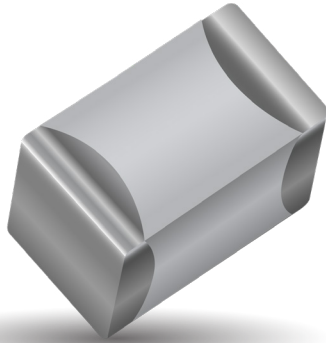


RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

200B Series BX Ceramic



FEATURES

- Case B 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

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.

PACKAGING OPTIONS



Tape & Reel



Vertical Orientation
Tape & Reel



Cap-Pak®
(100 pcs)

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 |

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CAPACITANCE VALUES

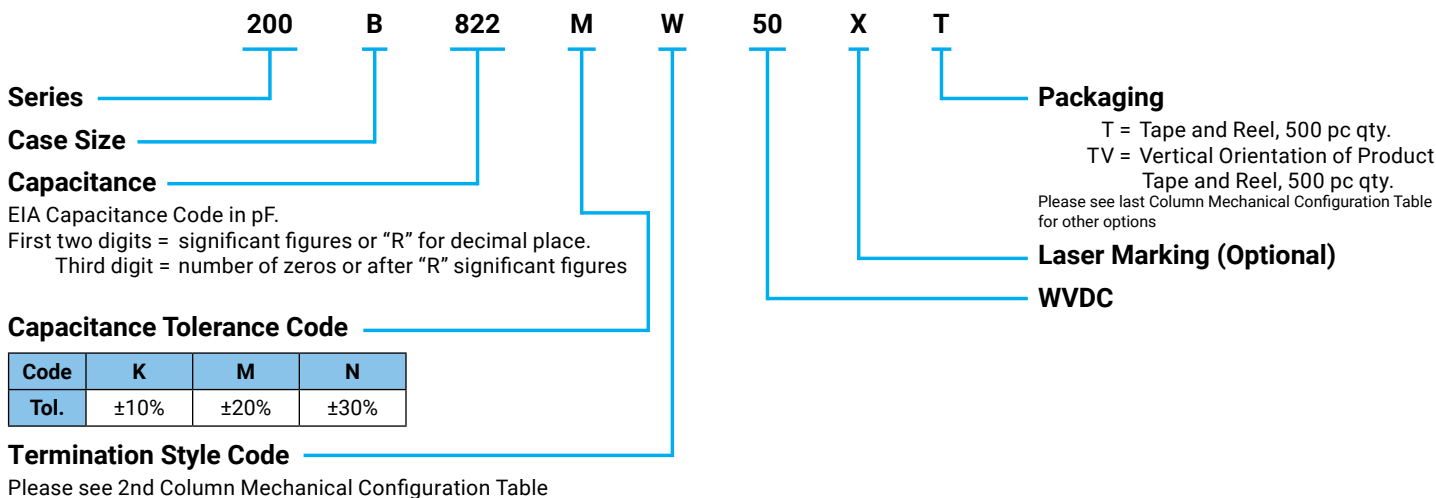
| CAP. CODE | CAP. (pF) | TOL. | RATED WVDC | | CAP. CODE | CAP. (pF) | TOL. | RATED WVDC | |
|-----------|-----------|---------|------------|---------|-----------|-----------|---------|------------|---------|
| | | | STD | EXT.* | | | | STD | EXT.* |
| 502 | 5000 | K, M, N | 50 | VOLTAGE | 273 | 27,000 | K, M, N | 50 | VOLTAGE |
| 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 | 100 | 683 | 68,000 | | EXTENDED | |
| 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 KYOCERA AVX Cap-Pac® packaging.

