

7676C (.760" x .760")

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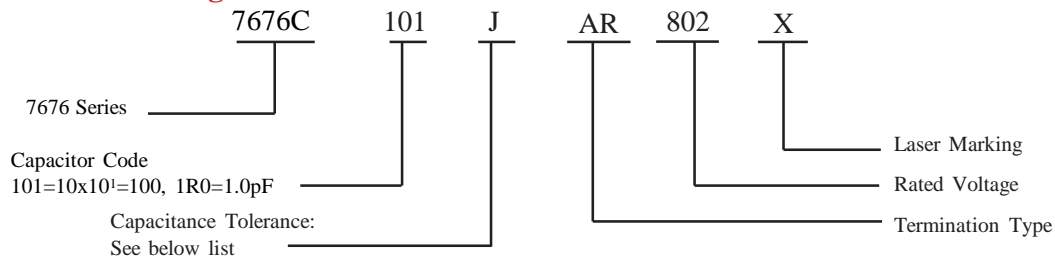
◆ Product Features

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

◆ 7676C Capacitance Table

Cap. pF	Code	Tol.	Rated WVDC	Cap. pF	Code	Tol.	Rated WVDC	Cap. pF	Code	Tol.	Rated WVDC
1.0	1R0	B,C,D	5000V Code 502; Extended 8000V Code 802	33	330	F,G, J,K	5000V Code 502; Extended 8000V Code 802	1000	102	G, J,K	3000V Code 302; Extended 5000V Code 502
1.2	1R2			39	390			1200	122		
1.5	1R5			47	470			1500	152		
1.8	1R8			56	560			1800	182		
2.2	2R2			68	680			2200	222		
2.7	2R7			82	820			2700	272		
3.3	3R3			100	101			3300	332		
3.9	3R9			120	121			4700	472		
4.7	4R7			150	151			5100	512		
5.6	5R6			180	181			5600	562		
6.8	6R8	220	221	6800	682	1000V Code 102; Extended 3000V Code 302					
8.2	8R2	270	271	7500	752						
10	100	300	301	8200	822						
12	120	F,G, J,K					3000V Code 302; Extended 5000V Code 502	10000	103	1000V Code 102; 2000V Code 202	
15	150							12000	123		
18	180							15000	153		
22	220							18000	183		
27	270							20000	203		

◆ Part Numbering


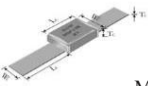
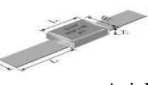
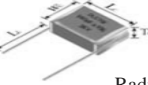
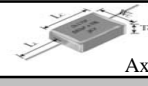
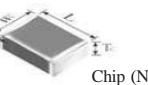
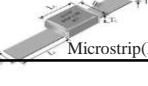
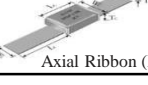

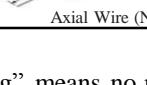


Capacitance Tolerance							
Code	B	C	D	F	G	J	K
Tolerance	±0.1pF	±0.25pF	±0.5pF	±1%	±2%	±5%	±10%

◆ 7676C Lead Type and Dimensions

7676C (.760" x .760")

unit: inch (millimeter)

Series	Term. Code	Type/ Outlines	Capacitor Dimensions				Lead Dimensions			Plated Material
			Length Lc	Width Wc	Thick-ness Tc	Overlap B	Length LL	Width WL	Thick-ness TL	
7676C	W	 Chip				.063 (1.60) max	-	-	-	100% Sn Solder over Nickel Plating RoHS Compliant
	L									90% Sn 10% Pb Tin Lead Solder over Nickel Plating
7676C	MS	 Microstrip	.760 +0.015 to -0.010 (19.3 to -0.25)	.760 ±.010 (19.3 ± 0.25)	.154 ± .008 (3.90 ±0.20)	-	.787 (20.00) min	.591 ± .010 (15.0 ± 0.25)	.008 ± .001 (0.20 ± 0.025)	Silver-plated Copper
7676C	AR	 Axial Ribbon								
7676C	RW	 Radial Wire					.787 (20.00) min	Dia.= .03 ±.004 0.80 ± 0.10		
7676C	AW	 Axial Wire				1.181 (30.00)				
Series	Term. Code	Type/ Outlines	Length Lc	Width Wc	Thick-ness Tc	Overlap B	Length LL	Width WL	Thick-ness TL	
7676C	P	 Chip (Non-Mag)				.063 (1.60) max	-	-	-	100% Sn Solder over Copper Plating
7676C	MN	 Microstrip(Non-Mag)								
7676C	AN	 Axial Ribbon (Non-Mag)	.760 +0.015 to -0.010 (19.3 to -0.25)	.760 ±.010 (19.3 ± 0.25)	.154 ± .008 (3.90 ±0.20)	-	.787 (20.00) min	.591 ± .010 (15.0 ± 0.25)	.008 ± .001 (0.20 ± 0.025)	Silver-plated Copper
7676C	RN	 Radial Wire (Non-Mag)								
7676C	BN	 Axial Wire (Non-Mag)				1.181 (30.00) min	Dia.= .03 ±.004 0.80 ± 0.10			

