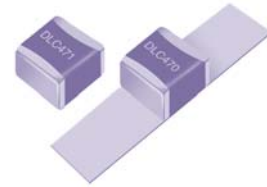


2225P (.220 x .250)

◆ **Product Features**

High Q, High RF Current/Voltage, High RF Power, Low ESR/ESL,
Ultra-Stable Performance.



◆ **Product Application**

Typical Functional Applications: Bypass, Coupling, Tuning, Impedance Matching and D.C. Blocking.

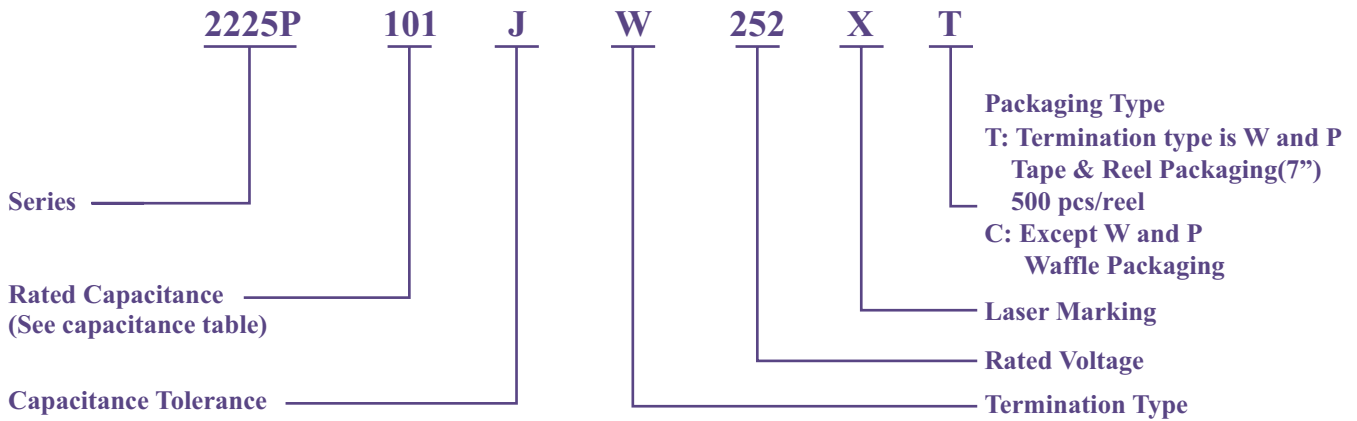
Typical Circuit Applications: UHF/VHF RF Power Amplifiers, Antenna Tuning, Plasma Chambers and Medical.

◆ **2225P Capacitance Table**

Cap.pF	Code	Tol.	WVDC V	Cap.pF	Code	Tol.	WVDC V	Cap.pF	Code	Tol.	WVDC V
1.0	1R0	B,C,D	2500V Code 252 or 3600V Code 362	18	180	F,G, J,K,	2500V Code 252 or 3600V Code 362	330	331	F,G, J,K,	1500V Code 152 or 2000V Code 202
1.2	1R2			22	220			390	391		
1.5	1R5			27	270			470	471		
1.8	1R8			33	330			560	561		
2.2	2R2			39	390			680	681		
2.7	2R7			47	470			820	821		
3.3	3R3			56	560			1000	102		
3.9	3R9			68	680			1200	122		
4.7	4R7			82	820			1500	152		
5.6	5R6			100	101			1800	182		
6.8	6R8	F,G, J,K,	2500V Code 252 or 3000V Code 302	120	121	2200	222	500V Code 501			
8.2	8R2			150	151	2700	272	300V Code 301			
10	100			180	181						
12	120			220	221						
15	150			270	271						

Remark: special capacitance, tolerance and WVDC are available, consult with PASSIVE PLUS.

◆Part Numbering



Capacitance Tolerance							
Code	B	C	D	F	G	J	K
Tolerance	± 0.1pF	± 0.25pF	± 0.5pF	± 1%	± 2%	± 5%	± 10%


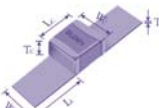
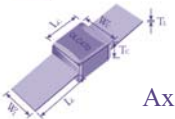

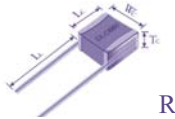
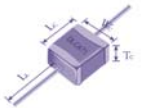
◆2225P Lead Type and Dimensions

unit:inch(millimeter)

