

GENERAL SPECIFICATIONS

Capacitance Range

See Individual Parts Specifications

Capacitance Test at 25°C

Measured at 1 VRMS max. at 1 KHz
(1 MHz for 1,000 pF or less)

Capacitance Tolerances

C = ± 0.25 pF, D = ± 0.50 pF, E = $\pm 0.5\%$, F = $\pm 1.0\%$,
G = $\pm 2\%$, H = $\pm 3\%$, J = $\pm 5\%$, K = $\pm 10\%$, M = $\pm 20\%$
For values less than 10 pF tightest tolerance available
is ± 0.25 pF

Operating Temperature Range

-55°C to +125°C

Temperature Characteristic

0 \pm 30 ppm/°C

Voltage Ratings

200, 100 & 50 Vdc

Dissipation Factor

.15% max. (+25°C and +125°C) for values greater
than 30 pF or Q = 20 x C + 400 for values
of 30 pF and below.

1.0 VRMS, 1 MHz for values \leq 1,000 pF, and
1 KHz for values > 1,000 pF

Insulation Resistance 25°C (MIL-STD-202-Method 302)

100 K megohms or 1000 megohms - μ F minimum,
whichever is less

Dielectric Strength

250% of rated Vdc

Life Test (1,000 hours)

200% rated voltage at +125°C

Moisture Resistance (MIL-STD-202-Method 106)

Thermal Shock (MIL-STD-202-Method 107, condition A, at rated elevated temperature)

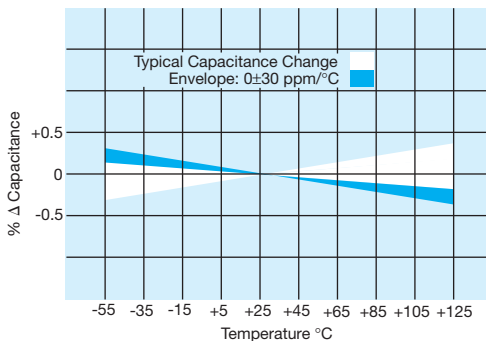
-55°C to +125°C

Immersion Cycling (MIL-STD-202-Method 104, condition B)

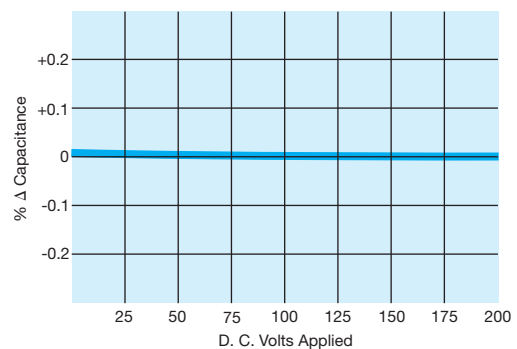
For current reliability information, consult factory.

TYPICAL CHARACTERISTICS

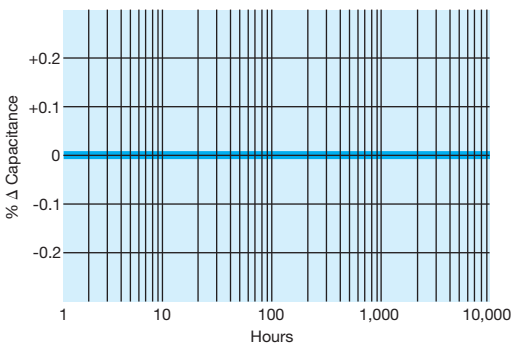
Temperature Coefficient



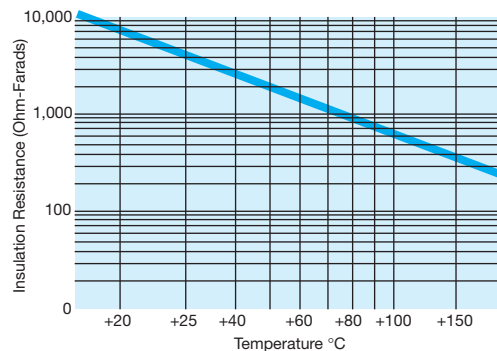
Voltage Coefficient



Aging Rate



Insulation Resistance vs. Temp.



