


	<b>DATASHEET</b>	<b>Part No.</b>
	Ultra-Low ESL/ESR, High Q, RF/Microwave Capacitor	<b>A80B series</b>

CUSTOMER :

# DATA SHEET

<b>Product name</b>	<b>: Low ESL/ESR, High Q, RF/Microwave Capacitor</b>
<b>Part number</b>	<b>: A80B series</b>
<b>Features</b>	<b>: 2828mm/1111inch, COG/NP0, High Q</b>
<b>Revision date</b>	<b>: 2021/07/13</b>

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### 1. Features :

- Lowest ESR in Class
- High Self Resonance Frequencies
- Low Inter-Modulation (IM) performance
- Standard EIA Size : 1111
- Laser Marking (Optional)
- RoHS Compliant

### 2. Applications :

- 4G-LTE/ 5G NR/ Small Cells/ CBRS/ WiFi 6E/
- IoT / RFID
- Medical/ Autonomous / Automotive / Aerospace

### 3. Circuit Applications :

- Discrete lumped element filtering networks
- Input/ Output and Inter stage matching networks
- Circuit tuning, signal coupling, high current shunts, bypass and DC blocking circuits

### 4. Part Number Code & Ordering Information

- Product Part No.

Series Name	Size	Capacitance	Cap tolerance	Terminal	Voltage	Laser Marked	Packing info.
<u>A80</u>	<u>B</u>	<u>0R2</u>	<u>B</u>	<u>T</u>	<u>500</u>	<u>X</u>	<u>T</u>

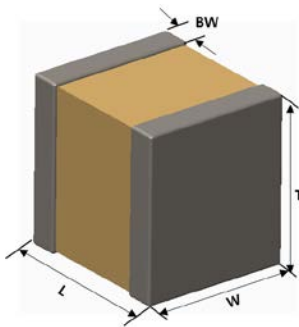
- **Series Name** : A80
- **Size** : B – 2828 mm, 1111 inch
- **Capacitance/ Cap tolerance** : Refer to "6. Capacitance Values, Markings & Tolerances"
- **Terminal** : "T"-Sn plated over Ni Barrier "TN"-Sn plated over Non-Magnetic Barrier
- **Working Voltage** : WVDC – Working Voltage of DC
- **Laser Marked** : X (Optional)
- **Packing info.** : T - Tape and Reel \*

## 5. Specifications

### ■ Electrical Specifications

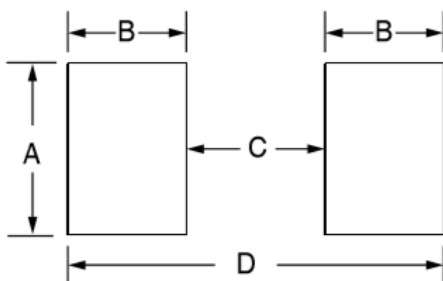
Capacitance	0.1 to 1000 pF
Tolerances	Refer to 6. Capacitance Values, Markings & Tolerances
Working Voltage (WVDC)	See capacitance value table page 5
Quality Factor (Q)	2,000 min. @ 1MHz
Operating Temperature Range	-55°C ~ +125°C
Temperature coefficient of Capacitances (TCC)	0 ± 30PPM/°C : -55°C ~ +125°C
Insulation Resistance	10 <sup>5</sup> MΩ min. at + 25°C at rated WVDC 10 <sup>4</sup> MΩ min. at + 125°C at rated WVDC
Dielectric Withstanding Voltage (DWV)	250% of WVDC for 5 seconds
Retrace	±(0.02% or 0.02pF), which is greater
Capacitance drift	±(0.02% or 0.02pF), which is greater
Aging	None
Piezo Effects	None

### ■ Mechanical dimension




AMOTCH Terminal code.	SPEC	L	W	T	BW
T	Size (mm)	2.79	2.79	1.78	0.38
	Tolerance	+0.51 / -0.25	± 0.38	Max.	±0.25
W	Size (mm)	2.79	2.79	1.78	0.38
	Tolerance	+0.51 / -0.25	± 0.38	Max.	±0.25
TN	Size (mm)	2.79	2.79	1.78	0.38
	Tolerance	+0.51 / -0.25	± 0.38	Max.	±0.25

### ■ Recommended solder pad



Pad size	A Min.	B Min.	C Min.	D Min.
Normal	3.30	1.27	1.91	4.45
High density	2.79	0.76	1.91	3.43

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■ **Mechanical Specifications**

Solderability	Solder coverage > 90% of end termination
Terminal Strength	MIL-STD-202, method 211 5 lbs Min., 15 lbs Typ. For 5 seconds in direction perpendicular to the termination surface of the capacitor

