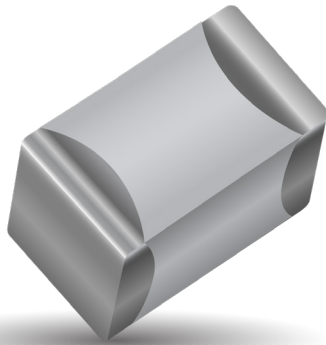


# RF/Microwave Capacitors

## RF/Microwave Multilayer Capacitors (MLC)

### 200A Series BX Ceramic



## FEATURES

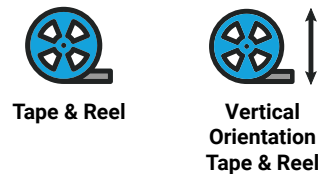
- Case A Size (.055" x .055")
- Lowest ESR/ESL
- Rugged Construction
- Extended WVDC Available
- Capacitance Range 510 pF to 0.01  $\mu$ F
- Mid-K
- High Reliability

## GENERAL DESCRIPTION

AVX, the industry leader, offers new improved ESR/ESL performance for the 200A Series Capacitors. This Series exhibits high volumetric efficiency with superior IR characteristics. Ceramic construction provides a rugged, hermetic package.

Typical functional applications: Bypass, Coupling and DC Blocking. Typical circuit applications: Switching Power Supplies and High Power Broadband Coupling.

## PACKAGING OPTIONS



## ELECTRICAL SPECIFICATIONS

<b>Temperature Coefficient (TCC)</b>	$\pm 15\%$ maximum (-55°C to +125°C)
<b>Capacitance Range</b>	510 pF to 0.01 $\mu$ F
<b>Operating Temperature</b>	-55°C to +125°C*
<b>Dissipation Factor</b>	2.5% Max @ 1 KHz
<b>Insulation Resistance (IR)</b>	510 pF to 0.01 $\mu$ F 10 <sup>4</sup> Megohms min. @ 25°C at rated WVDC 10 <sup>3</sup> Megohms min. @ 125°C at rated WVDC
<b>Dielectric Absorption</b>	2% Typical
<b>Working Voltage (WVDC)</b>	See Capacitance Values table
<b>Dielectric Withstanding Voltage (DWV)</b>	250% of rated WVDC for 5 seconds
<b>Aging Effects</b>	3% maximum per decade hour.
<b>Piezoelectric Effects</b>	Negligible
<b>Capacitance Drift</b>	$\pm$ (0.02% or 0.02 pF), whichever is greater

## ENVIRONMENTAL CHARACTERISTICS

<b>Thermal Shock</b>	Mil-STD-202, Method 107, Condition A
<b>Moisture Resistance</b>	Mil-STD-202, Method 106
<b>Low Voltage Humidity</b>	Mil-STD-202, Method 103, condition A, with 1.5 VDC applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours
<b>Life Test</b>	MIL-STD-202, Method 108, for 2000 hours, at 125°C. 200% WVDC applied.
<b>Termination Styles</b>	Available in various surface mount styles. See Mechanical Configurations, page 3
<b>Terminal Strength</b>	Terminations for chips and Pellets withstand a pull of 5 lbs. min., 10 lbs. typical, for 5 seconds in direction perpendicular to the termination surface of the capacitor. Test per MIL-STD-202, method 211

# RF/Microwave Capacitors

## RF/Microwave Multilayer Capacitors (MLC)

### 200A Series BX Ceramic



## CAPACITANCE VALUES

Cap. Code	Cap. (pF)	Tol.	Rated WVDC		Cap. Code	Cap. (pF)	Tol.	Rated WVDC	
			STD.	EXT.				STD.	EXT.
511	510	K, M, N	50	100	202	2000	K, M, N	50	100
561	560				222	2200			
621	620				272	2700			
681	680				332	3300			
751	750				392	3900			
821	820				472	4700			
911	910				502	5000			
102	1000				562	5600			
122	1200				682	6800			
152	1500				822	8200			
182	1800	103	10,000						

$v_{rms} = 0.707 \times WVDC$

Special values, tolerances, different WVDC and matching available. Please consult factory.

