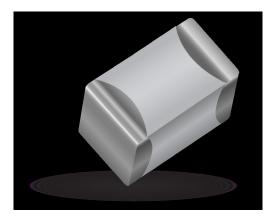
# **RF/Microwave Capacitors** RF/Microwave Multilayer Capacitors (MLC) 200B Series BX Ceramic



**W/X** 



### **GENERAL DESCRIPTION**

KYOCERA AVX, the industry leader, offers new improved ESR/ESL performance for the 200 B 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.

## **ELECTRICAL SPECIFICATIONS**

Temperature Coefficient (TCC)	±15% maximum (-55°C to +125°C)					
Capacitance Range	510 pF to 0.01 μF					
Operating Temperature	From -55°C to +125°C (No derating of working voltage).					
<b>Dissipation Factor</b>	2.5% max. @ 1 KHz					
Insulation Resistance (IR)	5000 pF to 0.1 MFd: 10 <sup>4</sup> Megohms min. @ +25°C at rated WVDC. 10 <sup>3</sup> Megohms min. @ +125°C at rated WVDC.					
Dielectric Absorption	2% Typical					
Working Voltage (WVDC)	See Capacitance Values table					
Dielectric Withstanding Voltage (DWV)	Case B: 250% of rated WVDC for 5 secs.					
Aging Effects	3% maximum per decade hour.					
Piezoelectric Effects	Negligible					
Capacitance Drift	± (0.02% or 0.02 pF), whichever is greater					

#### **FEATURES**

- Case B Size (.110" x .110")
- Lowest ESR/ESL
- Rugged Construction
- Extended WVDC Available
- Capacitance Range 5000 pF to 0.1  $\mu F$
- Mid-K
- · High Reliability

## **PACKAGING OPTIONS**



Tape & Reel



Vertical

Orientation Tape & Reel



Cap-Pak® (100 pcs)

### **ENVIRONMENTAL CHARACTERISTICS**

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, with 1.5 Volts DC applied while subjected to an environment of 85°C with 85% relative humidity for 240 hours min.
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**

CAP.	CAP.	TOL.	RATED WVDC		CAP.	CAP.	TOL.	RATED WVDC					
CODE	(pF) 10L. s		STD EXT.*		CODE	(pF)	TOL.	STD	EXT.*				
502	5000			ш	273	27,000			ш				
562	5600			AG	333	33,000			AG				
682	6800		50	VOLTAGE	393	39,000			VOLTAGE				
822	8200			>	473	47,000			>				
103	10,000			100	100	100	100	100	503	50,000		50	100
123	12,000	K, M, N		50	100	563	56,000	K, M, N	50	100			
153	15,000					9	683	68,000			9		
183	18,000			NDE	823	82,000			NDE				
203	20,000			EXTENDED	104	100,000			EXTENDED				
223	22,000			Ω Ω					L L L				

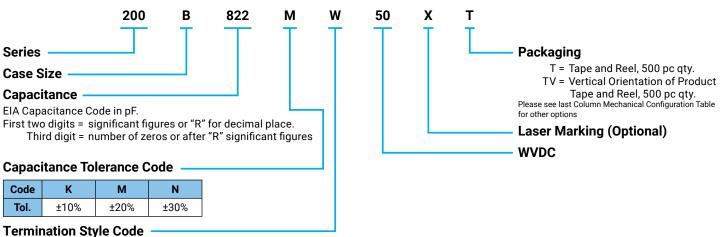
VRMS = 0.707 x WVDC

• SPECIAL VALUES, TOLERANCES, HIGHER WVDC AND MATCHING AVAILABLE.

PLEASE CONSULT FACTORY.

\* Extended WVDC offereing meets X7R characteristics

## **HOW TO ORDER**



Please see 2nd Column Mechanical Configuration Table

The above part number refers to a 200 B Series (case size B) 8200 pF capacitor, M tolerance (±20%), 50 WVDC, with W termination (Tin / Lead, Solder Plated over Nickel Barrier), laser marking and KYOCERA AVX Cap-Pac® packaging.





