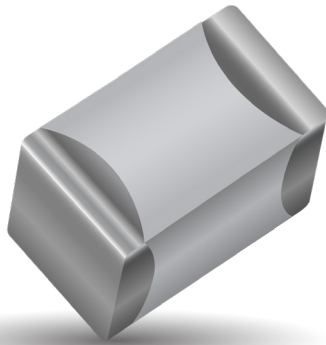


RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

200B Series BX Ceramic



FEATURES

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

GENERAL DESCRIPTION

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.

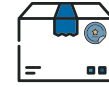
PACKAGING OPTIONS



Tape & Reel



Vertical
Orientation
Tape & Reel



Special
Packaging
Available

ELECTRICAL SPECIFICATIONS

Temperature Coefficient (TCC)	$\pm 15\%$ maximum (-55°C to +125°C)
Capacitance Range	510 pF to 0.01 μ F
Operating Temperature	From -55°C to +125°C (No derating of working voltage).
Dissipation Factor	2.5% max. @ 1 KHz
Insulation Resistance (IR)	5000 pF to 0.1 MFd: 10 ⁴ Megohms min. @ +25°C at rated WVDC. 10 ³ 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	\pm (0.02% or 0.02 pF), whichever is greater

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

RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

200B Series BX Ceramic



CAPACITANCE VALUES

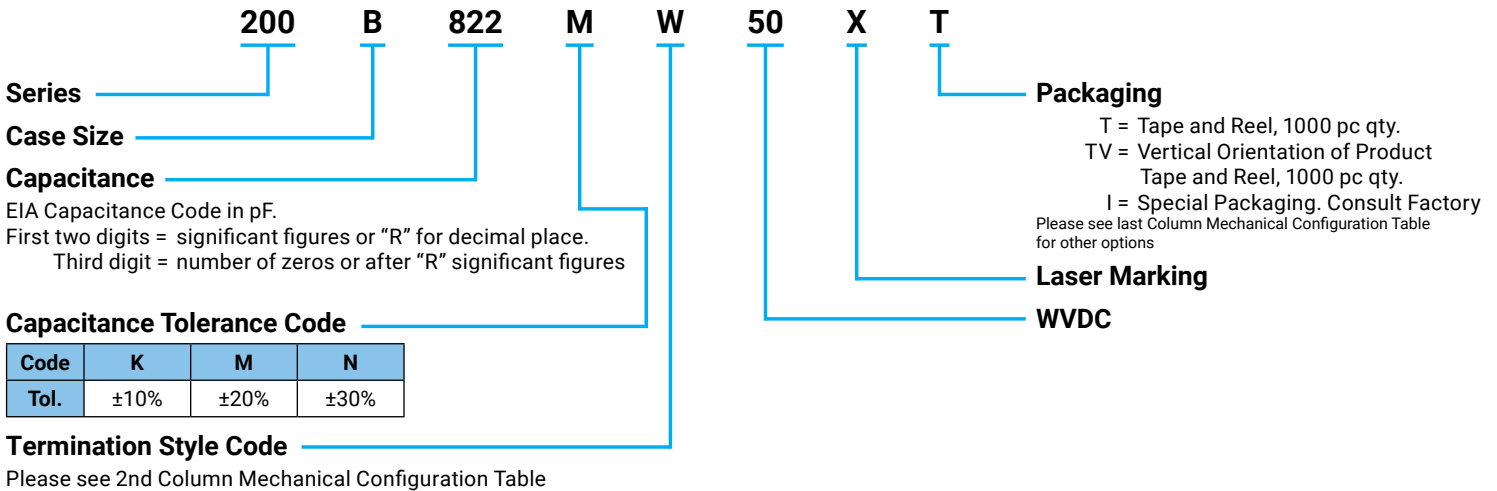
CAP. CODE	CAP. (pF)	TOL.	RATED WVDC		CAP. CODE	CAP. (pF)	TOL.	RATED WVDC	
			STD	EXT.*				STD	EXT.*
502	5000	K, M, N	50	100	273	27,000	K, M, N	50	100
562	5600				333	33,000			
682	6800				393	39,000			
822	8200				473	47,000			
103	10,000				503	50,000			
123	12,000				563	56,000			
153	15,000		EXTENDED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

VRMS = 0.707 x WVDC

* SPECIAL VALUES, TOLERANCES, HIGHER WVDC AND MATCHING AVAILABLE. PLEASE CONSULT FACTORY.

