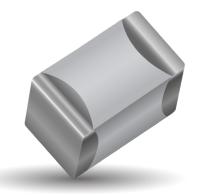
# **RF/Microwave Capacitors RF/Microwave Multilayer Capacitors (MLC)** 200A Series BX Ceramic





### **GENERAL DESCRIPTION**

KYOCERA 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 pro-vides a rugged, hermetic package.

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

### **ELECTRICAL SPECIFICATIONS**

Temperature Coefficient (TCC)	±15% maximum (-55°C to +125°C)
Capacitance Range	510 pF to 0.01 μF
Operating Temperature	-55°C to +125°C*
Dissipaction Factor	2.5% Max @ 1 KHz
Insulation Resistance (IR)	510 pF to 0.01 μF 10⁴ Megohms min. @ 25°C at rated WVDC 10³ Megohms min. @ 125°C at rated WVDC
Dielectric Absorption	2% Typical
Working Voltage (WVDC)	See Capacitance Values table
Dielectric Withstanding Voltage (DWV)	250% of rated WVDC for 5 seconds
Aging Effects	3% maximum per decade hour.
Piezoelectric Effects	Negligible
Capacitance Drift	± (0.02% or 0.02 pF), whichever is greater

#### **FEATURES**

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

### **PACKAGING OPTIONS**



Tape & Reel



Vertical Orientation Tape & Reel

# **ENVIRONMENTAL CHARACTERISTICS**

Themal 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, with 1.5 VDC applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours
Life Test	MIL-STD-202, Method 108, for 2000 hours, at 125°C. 200% WVDC applied.
Termination Styles	Available in various surface mount styles. See Mechanical Configurations, page 3
Terminal Strength	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

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### **CAPACITANCE VALUES**

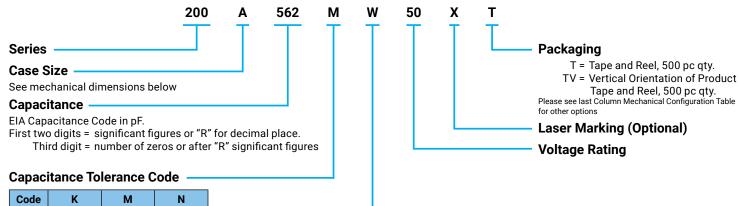
Con Codo	Con (nE)	Tal	Rated	WVDC	Con Codo	Con (nE)	Tal	Rated	WVDC
Cap. Code	Cap. (pF)	Tol.	STD.	EXT.	Cap. Code	Cap. (pF)	Tol.	STD.	EXT.
511	510				202	2000			
561	560			GE	222	2200			GE
621	620			VOLTAGE	272	2700			VOLTAGE
681	680			2	332	3300			0
751	750				392	3900			
821	820	K, M, N	50	100	472	4700	K, M, N	50	100
911	910				502	5000			
102	1000			ED	562	5600			ED
122	1200			EXTENDED	682	6800			ENI
152	1500			EXT	822	8200			EXTENDED
182	1800				103	10,000			

vrms = 0.707 x WVDC

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

\*Extended WVDC offering meets X7R characteristics

# **HOW TO ORDER**



#### Termination Style Code

±10%

Tol.

Please see 2nd Column Mechanical Configuration Table

±30%

±20%

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 PRODUCTS



### **MECHANICAL CONFIGURATION**

Series & Case		erm. Case Size	Outline W/T is a	Body Dimensions inches (mm)		Lead and Termination Dimensions and Material		Pkg Type & Qty	Dhu Qu du	
Size	Code	& Туре	Termination Surface	Length (L)	Width (W)	Thickness (T)	Overlap (Y)	Materials	PKY TYPE & QLY	Pkg Code
200A	w	A 🗭 Solder Plate	$\begin{array}{c c} Y \rightarrow & \downarrow \\ & & \downarrow \\ & & \downarrow \\ \rightarrow & \downarrow & \downarrow \\ \downarrow & \downarrow \\ \downarrow & \downarrow \\ \hline W & \downarrow \\ \downarrow \\$	.055+.015010 (1.40+0.38-0.25)	.055 ±.015 (1.40 ±0.38)			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	Ρ	A 论 Pellet	$\begin{array}{c c} Y \rightarrow & \downarrow \\ & & \downarrow \\ & & \downarrow \\ \rightarrow & \downarrow & \downarrow \\ \rightarrow & \downarrow & \downarrow \\ \downarrow & \downarrow \\ \downarrow & \downarrow \\ \leftarrow & \uparrow \rightarrow & \uparrow \\ \downarrow & \downarrow \\ \downarrow \\$	.055+.025010 (1.40+0.64-0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45)	.010 + .010005	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	т	A D Solderable Nickel Barrier	$\begin{array}{c c} Y \rightarrow & \downarrow \\ & & \downarrow \\ & & \downarrow \\ \rightarrow & \downarrow & \downarrow \\ \rightarrow & \downarrow & \downarrow \\ \downarrow \\$	.055+.015010 (1.40+0.38-0.25)	.055 ±.015 (1.40 ±0.38)	(1.43) max.	(0.25 + 0.25 - 0.13)	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	$\begin{array}{c c} Y \rightarrow \parallel \leftarrow & \downarrow \\ & & & \downarrow \\ & & & & \\ \hline & & & & \\ \rightarrow \mid L \mid \leftarrow^{\dagger} \rightarrow \mid T \mid \leftarrow \end{array}$	.055+.015010 (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**