### **MECHANICAL CONFIGURATION**

SERIES		CASE SIZE	OUTLINES W/T IS A								Pkg	
& CASE SIZE	TERM. CODE	& TYPE	TERMINATION SURFACE	LENGTH (L)	WIDTH (W)	THICKNESS (T)	OVERLAP (Y)		MATERIALS		Туре	Pkg Code
200B	w	B D Solder Plate	$\begin{array}{c c} Y \rightarrow & \downarrow \\ & & \downarrow \\ & & & \\ \hline & & & \\ & \rightarrow & \downarrow & \downarrow \\ \rightarrow & \downarrow & \downarrow \\ \downarrow & \downarrow & \downarrow \\ \downarrow & \downarrow & \downarrow \\ \downarrow \\$	.110 +.020010 (2.79 +0.51 -0.25)	.110 ±.015 (2.79 ±0.38)	.102 (2.59) max.					T&R, 1000 or 500 pcs Vertical T&R, 1000 pcs or 500 pcs Cap Pac, 100 pcs	T1K or T TV1K or TV C100
200B	Ρ	B Pellet	$\begin{array}{c} Y \rightarrow \left\  \leftarrow & \downarrow \\ & \blacksquare & \underline{w} \\ \rightarrow & \mid L \mid \leftarrow^{\uparrow} \rightarrow \mid T \mid \leftarrow \end{array} \right.$	.110 +.035010 (2.79 +0.89 -0.25)	.110 ±.015 (2.79 ±0.38)	.102 (2.59)	.015 (0.38)		leavy Tin/Lead Nickel Barrier 1		T&R, 1000 or 500 pcs Vertical T&R, 1000 pcs or 500 pcs Cap Pac, 100 pcs	T1K or T TV1K or TV C100
200B	т	B Solderable Nickel Barrier	$\begin{array}{c c} Y \rightarrow \parallel \leftarrow & \downarrow \\ & & & \\ & & & \\ \hline & & & \\ \rightarrow \mid \downarrow \mid \leftarrow \uparrow \rightarrow \mid \downarrow \mid \leftarrow \end{array}$	.110 +.020010 (2.79 +0.51 -0.25)	.110 ±.015 (2.79 ±0.38)	.102 (2.59)	±.010 (0.25) max.	Ni	RoHS Comp Tin Plated o ckel Barrier Ter	ver	T&R, 1000 or 500 pcs Vertical T&R, 1000 pcs or 500 pcs Cap Pac, 100 pcs	T1K or T TV1K or TV C100
200B	CA	B Gold Chip	$\begin{array}{c} Y \rightarrow \left  \begin{array}{c} \leftarrow \\ \end{array} \right  \begin{array}{c} \downarrow \\ \hline \\ \end{array} \\ \hline \\ \rightarrow \left  \begin{array}{c} L \end{array} \right  \left  \begin{array}{c} \leftarrow \\ \end{array} \right  \begin{array}{c} \uparrow \\ \end{array} \right  \left  \begin{array}{c} T \end{array} \right  \left  \begin{array}{c} \leftarrow \\ \end{array} \right  \left  \begin{array}{c} \end{array} \right  \left  \begin{array}{c} T \end{array} \right  \left  \begin{array}{c} \leftarrow \\ \end{array} \right  \left  \begin{array}{c} \end{array} \right  \left  \begin{array}{c} T \end{array} \right  \left  \begin{array}{c} \leftarrow \\ \end{array} \right  \left  \begin{array}{c} T \end{array} \right  \left  \begin{array}{c} T \end{array} \right  \left  \begin{array}{c} \end{array} \right  \left  \begin{array}{c} T \end{array} \right  \left  \left  \left  \begin{array}{c} T \end{array} \right  \left  \left $	.110 +.020010 (2.79 +0.51 -0.25)	.110 ±.015 (2.79 ±0.38)	.102 (2.59)		RoHS Compliant Gold Plated over Nickel Barrier Termination			T&R, 1000 or 500 pcs Vertical T&R, 1000 pcs or 500 pcs Cap Pac, 100 pcs	T1K or T TV1K or TV C100
200B	MS	B Microstrip	$\begin{array}{c} \downarrow  \rightarrow \mid \iota_{L} \mid \leftarrow  \downarrow  \rightarrow \mid \leftarrow \\ \hline \underline{w_{L}}  \blacksquare  \blacksquare  \underbrace{w_{L}}  \blacksquare  \underbrace{w_{L}}  \blacksquare \\ \uparrow  \rightarrow \mid \llcorner \mid \leftarrow  \uparrow \rightarrow \mid \top \mid \leftarrow \end{array}$	.135 ±.015 (3.43 ±0.38)	.110 ±.015 (2.79 ±0.38)	.120 (3.05) max.	N/A	Length (LL)	Width (WL) .093 ±. 005 (2.36 ± 0.13)	Thickness (TL)	Cap Pac, 20 pcs	C20
200B	AR	B Axial Ribbon	$\begin{array}{c} \downarrow & \rightarrow \mid \downarrow_{L} \mid \leftarrow & \downarrow_{T_{L}} \\ \hline \underbrace{w_{L}} & & \underbrace{w_{L}} & \underbrace{w_{L}} \\ \dagger & & \underbrace{w_{L}} & & \underbrace{w_{L}} \\ \dagger & & \downarrow_{L} \mid \leftarrow & \overset{T_{L}} \\ \end{array}$					.250 (6.35) min.		.004 ± .001 (.102 ± .025)	Box, 20 or 100 pcs	B20 or B100
200B	RR	B Radial Ribbon	$ \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \end{array} \end{array} \end{array} \end{array} \\ \begin{array}{c} \end{array} \end{array} \\ \end{array} \\ \end{array} \end{array} \\ \begin{array}{c} \end{array} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \end{array} \\ \end{array} \\ \end{array} \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \end{array} \\ $			.100 (2.54)					Box, 20 or 100 pcs	B20 or B100
200B	RW	B Radial Wire	+   L_  ← +   L   ← +   W   ←	.145 ±.020		max.			#26 AWG., .016 (.406) dia. nominal		Box, 20 or 100 pcs	B20 or B100
200B	AW	B Axial Wire	$\rightarrow$ $L$ $\downarrow$ $\downarrow$ $W$ $\downarrow$	(3.68 ±0.51)				(12.7)			Box, 20 or 100 pcs	B20 or B100