Series	Term. Code	Type/Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material	
			Length (L _c)	Width (W _c)	Thickness (T _c)	Overlap (B)	Length (L _l)	Width (W _l)	Thickness (T _l)		
2225P	W	Chip	.230+.020 ~.010 (5.84+0.51 ~-0.25)	.250 ± .015 (6.35 ±0.38)	.165 (4.19) max	.047 (1.20) max	—	—	—	Plated Nickel, Plated 100% Sn, RoHS Compliant	
2225P	MS	Microstrip	.245 ± (6.22 ±0.64)	.250 ± (6.35 ±0.38)	.165 (4.19) max	—	.500 (12.7) min	.240 ±	.008 ±	Silver-plated Copper	
2225P	AR	Axial Ribbon						.005 (6.10 ±0.13)	.001 (0.1 ±0.025)		
2225P	RR	Radial Ribbon						.394 ±.039 (10±1)	.114 ±.005 (2.9 ±0.13)		.012 ±.001 (0.3 ±0.025)
2225P	RW	Radial Wire						1.0 (25.4) min	Dia.=.031±.004 (0.8±0.1)		
2225P	AW	Axial Wire									

◆ 2225P Lead Type and Dimensions

unit:inch(millimeter)

Series	Term. Code	Type/Outlines	Capacitor Dimensions			Overlap and Lead Dimensions				Overlap and Lead Material	
			Length (Lc)	Width (Wc)	Thickness (Tc)	Overlap (B)	Length (Ll)	Width (Wl)	Thickness (Tl)		
2225P	P (non-mag)	 Chip	.230+.020 ~.010 (5.84+0.51 ~-.025)	.250 ± .015 (6.35 ±0.38)	.165 (4.19) max	.047 (1.20) max	—	—	—	Copper Plated 100% Sn, Non-Mag, RoHS Compliant	
2225P	MN (non-mag)	 Microstrip	.245 ±	.250 ±	.165 (4.19) max	—	.500 (12.7) min	.240 ±	.008 ±	Silver or Silver-plated Copper	
2225P	AN (non-mag)	 Axial Ribbon						.005 (6.10 ±0.13)	.001 (0.1 ±0.025)		
2225P	FN (non-mag)	 Radial Ribbon						.394 ±.039 (10±1)	.114 ±.005 (2.9 ±0.13)		.012 ±.001 (0.3 ±0.025)
2225P	RN (non-mag)	 Radial Wire						1.0 (25.4) min	Dia.=.031±.004 (0.8±0.1)		
2225P	BN (non-mag)	 Axial Wire									

◆ Performance

Item	Specifications
Quality Factor (Q)	1 pF to 1000 pF: greater than 10,000 at 1 MHz. 1100 pF to 2700 pF: greater than 10,000 at 1 KHz.
Insulation Resistance (IR)	Test Voltage: 500V 10 ⁵ Megohms min. @ +25°C at rated WVDC. 10 ⁴ Megohms min. @ +125°C at rated WVDC.
Rated Voltage	See Rated Voltage Table
Dielectric Withstanding Voltage (DWV)	1 pF to 470 pF: 120% of rated WVDC for 5 secs. 560 pF to 1200 pF: 150% of rated WVDC for 5 secs. 1500 pF to 2700 pF: 250% of rated WVDC for 5 secs.
Operating Temperature Range	-55°C to +125°C
Temperature Coefficient (TC)	+90 ± 20ppm/°C
Capacitance Drift	± 0.02% or ± 0.02pF, whichever is greater.
Piezoelectric Effects	None
Termination Type	See Termination Type Table

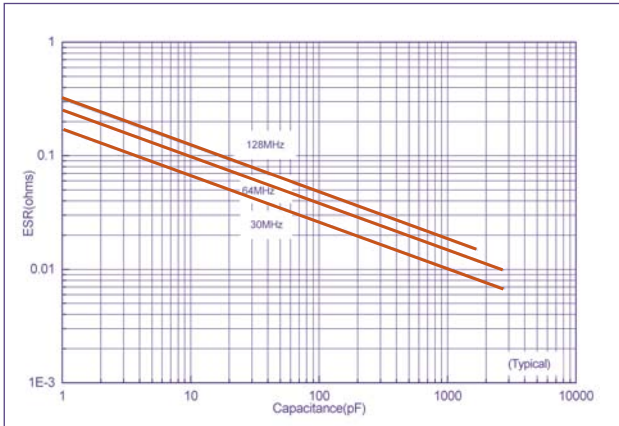
Capacitors are designed and manufactured to meet the requirements of MIL-PRF-55681 and MIL-PRF-123.