Note: "Non-Mag" means no magnetic materials. All leads are attached with high temperature solder and parts are RoHS Compliant.

◆ Performance

Item	Specifications
Quality Factor (Q)	No less than 1000pF, Q value more than 2000, Test frequency 1MHz; More than 1000pF, Q value more than 2000, Test frequency 1KHz
Insulation Resistance (IR)	Test Voltage: 500V: 10 ⁵ Megaohms min. @ +25°C at rated WVDC 10 ⁴ Megaohms min. @ +125°C at rated WVDC
Rated Voltage	See Rated Voltage Table
Dielectric Withstanding Voltage (DWV)	250% of Voltage for 5 seconds, Rated Voltage ≤ 500 VDC 150% of Voltage for 5 seconds, 500 VDC < Rated Voltage ≤ 1250 VDC 120% of Voltage for 5 seconds, Rated Voltage > 1250VDC
Operating Temperature Range	-55°C to +175°C
Temperature coefficient (TC)	0 ± 30ppm/°C
Capacitance Drift	±0.02% or ±0.02pF, whichever is greater
Piezoelectric Effects	None

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

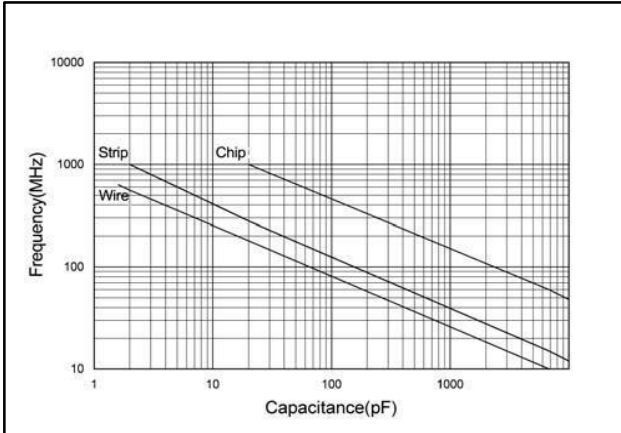
◆ Environmental Tests

Item	Specifications	Method
Thermal shock	DWV: the initial value IR: Shall not be less than 30% of the initial value.	MIL-STD-202, Method 107, Condition A At the maximum rated temperature (-55°C and 125°C) stay 30 min, the time of removing shall not be more than 3 minutes. Perform the five cycles.
Moisture resistance	Capacitance change: no more than 0.5% or 0.5 pF, whichever is greater.	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, whichever is greater.	MIL-STD-202, Method 103, Condition A With 1.5 Volts DC 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 2.0% or 0.5 pF, whichever is greater.	MIL-STD-202, Method 108, for 2000 hours at 125°C 200% of Voltage for Capacitors, Rated Voltage ≤ 500 VDC 120% of Voltage for Capacitors, 500 VDC < Rated Voltage ≤ 1250VDC 100% of Voltage for Capacitors, Rated Voltage > 1250VDC
Terminal strength	Force : 30lbs typical, Duration time: 5 to 10 seconds.	MIL-STD-202, Method 211A, Test condition A Applied a force and maintained for a period of 5 to 10 seconds. The force shall be in the direction of the axes of the terminations.