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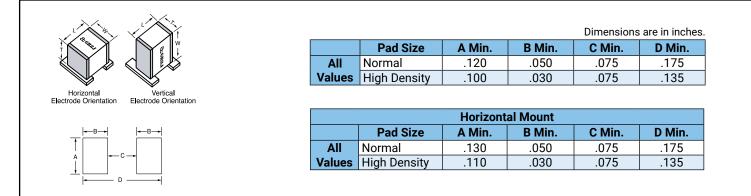
#### **NON-MECHANICAL CONFIGURATION**

SERIES	TERM.	MIL-PRF-	CASE SIZE	SIZE W/T IS A INCHES (mm DIMENSI					TERMINATIO	Pkg Type	Pkg Code				
& CASE SIZE	CODE	55681	& TYPE	TERMINATION SURFACE	LENGTH (L)	WIDTH (W)	THICKNESS (T)	OVERLAP (Y)		MATERIAI	гкутуре	Pkg Code			
200B	WN	Meets Rqmts.	B Non-Mag Solder Plate	⋎⋺╠⋲ □□□ <u>₩</u> →│└│⋲ <sup>↑</sup> ⋺│⊤│⋲	.110+.025 010 (2.79 +0.64 -0.25)	.110 ±.015 (2.79 ±0.38)						T&R, 1000 or 500 pcs Vertical T&R, 1000 pcs or 500 pcs Cap Pac, 100 pcs	T1K or T TV1K or TV C100		
200B	PN	Meets Rqmts.	B Pellet	⊻→╠╾ □□□□□□□□□□□ →│└│← <sup>↑</sup> →│⊤│←	.110+.035 010 (2.79 +0.89 -0.25)	.110 ±.015 (2.79 ±0.38)	.102 (2.59) max	9) .015 (0.38) ±.010 (0.25)				T&R, 1000 or 500 pcs Vertical T&R, 1000 pcs or 500 pcs Cap Pac, 100 pcs	T1K or T TV1K or TV C100		
200B	TN	Meets Rqmts.	B Non-Mag Solderable Barrier	⋎⋺╠⋲ □□□□ <u>₩</u> □□ →   └   ← <sup>†</sup> →  ⊤   ←	.110+.025 010 (2.79 +0.64 -0.25)	.110 ±.015 (2.79 ±0.38)						T&R, 1000 or 500 pcs Vertical T&R, 1000 pcs or 500 pcs Cap Pac, 100 pcs	T1K or T TV1K or TV C100		
200B	MN	Meets Rqmts.	B Non-Mag	$\begin{array}{c} 1 & \rightarrow \mid L_{L} \mid \leftarrow & \downarrow \\ \frac{1}{W_{L}} & \begin{array}{c} \rightarrow \\ \hline \end{array} \\ \frac{W_{L}}{W_{L}} & \begin{array}{c} \rightarrow \\ \end{array} \\ \frac{W_{L}}{W_{L}} & \begin{array}{c} \end{array} \\ \frac{W_{L}}{W_{L}} & \begin{array}{c} \rightarrow \\ \end{array} \\ \frac{W_{L}}{W_{L}} & \begin{array}{c} \end{array} \\ \frac{W_{L}}{W_{L}} & \end{array} \\ \\ \frac{W_{L}}{W_{L}} & \begin{array}{c} \end{array} \\ \frac{W_{L}}{W_{L}} & \begin{array}{c} \end{array} \\ \frac{W_{L}}{W_{L}} & \end{array} \\ \\ \frac{W_{L}}{W_{L}} & \begin{array}{c} \end{array} \\ \frac{W_{L}}{W_{L}} & \end{array} \\ \\ \frac{W_{L}}{W_{L}} & \begin{array}{c} \end{array} \\ \frac{W_{L}}{W_{L}} & \end{array} \\ \\ \frac{W_{L}}{W$			.120 (3.05) max.		Length (LL) .250 (6.35) min.	Width (WL)	Thickness (TL)	Cap Pac, 20 pcs	C20		
200B	AN	Meets Rqmts.	Microstrip B Non-Mag Axial Ribbon		.135 ±.015 (3.43 ±0.38)	.110 ±.015 (2.79 ±0.38)				.093 ± .005 (2.36 ± 0.13)	.004 ± . 001 (.102 ± .025)	Box, 20 or 100 pcs	B20 or B100		
200B	FN	Meets Rqmts.	B Non-Mag Radial Ribbon	i → L ← t <sub>a</sub> ⊤  t <sub>c</sub>   t <sub>a</sub> → L ← t <sub>a</sub>   ⊤  ← t					.100 (2.54)	N/A				Box, 20 or 100 pcs	B20 or B100
200B	RN	Meets Rqmts.	B Non-Mag Axial Wire	→ L L L L L L L L L L L L L L L L L L L	145 + 000			max.		.500	.500 #26 AWG.,		Box, 20 or 100 pcs	B20 or B100	
200B	BN	Meets Rqmts.	B Non-Mag RadialWire		.145 ±.020 (3.68 ±0.51)				(12.7) min.	.016 (.4	106) dia. hinal	Box, 20 or 100 pcs	B20 or B100		

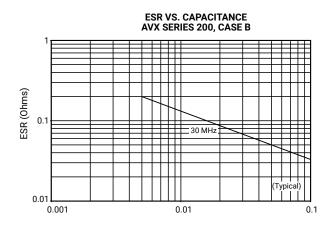
Additional lead styles available: Narrow Microstrip (DN), Narrow Axial Ribbon (GN) and Vertical Narrow Microstrip (HN). Other lead lengths are available; consult factory. All leads are high purity silver attached with high temperature solder and are RoHS compliant.

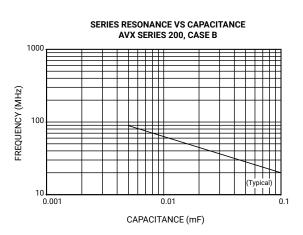


# SUGGESTED MOUNTING PAD DIMENSIONS

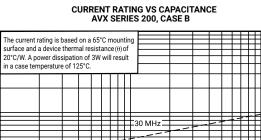


## **PERFORMANCE DATA**





C PVS CAPACITANCE AVX SERIES 200, CASE B



Dotted line

0.01

Power dissipation lim

0.1

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100

RMS CURRENT (Amps)

10

0.001

单击下面可查看定价,库存,交付和生命周期等信息

# >>AVX