GENERAL SPECIFICATIONS

Capacitance Range

See Individual Parts Specifications

Capacitance Test at 25°C

Measured at 1 VRMS max. at 1 KHz

Capacitance Tolerances

J = $\pm 5\%$, K = $\pm 10\%$, M = $\pm 20\%$

Operating Temperature Range

-55°C to +125°C

Temperature Characteristic

$\pm 15\%$ (0 Vdc)

Voltage Ratings

200, 100 & 50 Vdc

Dissipation Factor

2.5% max. at 1 KHz, 1 VRMS max.

Insulation Resistance 25°C (MIL-STD-202-Method 302)

100 K megohms or 1000 megohms - μF minimum, whichever is less

Dielectric Strength

250% of rated Vdc

Life Test (1,000 hours)

200% rated voltage at +125°C

Moisture Resistance (MIL-STD-202-Method 106)

Thermal Shock (MIL-STD-202-Method 107, condition A, at rated elevated temperature)

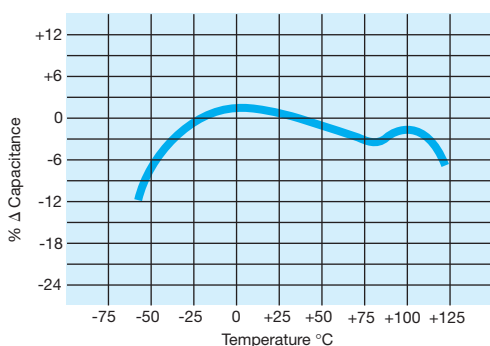
-55°C to +125°C

Immersion Cycling (MIL-STD-202-Method 104, condition B)

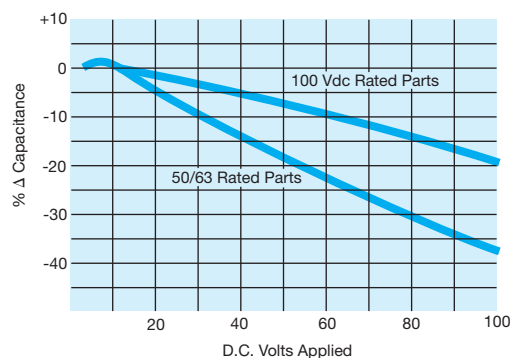
For current reliability information, consult factory.