■ **Environmental Specifications**

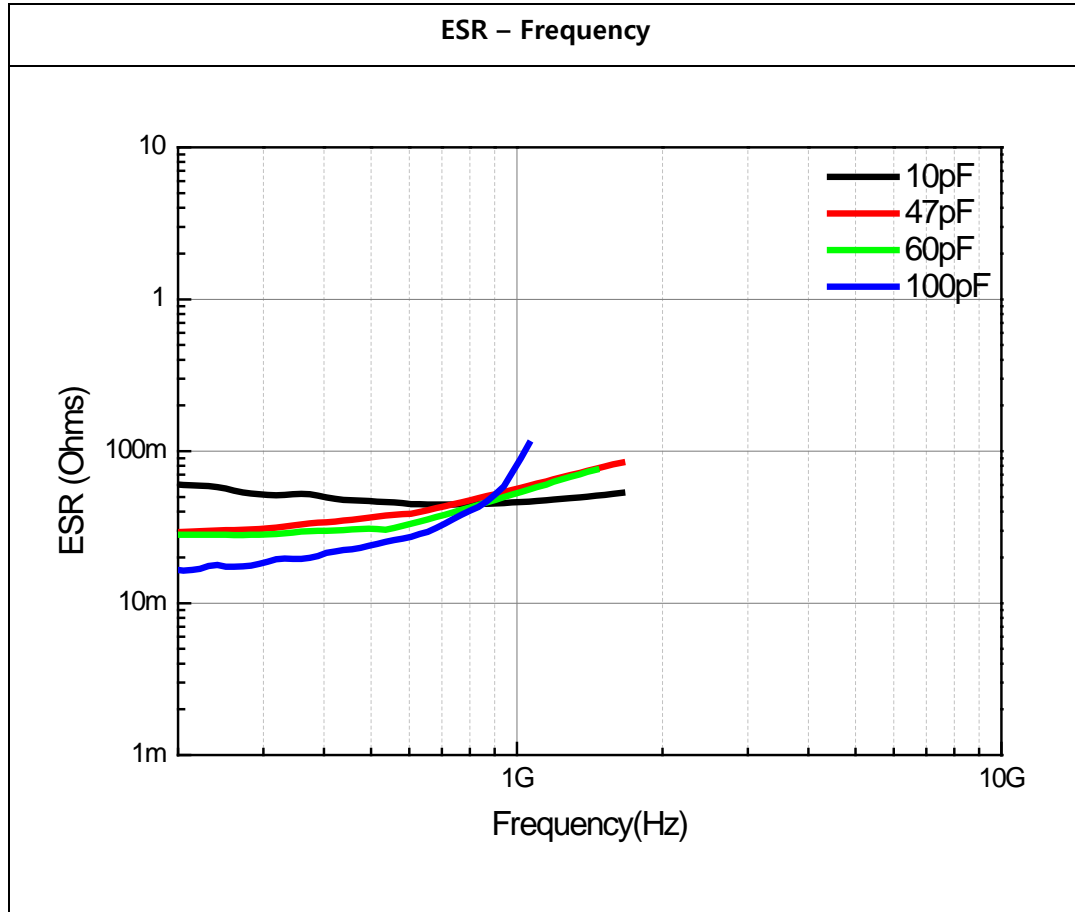
Thermal Shock	MIL-STD-202, Method 107, condition A
Moisture Resistance	MIL-STD-202, Method 106
Low voltage humidity	MIL-STD-202, Method 103, condition A 1.5VDC with 85°C 85% for 240hours Min.
Life Test	MIL-STD-202, Method 108 for 2000 hours, +125°C 200% of WVDC applied


**6. Capacitance Values, Markings & Tolerances**

Value [pF]	Cap. Code	Cap. Tol.	Rated WVDC		Value [pF]	Cap. Code	Cap. Tol.	Rated WVDC		Value [pF]	Cap. Code	Cap. Tol.	Rated WVDC		Value [pF]	Cap. Code	Cap. Tol.	Rated WVDC			
			STD.	EXT.				STD.	EXT.				STD.	EXT.				STD.	EXT.		
0.1	0R1	B	500V	1500V	2.4	2R4	B,C,D	500V	1500V	20	200	F,G,J, K,M	500V	1500V	150	151	F,G,J, K,M	300V	1000V		
0.2	0R2				2.7	2R7				22	220				160	161					
0.3	0R3	B,C			3.0	3R0				24	240				180	181					
0.4	0R4				3.3	3R3				27	270				200	201					
0.5	0R5	B,C,D			3.6	3R6				30	300				220	221				200V	600V
0.6	0R6				3.9	3R9				33	330				240	241					
0.7	0R7				4.3	4R3				36	360				270	271					
0.8	0R8				4.7	4R7				39	390				300	301					
0.9	0R9				5.1	5R1				43	430				330	331					
1.0	1R0				5.6	5R6				47	470				360	361					
1.1	1R1				B,C,D	6.2				6R2	51				510	390		391	100V	300V	
1.2	1R2					6.8				6R8	56				560	430		431			
1.3	1R3		B,C,J, K,M	7.5		7R5	62	620	470	471											
1.4	1R4			8.2		8R2	68	680	510	511											
1.5	1R5		9.1	9R1		75	750	560	561	50V											
1.6	1R6		F,G,J, K,M	10		100	82	820	620		621										
1.7	1R7	11		110		91	910	680	681												
1.8	1R8	12		120		100	101	750	751												
1.9	1R9	13		130		110	111	820	821												
2.0	2R0	15		150		120	121	910	911												
2.1	2R1	16		160		130	131	1000	102												
2.2	2R2	18		180																	

\* Cap tolerance : "P"-±0.02pF "Q"-±0.03pF "A"-±0.05pF "B"-±0.1pF "C"-±0.25pF "D"-±0.5pF  
 "F"-±1% "G"-±2% "J"-±5% "K"-±10% "M"-±20%

**7. Series & Parallel Resonance Curves**



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## 8. Tape and Reel Specification

### ■ Size

To be determined

### ■ Material

- 1) carrier tape: PET/ PC/ PS
- 2) Top tape (Cover tape): Polyester film