

**7676C (.760" x .760")**

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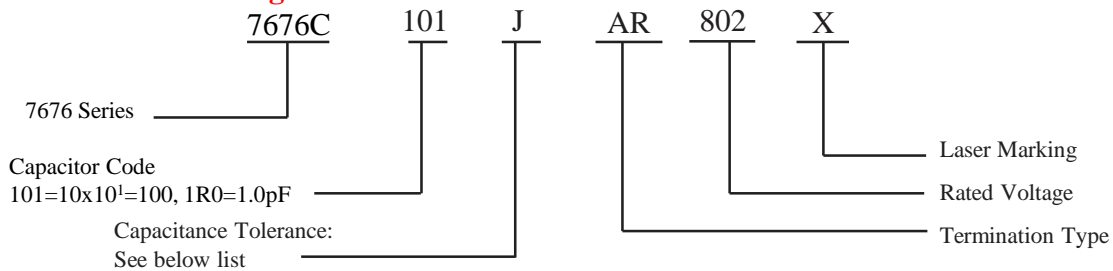
**◆ Product Features**

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		
8.2	8R2			270	271			7500	752		
10	100			F,G, J,K	3000V Code 302; Extended 5000V Code 502			300	301		
12	120	390	391			10000	103				
15	150	470	471			12000	123				
18	180	560	561			15000	153				
22	220	680	681			18000	183				
27	270	820	821			20000	203				
											1000V Code 102; 2000V Code 202

**◆ Part Numbering**


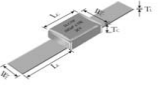
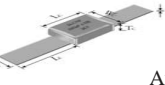
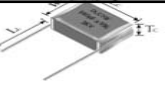


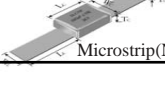


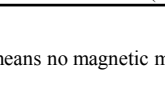


Capacitance Tolerance							
Code	B	C	D	F	G	J	K
Tolerance	±0.1pF	±0.25pF	±0.5pF	±1%	±2%	±5%	±10%

**◆ 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 -0.10 (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	1.181 (30.00)	-	-	-	-	-		Dia.= .03 ± .004 0.80 ± 0.10
7676C	AW	 Axial Wire									
Series	Term. Code	Type/ Outlines	Length Lc	Width Wc	Thick-ness Tc	Overlap B	Length LL	Width WL	Thick-ness TL	Plated Material	
7676C	P	 Chip (Non-Mag)	.760 +0.015 to -0.10 (19.3 to -0.25)	.760 ± .010 (19.3 ± 0.25)	.154 ± .008 (3.90 ± 0.20)	.063 (1.60) max	-	-	-	100% Sn Solder over Copper Plating	
7676C	MN	 Microstrip (Non-Mag)									
7676C	AN	 Axial Ribbon (Non-Mag)	.787 (20.00) min	-	-	-	-	-	-	Silver-plated Copper	
7676C	RN	 Radial Wire (Non-Mag)									
7676C	BN	 Axial Wire (Non-Mag)	.787 (20.00) min	1.181 (30.00) min	-	-	-	-	-		Dia.= .03 ± .004 0.80 ± 0.10
7676C											

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 <sup>5</sup> Megohms min. @ +25°C at rated WVDC. 10 <sup>4</sup> Megohms min. @ +125°C at rated WVDC.
Rated Voltage	See Rated Voltage Table.
Dielectric Withstanding Voltage (DWV)	250% of Voltage for 5 seconds, Rated Voltage ≤500VDC 150% of Voltage for 5 seconds, 500VDC < Rated Voltage ≤1250VDC 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

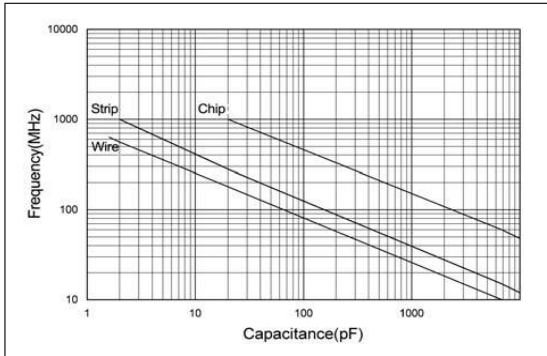
Capacitors are designed and manufactured to meet the requirements of MIL-PRF-55681 and MIL-PRF-123.

**◆ Environmental Tests**

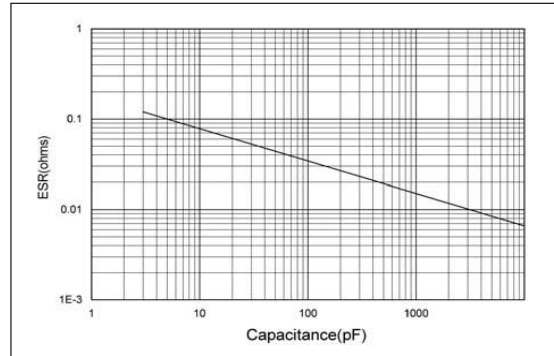
Item	Specifications	Method
Thermal shock	DWV: the initial value IR: Shall not be less than 30% of the initial value. Capacitance change: no more than 0.5% or 0.5 pF, whichever is greater.	MIL-STD-202, Method 107, Condition A. At the maximum rated temperature (-55°C and 125°C) stay 30 min, the time of removing shall not be more than 3 minutes. Perform the five cycles.
Moisture resistance		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 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 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 ≤500VDC; 120% of Voltage for Capacitors, 500VDC < 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**

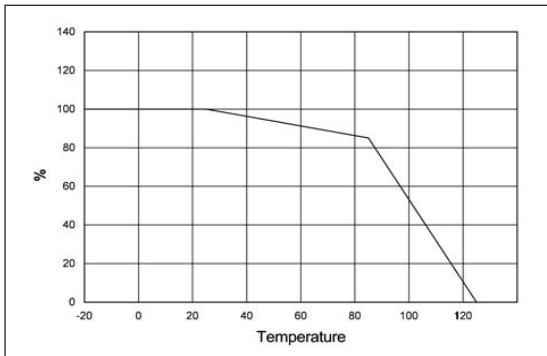
Self Resonant Frequency vs Capacitance



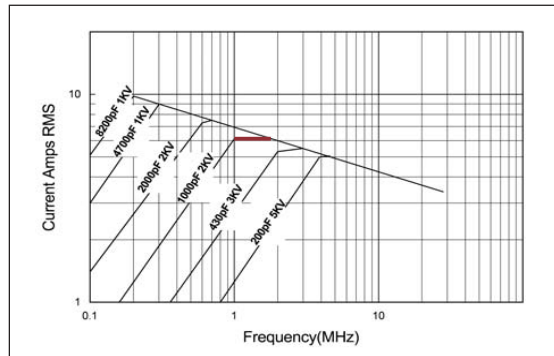
ESR vs Capacitance measured @ 30MHz



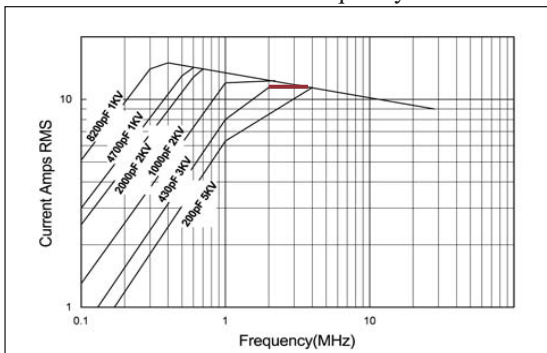
% Maximum Current vs Ambient Temperature



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