* Extended WVDC offering meets X7R characteristics

HOW TO ORDER



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 ATC Cap-Pac® packaging.

RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

200B Series BX Ceramic



MECHANICAL CONFIGURATION

AVX SERIES & CASE SIZE	AVX TERM. CODE	CASE SIZE & TYPE	OUTLINES W/T IS A TERMINATION SURFACE	BODY DIMENSIONS INCHES (mm)			LEAD AND TERMINATION DIMENSIONS AND MATERIALS			
				LENGTH (L)	WIDTH (W)	THICKNESS (T)	OVERLAP (Y)	MATERIALS		
200B	W	B Solder Plate		.110 +.020 -.010 (2.79 +0.51 -.025)	.110 ±.015 (2.79 ±0.38)	.102 (2.59) max.	.015 (0.38) ±.010 (0.25) max.	Tin/Lead, Solder Plated over Nickel Barrier Termination		
200B	P	B Pellet		.110 +.035 -.010 (2.79 +0.89 -.025)	.110 ±.015 (2.79 ±0.38)	.102 (2.59)		Heavy Tin/Lead Coated, over Nickel Barrier Termination		
200B	T	B Solderable Nickel Barrier		.110 +.020 -.010 (2.79 +0.51 -.025)	.110 ±.015 (2.79 ±0.38)	.102 (2.59)		RoHS Compliant Tin Plated over Nickel Barrier Termination		
200B	CA	B Gold Chip		.110 +.020 -.010 (2.79 +0.51 -.025)	.110 ±.015 (2.79 ±0.38)	.102 (2.59)		RoHS Compliant Gold Plated over Nickel Barrier Termination		
200B	MS	B Microstrip		.135 ±.015 (3.43 ±0.38)	.110 ±.015 (2.79 ±0.38)	.120 (3.05) max.	N/A	Length (LL)	Width (WL)	Thickness (TL)
200B	AR	B Axial Ribbon				.250 (6.35) min.		.093 ±.005 (2.36 ± 0.13)	.004 ±.001 (.102 ± .025)	
200B	RR	B Radial Ribbon				.100 (2.54) max.		.500 (12.7)	#26 AWG., .016 (.406) dia. nominal	
200B	RW	B Radial Wire		.145 ±.020 (3.68 ±0.51)						
200B	AW	B Axial Wire								

RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

200B Series BX Ceramic



NON-MECHANICAL CONFIGURATION

AVX SERIES & CASE SIZE	AVX TERM. CODE	MIL-PRF-55681	CASE SIZE & TYPE	OUTLINES W/T IS A TERMINATION SURFACE	BODY DIMENSIONS INCHES (mm)			LEAD AND TERMINATION DIMENSIONS AND MATERIALS			
					LENGTH (L)	WIDTH (W)	THICKNESS (T)	OVERLAP (Y)	MATERIALS		
200B	WN	Meets Requirements	B Non-Mag Solder Plate		.110+.025 -.010 (2.79 +0.64 -0.25)	.110 ±.015 (2.79 ±0.38)	.102 (2.59) max..	.015 (0.38) ±.010 (0.25)	Tin/Lead, Solder Plated over Non-Magnetic Barrier Termination		
200B	PN	Meets Requirements	B Non-Mag Pellet		.110+.035 -.010 (2.79 +0.89 -0.25)	.110 ±.015 (2.79 ±0.38)			Heavy Tin/Lead, Coated over Non-Magnetic Barrier Termination		
200B	TN	Meets Requirements	B Non-Mag Solderable Barrier		.110+.025 -.010 (2.79 +0.64 -0.25)	.110 ±.015 (2.79 ±0.38)			RoHS Compliant Tin Plated over Non-Magnetic Barrier Termination		
200B	MN	Meets Requirements	B Non-Mag Microstrip		.135 ±.015 (3.43 ±0.38)	.110 ±.015 (2.79 ±0.38)	.120 (3.05) max.	N/A	Length (LL)	Width (WL)	Thickness (TL)
200B	AN	Meets Requirements	B Non-Mag Axial Ribbon						.250 (6.35) (6.35) min.	.093 ± .005 (2.36 ± 0.13)	.004 ± .001 (.102 ± .025)
200B	FN	Meets Requirements	B Non-Mag Radial Ribbon		.145 ±.020 (3.68 ±0.51)	.110 ±.015 (2.79 ±0.38)	.100 (2.54) max.	N/A	.500 (12.7) min.	#26 AWG., .016 (.406) dia. nominal	
200B	RN	Meets Requirements	B Non-Mag Axial Wire								
200B	BN	Meets Requirements	B Non-Mag Radial Wire								

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.