RF/Microwave Capacitors

RF/Microwave Multilayer Capacitors (MLC)

200B Series BX Ceramic



MECHANICAL CONFIGURATION

| SERIES & CASE SIZE | TERM. CODE | CASE SIZE & TYPE | OUTLINES W/T IS A TERMINATION SURFACE | BODY DIMENSIONS INCHES (mm) | | | LEAD AND TERMINATION DIMENSIONS AND MATERIALS | | | Pkg Type | Pkg Code | |
|--------------------|------------|--------------------------------|---------------------------------------|--|----------------------------|------------------------------------|---|--|------------------------------|--------------------|---|--------------------------|
| | | | | LENGTH (L) | WIDTH (W) | THICKNESS (T) | OVERLAP (Y) | MATERIALS | | | | |
| 200B | W | B Solder Plate | | .110 +.020 -.010 (2.79 +0.51 -0.25) | .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 | | | 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 | P | B Pellet | | .110 +.035 -.010 (2.79 +0.89 -0.25) | .110 ±.015 (2.79 ±0.38) | .102 (2.59) | | Heavy Tin/Lead Coated, 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 | T | B Solderable Nickel Barrier | | .110 +.020 -.010 (2.79 +0.51 -0.25) | .110 ±.015 (2.79 ±0.38) | .102 (2.59) | | RoHS Compliant Tin 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 | CA | B Gold Chip | | .110 +.020 -.010 (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 | | .135 ±.015 (3.43 ±0.38) | .110 ±.015 (2.79 ±0.38) | .120 (3.05) max. | N/A | Length (LL) | Width (WL) | Thickness (TL) | Cap Pac, 20 pcs | C20 |
| 200B | AR | B Axial Ribbon | | | | .250 (6.35) min. | | .093 ± .005 (2.36 ± 0.13) | .004 ± .001 (.102 ± .025) | Box, 20 or 100 pcs | B20 or B100 | |
| 200B | RR | B Radial Ribbon | | | | .100 (2.54) max. | | Box, 20 or 100 pcs | B20 or B100 | | | |
| 200B | RW | B Radial Wire | | .145 ±.020 (3.68 ±0.51) | .500 (12.7) | #26 AWG., .016 (.406) dia. nominal | | Box, 20 or 100 pcs | B20 or B100 | | | |
| 200B | AW | B Axial Wire | | | | | | Box, 20 or 100 pcs | B20 or B100 | | | |

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NON-MECHANICAL CONFIGURATION

| SERIES & CASE SIZE | 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 | | | Pkg Type | Pkg Code | | | |
|--------------------|------------|---------------|---------------------------------|---------------------------------------|---|----------------------------|----------------------------|---|--|-----------------------------|---|-----------------------------------|---|-----------------------------------|------------------------|
| | | | | | LENGTH (L) | WIDTH (W) | THICKNESS (T) | OVERLAP (Y) | MATERIALS | | | | | | |
| 200B | WN | Meets Rqmts. | B Non-Mag Solder Plate | | .110+0.025 -0.10 (2.79 +0.64 -0.25) | .110 ±0.15 (2.79 ±0.38) | | | Tin/Lead, Solder Plated over Non-Magnetic 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 | PN | Meets Rqmts. | B Non-Mag Pellet | | .110+0.035 -0.10 (2.79 +0.89 -0.25) | .110 ±0.15 (2.79 ±0.38) | | | .102 (2.59) max.. | .015 (0.38) ±.010 (0.25) | Heavy Tin/Lead, Coated over Non-Magnetic 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 | TN | Meets Rqmts. | B Non-Mag Solderable Barrier | | .110+0.025 -0.10 (2.79 +0.64 -0.25) | .110 ±0.15 (2.79 ±0.38) | | | | | RoHS Compliant Tin Plated over Non-Magnetic 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 | MN | Meets Rqmts. | B Non-Mag Microstrip | | | | .120 (3.05) max. | N/A | Length (LL) | Width (WL) | Thickness (TL) | Cap Pac, 20 pcs | C20 | | |
| 200B | AN | Meets Rqmts. | B Non-Mag Axial Ribbon | | | | .135 ±0.15 (3.43 ±0.38) | | | | .250 (6.35) min. | .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 | | | | | | .110 ±0.15 (2.79 ±0.38) | | | | | Box, 20 or 100 pcs | B20 or B100 |
| 200B | RN | Meets Rqmts. | B Non-Mag Axial Wire | | | | | | | | | Box, 20 or 100 pcs | B20 or B100 | | |
| 200B | BN | Meets Rqmts. | B Non-Mag RadialWire | | | | | | | | | .145 ±0.020 (3.68 ±0.51) | | | .500 (12.7) min. |

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.