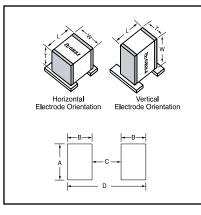
Series & Case	Term.	Case Size	Outline W/T is a	Body Dimensions inches (mm)		Lead and Termination Dimensions and Material		Pkg Type & Qty	Pkg Code	
Size	Code	& Type	Termination Surface	Length (L)	Width (W)	Thickness (T)	Overlap (Y)	Materials	rky type a Qiy	r ng obuc
200A	WN	A 🗭 Non-Mag Solder Plate	$\begin{array}{c} Y \rightarrow \parallel \leftarrow & \downarrow \\ & \square & \underline{W} \\ \rightarrow \mid L \mid \leftarrow^{\uparrow} \rightarrow \mid \top \mid \leftarrow \end{array}$	.055+.015010 (1.40+0.38-0.25)	.055 ±.015 (1.40 ±0.38)			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	$\begin{array}{c} Y \rightarrow \parallel \leftarrow & \downarrow \\ \hline \square & \underline{W} \\ \rightarrow \mid L \mid \leftarrow^{\uparrow} \rightarrow \mid \top \mid \leftarrow \end{array}$	.055+.025010 (1.40+0.64-0.25)	.055 ±.015 (1.40 ±0.38)	.057 (1.45) max.	.010 + .010005 (0.25 + 0.25 - 0.13)	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	$\begin{array}{c} Y \rightarrow \left  \leftarrow & \downarrow \\ & & \downarrow \\ & & \\ & & \\ \end{array} \right  \begin{array}{c} \downarrow \\ & \underline{w} \\ & \underline{w} \\ & \\ \end{array} \right  \\ \downarrow \left  \leftarrow^{\uparrow} \rightarrow \right  \\ \top \left  \leftarrow \end{array} \right  $	.055+.015010 (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

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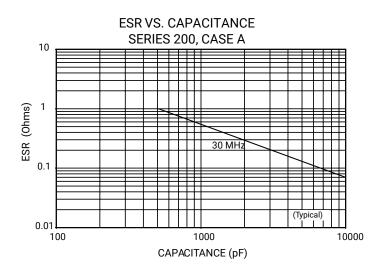
### SUGGESTED MOUNTING PAD DIMENSIONS

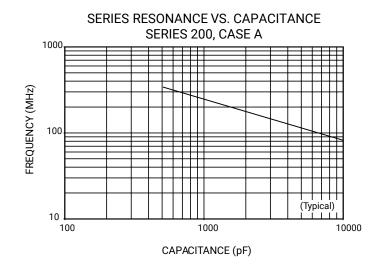


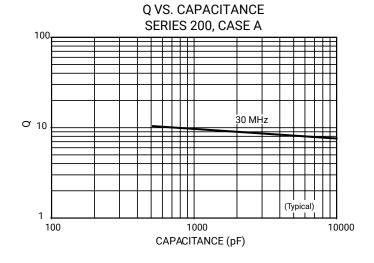
Case A									
Mount Type Pad Size A Min. B Min. C Min. D Min.									
Vertical Mount	Normal	.070	.050	.030	.130				
	High Density	.050	.030	.030	.090				
Llevinentel Merunt	Normal	.080	.050	.030	.130				
Horizontal Mount	High Density	.060	.030	.030	.090				
				<u>.</u>					

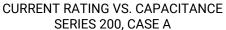
Dimensions are in inches.

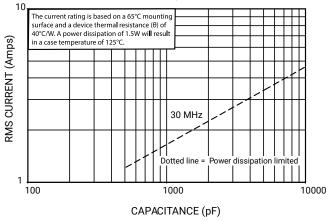
### **PERFORMANCE DATA**











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