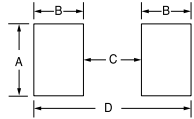
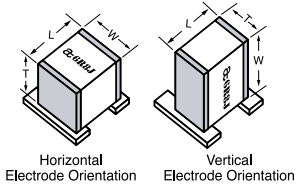
RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

200B Series BX Ceramic



SUGGESTED MOUNTING PAD DIMENSIONS



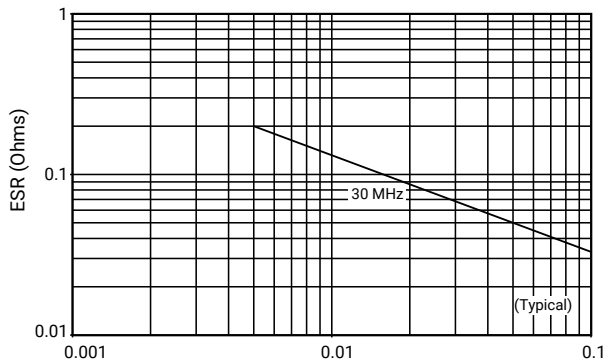
Dimensions are in inches.

	Pad Size	A Min.	B Min.	C Min.	D Min.
All Values	Normal	.120	.050	.075	.175
	High Density	.100	.030	.075	.135

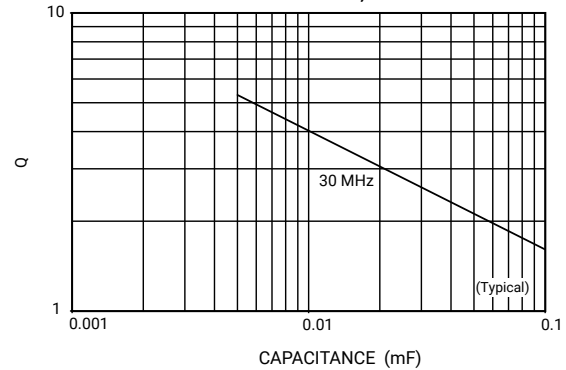
Horizontal Mount					
	Pad Size	A Min.	B Min.	C Min.	D Min.
All Values	Normal	.130	.050	.075	.175
	High Density	.110	.030	.075	.135

PERFORMANCE DATA

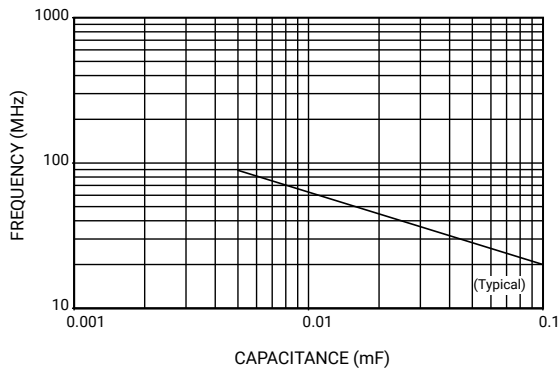
ESR VS. CAPACITANCE
AVX SERIES 200, CASE B



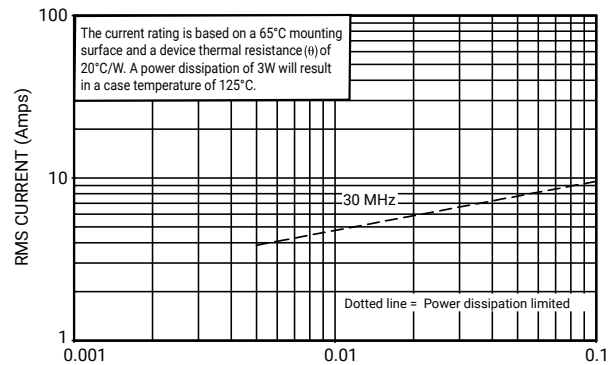
Q VS CAPACITANCE
AVX SERIES 200, CASE B



SERIES RESONANCE VS CAPACITANCE
AVX SERIES 200, CASE B



CURRENT RATING VS CAPACITANCE
ATC SERIES 200, CASE B



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.