature Range	-55°C to +125°C
Insulation Resistance (IR)	Insulation Resistance @ +25°C > 1000ΩF Insulation Resistance @ +125°C > 100ΩF
Temperature Voltage Coefficient	± 15% Maximum
Dielectric Withstanding Voltage (DWV)	2.5x WVDC, 5 seconds
Max Dissipation Factor	0.025 (2.5%) max
Test Parameters	1kHz, 1.0 VRMS, 25°C

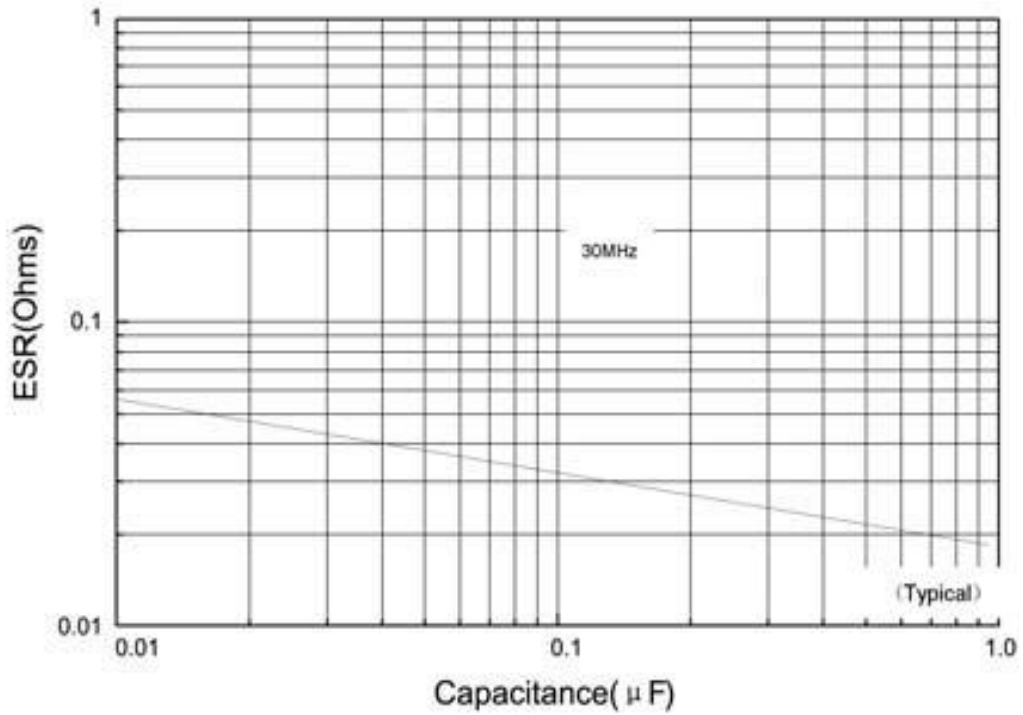
Q vs. Frequency



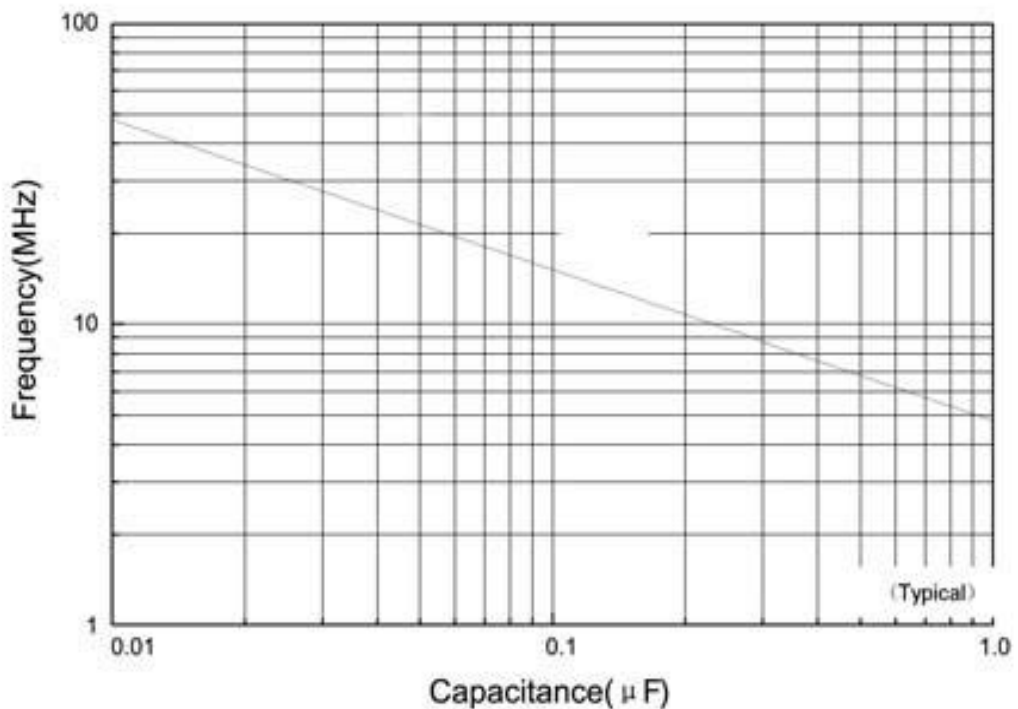
Current Rating vs. Capacitance



⚡ ESR vs Capacitance

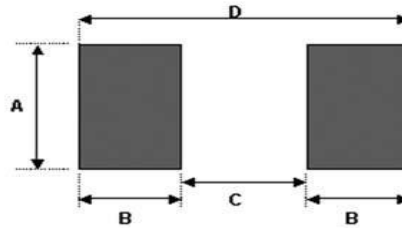


⚡ Series Resonance vs. Capacitance



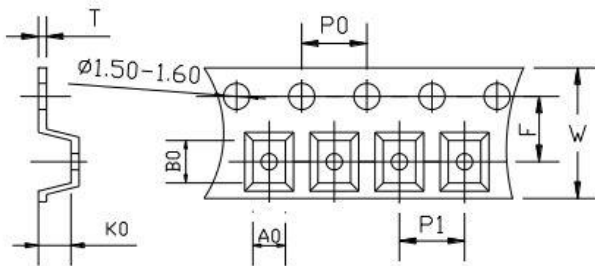
≠ Mounting Pad Recommendations

Orientation	A Min	B Min	C Min	D Min