◆ Environmental Tests

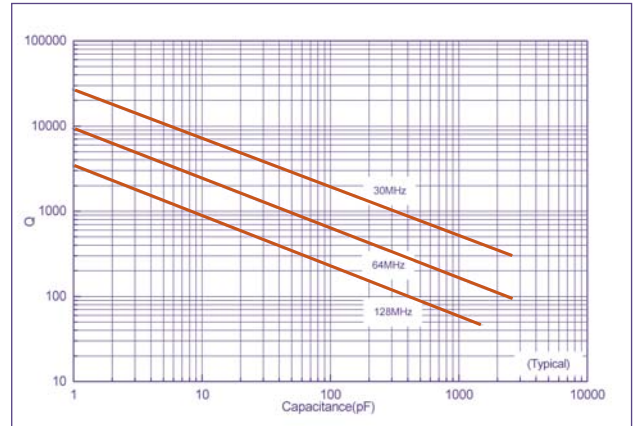
Item	Specifications	Method
Thermal Shock	DWV: the initial value IR: Shall not be less than 30% of the initial value Capacitance change: no more than 0.5% or 0.5pF.	MIL-STD-202, Method 107, Condition A. At the maximum rated temperature (-55°C and 125°C) stay 30 minutes. The time of removing shall not be more than 3 minutes. Perform the five cycles.
Moisture Resistance		MIL-STD-202, Method 106.
Humidity (steady state)	DWV: the initial value IR: the initial value Capacitance change: no more than 0.3% or 0.3pF.	MIL-STD-202, Method 103, Condition A, with 1.5 Volts D.C. applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours minimum.
Life	IR: Shall not be less than 30% of the initial value Capacitance change: no more than 0.2%	MIL-STD-202, Method 108, for 2000 hours, at 125°C. no less than 1500V, 120% Rated voltage D.C. applied; less than 1500V, 150% rated voltage D.C. applied.

◆ 2225P Performance Curve

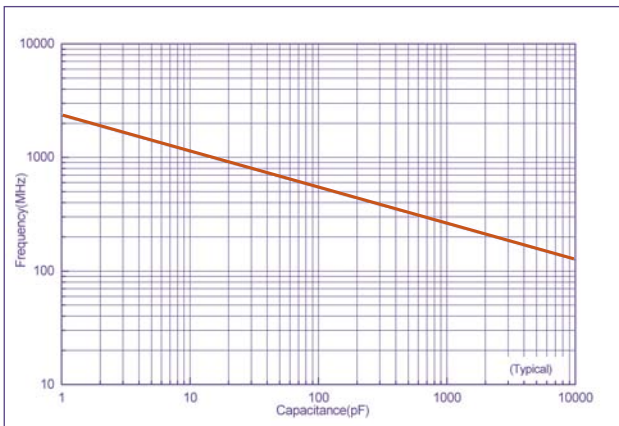
ESR vs Capacitance



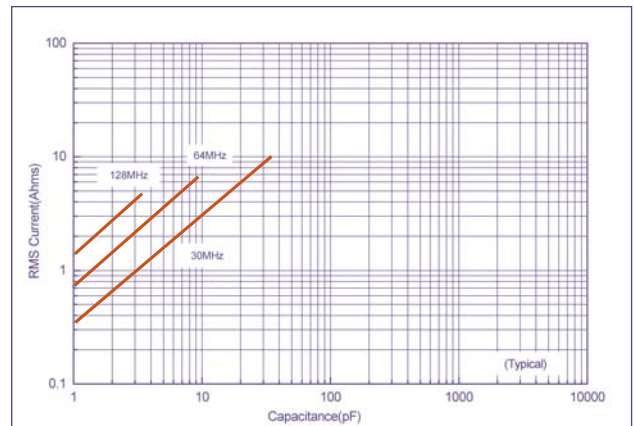
Q vs Capacitance



Series Resonance vs Capacitance



Current Rating vs Capacitance



The current depends on voltage limited: $I = \frac{\sqrt{2}}{2} I_{peak} = \frac{\sqrt{2}}{2} \times \frac{V_{rated}}{X_c} = \sqrt{2} \pi f C V_{rated}$

The current depends on power dissipation limited: $I = \sqrt{\frac{P_{dissipation}}{ESR}}$

Note: If the thermal resistance of mounting surface is 15°C/W.

then a power dissipation of 4 W will result in the current limited

we can calculate the current limited $I = \sqrt{\frac{P_{dissipation}}{ESR}}$