\*Extended WVDC offering meets X7R characteristics

## HOW TO ORDER

**200 A 562 M W 50 X T**

**Series** ————

**Case Size** ————  
See mechanical dimensions below

**Capacitance** ————  
EIA Capacitance Code in pF.  
First two digits = significant figures or "R" for decimal place.  
Third digit = number of zeros or after "R" significant figures

**Capacitance Tolerance Code** ————

Code	K	M	N
Tol.	±10%	±20%	±30%

**Termination Style Code** ————  
Please see 2nd Column Mechanical Configuration Table

**Packaging** ————  
T = Tape and Reel, 500 pc qty.  
TV = Vertical Orientation of Product  
Tape and Reel, 500 pc qty.  
Please see last Column Mechanical Configuration Table for other options

**Laser Marking (Optional)** ————

**Voltage Rating** ————

The above part number refers to a 200 A Series (case size A) 5600 pF capacitor, M tolerance (±20%), 50 WVDC, with W termination (Tin / Lead, Solder Plated over Nickel Barrier), Laser Marking and Tape and Reel 1000 pc qty. Packaging



# RF/Microwave Capacitors

## RF/Microwave Multilayer Capacitors (MLC)

### 200A Series BX Ceramic



## MECHANICAL CONFIGURATION

AVX Series & Case Size	AVX Term. Code	Case Size & Type	Outline W/T is a Termination Surface	Body Dimensions inches (mm)			Lead and Termination Dimensions and Material		Pkg Type & Qty	Pkg Code
				Length (L)	Width (W)	Thickness (T)	Overlap (Y)	Materials		
200A	W	A Solder Plate		.055+.015 -.010 (1.40+0.38-0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	.010 + .010 - .005 (0.25 + 0.25 - 0.13)	Tin/ Lead, Solder Plated over Nickel Barrier Termination	T&R, 1000 or 500 pcs Vertical T&R, 1000 or 500 pcs Cap Pac, 100 pcs	T1K or T TV1k or TV C100
200A	P	A Pellet		.055+.025 -.010 (1.40+0.64-0.25)	.055 ±.015 (1.40 ±0.38)			Heavy Tin/ Lead Coated, over Nickel Barrier Termination	T&R, 1000 or 500 pcs Vertical T&R, 1000 or 500 pcs Cap Pac, 100 pcs	T1K or T TV1k or TV C100
200A	T	A Solderable Nickel Barrier		.055+.015 -.010 (1.40+0.38-0.25)	.055 ±.015 (1.40 ±0.38)			Tin Plated over Nickel Barrier Termination	T&R, 1000 or 500 pcs Vertical T&R, 1000 or 500 pcs Cap Pac, 100 pcs	T1K or T TV1k or TV C100
200A	CA	A Gold Chip		.055+.015 -.010 (1.40+0.38-0.25)	.055 ±.015 (1.40 ±0.38)			Gold Plated over Nickel Barrier Termination	T&R, 1000 or 500 pcs Vertical T&R, 1000 or 500 pcs Cap Pac, 100 pcs	T1K or T TV1k or TV C100

## NON-MECHANICAL CONFIGURATION

AVX Series & Case Size	AVX Term. Code	Case Size & Type	Outline W/T is a Termination Surface	Body Dimensions inches (mm)			Lead and Termination Dimensions and Material		Pkg Type & Qty	Pkg Code
				Length (L)	Width (W)	Thickness (T)	Overlap (Y)	Materials		
200A	WN	A Non-Mag Solder Plate		.055+.015 -.010 (1.40+0.38-0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	.010 + .010 - .005 (0.25 + 0.25 - 0.13)	Tin / Lead, Solder Plated over Non-Magnetic Barrier Termination	T&R, 1000 or 500 pcs Vertical T&R, 1000 or 500 pcs Cap Pac, 100 pcs	T1K or T TV1k or TV C100
200A	PN	A Non-Mag Pellet		.055+.025 -.010 (1.40+0.64-0.25)	.055 ±.015 (1.40 ±0.38)			Heavy Tin/Lead Coated, over Non-Magnetic Barrier Termination	T&R, 1000 or 500 pcs Vertical T&R, 1000 or 500 pcs Cap Pac, 100 pcs	T1K or T TV1k or TV C100
200A	TN	A Non-Mag Solderable Nickel Barrier		.055+.015 -.010 (1.40+0.38-0.25)	.055 ±.015 (1.40 ±0.38)			Tin Plated over Non-Magnetic Barrier Termination	T&R, 1000 or 500 pcs Vertical T&R, 1000 or 500 pcs Cap Pac, 100 pcs	T1K or T TV1k or TV C100

# RF/Microwave Capacitors

## RF/Microwave Multilayer Capacitors (MLC)

### 200A Series BX Ceramic



## SUGGESTED MOUNTING PAD DIMENSIONS

Horizontal Electrode Orientation

Vertical Electrode Orientation

Case A					
Mount Type	Pad Size	A Min.	B Min.	C Min.	D Min.
Vertical Mount	Normal	.070	.050	.030	.130
	High Density	.050	.030	.030	.090
Horizontal Mount	Normal	.080	.050	.030	.130
	High Density	.060	.030	.030	.090

Dimensions are in inches.

## PERFORMANCE DATA

