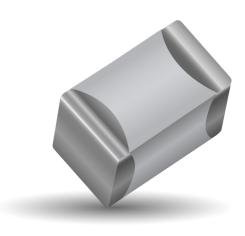
# **RF/Microwave Capacitors**

### **RF/Microwave Multilayer Capacitors (MLC)** 600S Ultra-Low ESR, High Q, NPO Capacitors





#### **APPLICATIONS**

- · Cellular Base Stations
- **Broadband Wireless** Services
- Satellite Communications
- WiFi (802.11)
- · Subscriber-based Wireless Devices
- · Public Safety Radio

### **CIRCUIT APPLICATIONS**

- Filter Networks
- High Q Frequency Sources
- Matching Networks
- · Tuning, Coupling, Bypass and DC Blocking

#### **ELECTRICAL SPECIFICATIONS**

Capacitance	0.1 to 100 pF				
Tolerances	See Cap Value Chart				
Working Voltage (WVDC)	250 V				
Quality Factor (Q)	> 2000 @ 1 MHz				
Operating Temperature Range	-55°C to +125°C (no derating of working voltage)				
Temperature Coefficient of Capacitance (TCC)	$0 \pm 30$ ppm/°C, -55°C to +125° $10^5$ M $\Omega$ min. at +25°C at rated WVDC $10^4$ M $\Omega$ min. at +125°C at rated WVDC				
Dielectric Withstanding Voltage (DWV)	2.5 x WVDC for 5 seconds				
Aging	None				
Piezo Effects	None				

#### **FEATURES**

- · Lowest ESR in Class
- Highest Working Voltage in Class 250 V
- Standard EIA Size: 0603
- · Laser Marking (Optional)
- · High Self-Resonance Frequencies

#### **600 SERIES OVERVIEW**

Series	Case Size	EIA Case Size		
600	L	0402		
600	S	0603		
600	F	0805		

#### PACKAGING OPTIONS



Tape & Reel







Orientation Tape & Reel

#### **ENVIRONMENTAL CHARACTERISTICS**

Themal Shock	5 Cycles, -55°C to 125°C				
Moisture Resistance	Mil-STD-202, Method 106				
Life Test	2000 hours at 125°C at 2X WVDC				
Solderability	Solder Coverage > 90% of end termination				
Terminal Strength	4 lbs. typ., 2 lb. min.				
Military Approval	DSCC Drawing Number 05002				

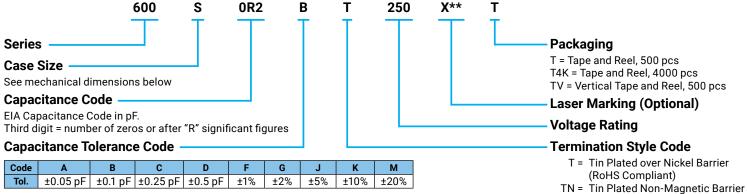
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#### CAPACITANCE VALUES

Value (pF)	Cap Code	Marking	Tolerances	Value (pF)	Cap Code	Marking	Tolerances	Value (pF)	Cap Code	Marking	Tolerances
0.1	0R1	A9	A, B	2.7	2R7	L0	A, B, C, D	20	200	H1	F, G, J, K, M
0.2	0R2	H9	A, B	3.0	3R0	M0	A, B, C, D	22	220	J1	F, G, J, K, M
0.3	0R3	M9	A, B, C	3.3	3R3	N0	A, B, C, D	24	240	K1	F, G, J, K, M
0.4	0R4	d9	A, B, C	3.6	3R6	P0	A, B, C, D	27	270	L1	F, G, J, K, M
0.5	0R5	f9	A, B, C	3.9	3R9	Q0	A, B, C, D	30	300	M1	F, G, J, K, M
0.6	0R6	m9	A, B, C	4.3	4R3	R0	A, B, C, D	33	330	N1	F, G, J, K, M
0.7	0R7	n9	A, B, C	4.7	4R7	S0	A, B, C, D	36	360	P1	F, G, J, K, M
0.8	0R8	t9	A, B, C	5.1	5R1	T0	A, B, C, D	39	390	Q1	F, G, J, K, M
0.9	0R9	y9	A, B, C	5.6	5R6	U0	A, B, C, D	43	430	R1	F, G, J, K, M
1.0	1R0	A0	A, B, C, D	6.2	6R2	V0	A, B, C, D	47	470	S1	F, G, J, K, M
1.1	1R1	В0	A, B, C, D	6.8	6R8	W0	B, C, J, K	51	510	T1	F, G, J, K, M
1.2	1R2	C0	A, B, C, D	7.5	7R5	X0	B, C, J, K	56	560	U1	F, G, J, K, M
1.3	1R3	D0	A, B, C, D	8.2	8R2	Y0	B, C, J, K	62	620	V1	F, G, J, K, M
1.5	1R5	E0	A, B, C, D	9.1	9R1	Z0	B, C, J, K	68	680	W1	F, G, J, K, M
1.6	1R6	F0	A, B, C, D	10	100	A1	F, G, J, K, M	75	750	X1	F, G, J, K, M
1.8	1R8	G0	A, B, C, D	11	110	B1	F, G, J, K, M	82	820	Y1	F, G, J, K, M
2.0	2R0	H0	A, B, C, D	12	120	C1	F, G, J, K, M	91	910	Z1	F, G, J, K, M
2.2	2R2	J0	A, B, C, D	15	150	E1	F, G, J, K, M	100	101	A2	F, G, J, K, M
2.4	2R4	K0	A, B, C, D	18	180	G1	F, G, J, K, M				