TYPICAL CHARACTERISTICS

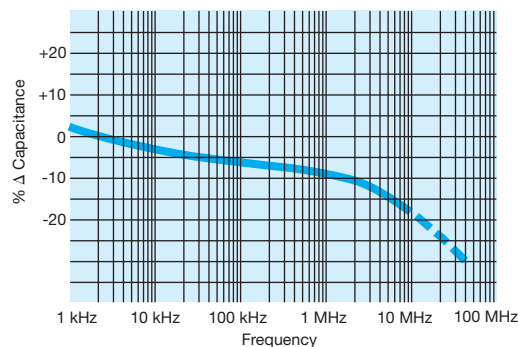
Temperature Coefficient



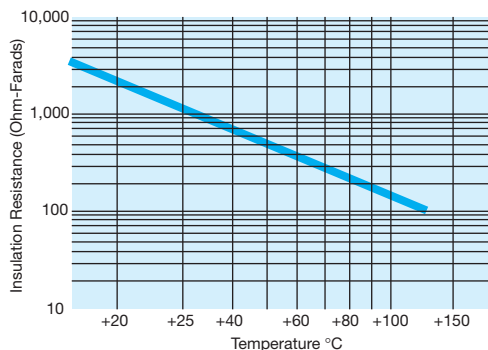
Voltage Coefficient



Capacitance vs. Frequency



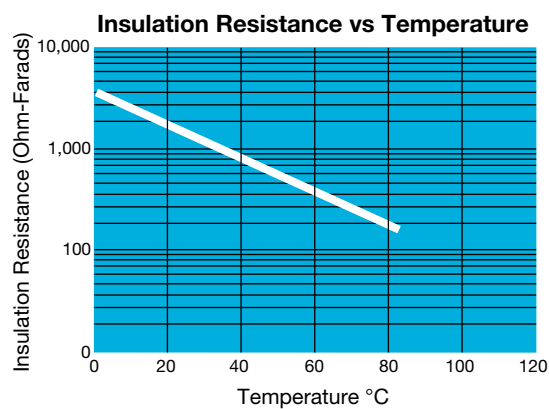
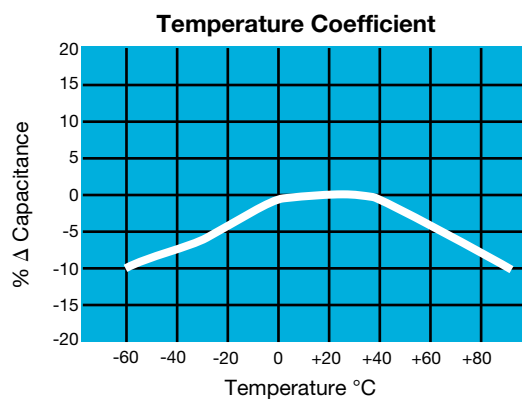
Insulation Resistance vs. Temp.



GENERAL DESCRIPTION

- General Purpose Dielectric for Ceramic Capacitors
- EIA Class II Dielectric
- Temperature variation of capacitance is within $\pm 15\%$ from -55°C to $+85^{\circ}\text{C}$
- Well suited for decoupling and filtering applications
- Available in High Capacitance values (up to $100\mu\text{F}$)

TYPICAL ELECTRICAL CHARACTERISTICS



X8R Dielectric “F”