Vertical	0.185"	0.050"	0.200"	0.300"
Horizontal	0.280"	0.050"	0.200"	0.300"

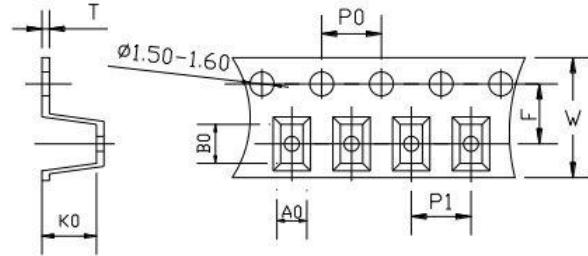


≠ Tape & Reel Specifications (mm)

Horizontal Orientation



Vertical Orientation



Orientation	W	P0	P1	T	F	Qty Min	Qty/reel	Tape Material
Horizontal	8.00	4.00	4.00	0.22	3.50	500	3000	Plastic
Vertical	12.00	4.00	4.00	0.30	5.50	300	2000	Plastic

A₀ B₀ K₀

- Determined by component size. Typical clearance between the cavity and the component is:
.05 (.002) min to .50 (.020) max for 8mm tape and .50 (.002) min to .65 (.026) max for 12mm tape.
- The component cannot rotate more than 20° within the determined cavity.