#### **HOW TO ORDER**



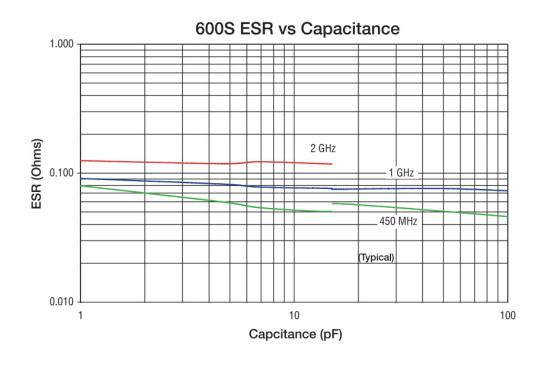
The above part number refers to a 600F Series (case size F) 10 pF capacitor, J tolerance (±5%), 250 WVDC, with T termination (Tin Plated over Nickel Barrier, RoHS Compliant), Laser Marking and Tape and Reel packaging.

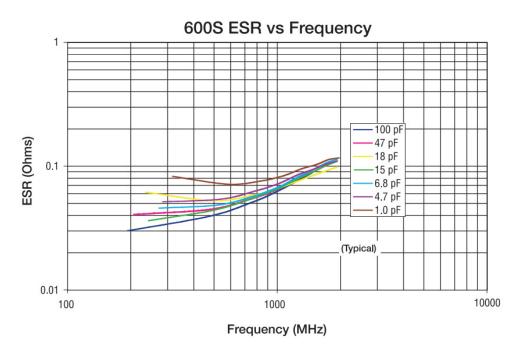
<sup>\*\*</sup>Laser Marking is optional

T = Tin Plated over Nickel Barrier

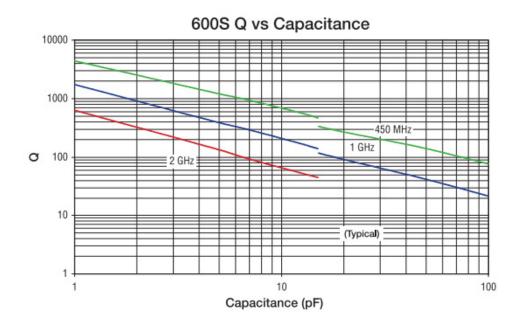
W = Tin/Lead Solder Nickel Barrier

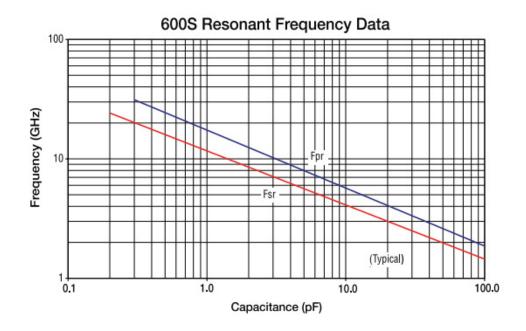












#### **600F Series Data Sheet Condition Description**

Capacitors horizontally mounted on 13.3 -mil thick Rogers R0435® softboard 29-mils wide 1/2 oz. Cu traces FSR = lowest frequency at which S11 response, referenced at capacitor edge, crosses real axis on Smith Chart. FPR = lowest frequency at which there is a notch in S21 magnitude response.

120320