GENERAL INFORMATION

AVX AR Series

Conformally Coated Radial Leaded MLC

Temperature Coefficients: C0G (NP0), X7R, X8R

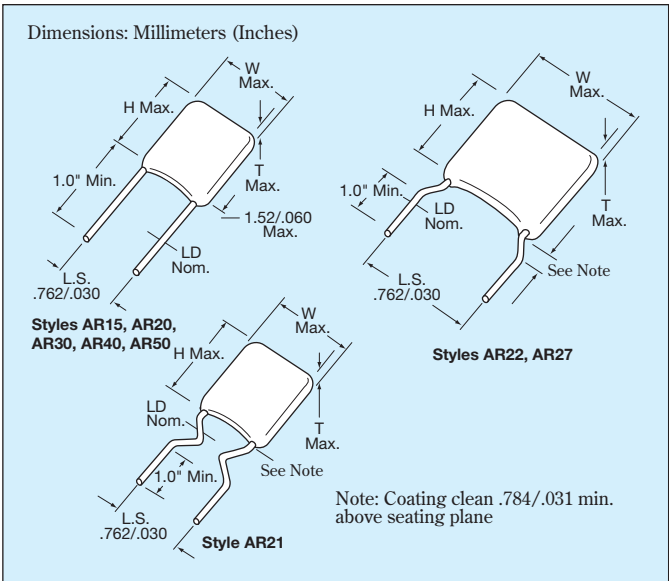
200, 100, 50 Volts

Case Material: Epoxy

Lead Material: Solderable

Qualified: to AEC-Q200

Temperature Range: up to 150°C

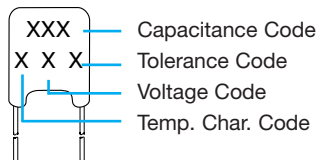


HOW TO ORDER

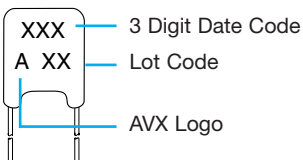
AR21	5	F	104	M	4	R
AVX Style	Voltage 5 = 50V 1 = 100V 2 = 200V	Temperature Coefficient A = C0G (NP0) C = X7R F = X8R	Capacitance First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros. For example, order 100,000 pF as 104. (For values below 10pF use "R" in place of decimal point, e.g., 1R4 = 1.4pF)	Capacitance Tolerance C0G (NP0): C = $\pm 0.25\text{pF}$ D = $\pm 0.5\text{pF}$ F = $\pm 1\%$ ($>50\text{pF}$ only) G = $\pm 2\%$ ($>25\text{pF}$ only) J = $\pm 5\%$ K = $\pm 10\%$ X7R: J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ X8R: J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$	Failure Rate 4 = AEC-Q200	Leads T = Trimmed Leads .230" \pm .030" A = Long Leads 1.0" minimum (Other lead lengths are available, contact AVX) R = RoHS Long Lead 1.0" minimum

MARKING

FRONT



BACK



PACKAGING REQUIREMENTS

	Quantity per Bag
AR15, 20, 21, 30	1000 Pieces
SR40	500 Pieces

Note: AR15, AR20, AR21, AR30, and AR40 available on tape and reel per EIA specifications RS-468. See pages 33 and 34.



GENERAL SPECIFICATIONS

Capacitance Range

See Individual Parts Specifications

Capacitance Test at 25°C

Measured at 0.5 VRMS max. at 1 KHz

Capacitance Tolerances

M = $\pm 20\%$, Z = $+80\%$, -20% , P = GMV*

Operating Temperature Range

$+10^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

Temperature Characteristic

$+22\%$, -56%

Voltage Ratings

100 & 50 Vdc

Dissipation Factor

4.0% max. at 1 KHz, .5 VRMS max.

Insulation Resistance 25°C (MIL-STD-202-Method 302)

10 K megohms or 100 megohms - μF minimum, whichever is less

Dielectric Strength

200% of rated Vdc

Life Test (1,000 hours)

150% rated voltage at $+85^{\circ}\text{C}$

Moisture Resistance (MIL-STD-202-Method 106)

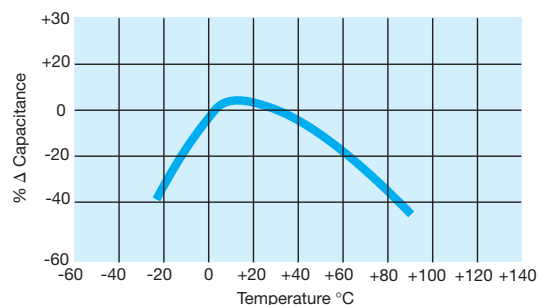
Immersion Cycling (MIL-STD-202-Method 104, condition B)

For current reliability information, consult factory.

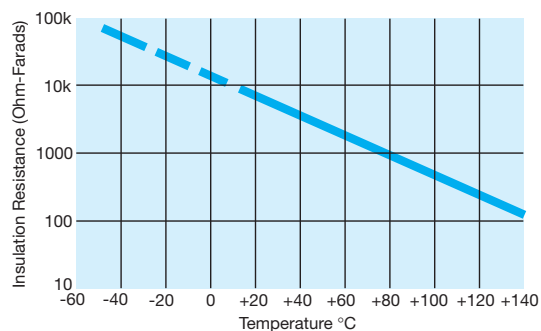
*Guaranteed Minimum Value

TYPICAL CHARACTERISTICS

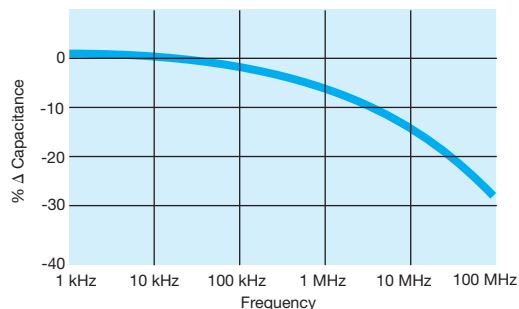
Temperature Coefficient



Insulation Resistance vs. Temp.



Capacitance vs. Frequency



Voltage Coefficient