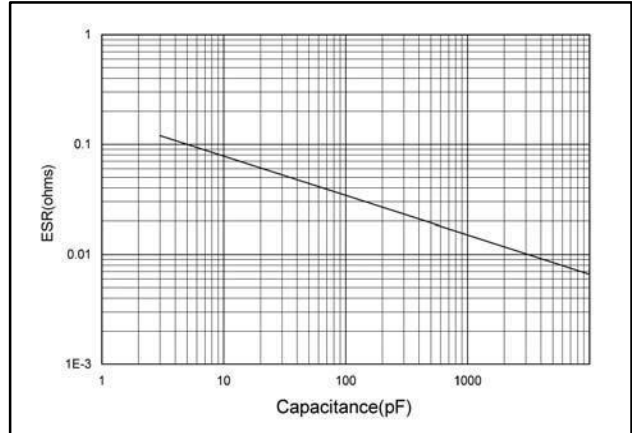
◆ 7676C Performance Curves

7676C (.760" x .760")

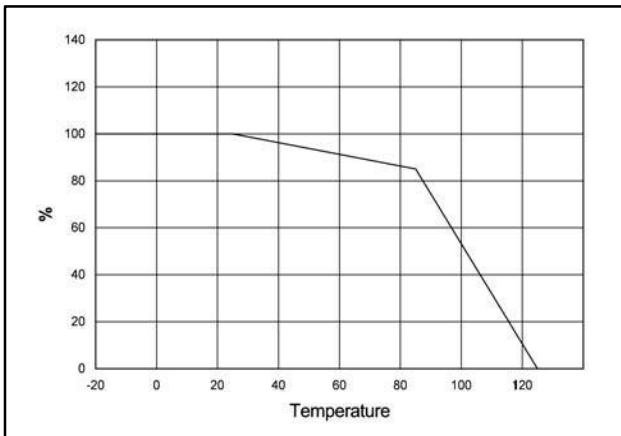
Self Resonant Frequency vs Capacitance



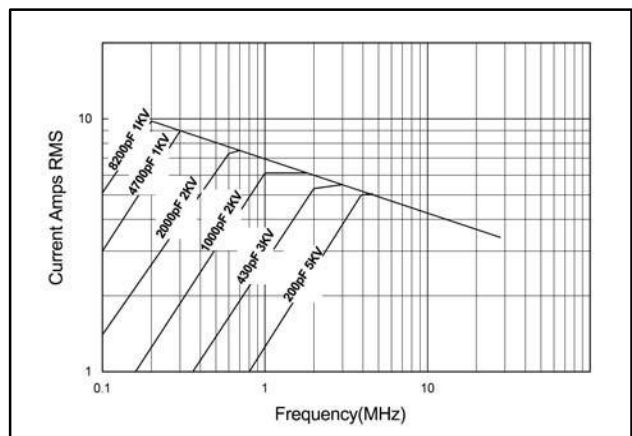
ESR vs Capacitance measured @ 30MHz



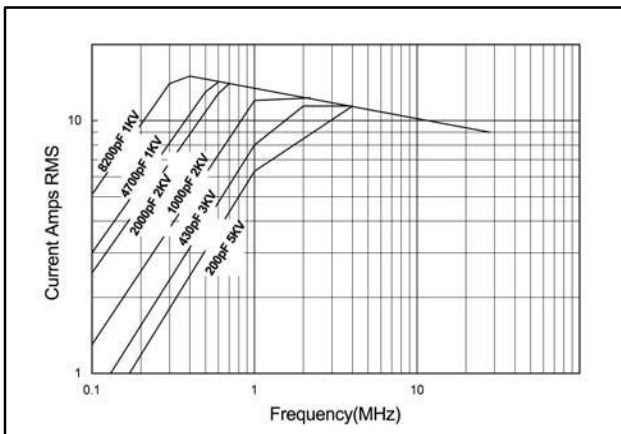
% Maximum Current vs Ambient Temperature



7676C Wire Terminals Rated Current vs Frequency



7676C Strip Terminals Rated Current vs Frequency



◆ **Recommended Land Pattern Dimensions**

When mounting the capacitor to substrate, it's important to carefully consider that the amount of solder (size of fillet) used has a direct effect upon the capacitor once it's mounted.

- 1) The greater the amount of solder, the greater the stress to the elements. This may cause the substrate to break or crack.
- 2) In the situation where two or more devices are mounted onto a common land, be sure to separate the device into exclusive pads by using soldering resist.

● **Horizontal Mounting**

Orientation	EIA	A	B	C
Horizontal	7676	16.00	3.30	19.60

