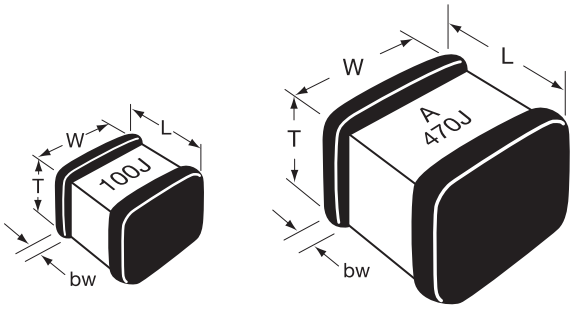
### MILITARY DESIGNATION PER MIL-PRF-55681




CDR11/12 CDR13/14

### CROSS REFERENCE: AVX/MIL-PRF-55681

| Per MIL-C-55681 | AVX Style | Length (L) | Width (W) | Thickness (T) | | Termination Band (bw) | |
|---|---|---|---|---|---|---|---|
| | | | | Max | Min | Max | Min |
| CDR11 | AQ11 | .055±.015 (1.40±.381) | .055±.015 (1.40±.381) | .057 (1.45) | .020 (.508) | .020 (.508) | .005 (.127) |
| CDR12 | AQ12 | .055±.025 (1.40±.635) | .055±.015 (1.40±.381) | .057 (1.45) | .020 (.508) | .020 (.508) | .005 (.127) |
| CDR13 | AQ13 | .110±.020 (2.79±.508) | .110±.020 (2.79±.508) | .102 (2.59) | .030 (.762) | .025 (.635) | .005 (.127) |
| CDR14 | AQ14 | .110 +.035 -0.020 (2.79 +.889 -.508) | .110±.020 (2.79±.508) | .102 (2.59) | .030 (.762) | .025 (.635) | .005 (.127) |

### PACKAGING

Standard Packaging Quanity

CDR11-12 = 100 pcs per waffle pack

CDR13-14 = 80 pcs per waffle pack

### TAPE & REEL:

All tape and reel specifications are in compliance with EIA RS481 (equivalent to IEC 286 part 3).

Sizes SQCA through SQCB, CDR11/12 through 13/14.

—8mm carrier

—7" reel: ≤0.040" thickness = 2000 pcs
≤0.075" thickness = 2000 pcs

—13" reel: ≤0.075" thickness = 10,000 pcs

### HOW TO ORDER

**CDR12 BP 101 A K U S**

**MIL Style**
CDR11, CDR12,
CDR13, CDR14

**Voltage Temperature Limits**
BP = 0±30ppm/°C with and without rated voltage from -55°C to +125°C

**Capacitance**
EIA Capacitance Code in pF.
First two digits = significant figures or "R" for decimal place.
Third digit = number of zeros or after "R" significant figures.

**Rated Voltage Code**
A = 50V D = 300V
B = 100V E = 500V
C = 200V

Not RoHS Compliant

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

*For RoHS compliant products, please select correct termination style.*

**Failure Rate Level**
M = 1.0% R = .01%
P = .1% S = .001%

**Termination Finish (Military Designations) Code**
M = Palladium silver
N = Silver-nickel-gold
S = Solder coated final with a minimum of 4 percent lead
T = Silver
U = Base metallization-barrier metal-solder coated
(tin/lead alloy, with a minimum of 4 percent lead)
W = Base metallization-barrier metal-tinned
(tin or tin/lead alloy)
Y = Base metallization-barrier metal-tin
(100 percent)
Z = Base metallization-barrier metal-tinned
(tin/lead alloy, with a minimum of 4 percent lead)

*See MIL-PRF-55681 Specification for more details

**Capacitance Tolerance Code**
B = ±.1 pF G = ±2%
C = ±.25 pF J = ±5%
D = ±.5 pF K = ±10%
F = ±1% M = ±20%

### TABLE I: STYLES CDR11 AND CDR12 CAPACITOR CHARACTERISTICS

| Type Designation 1/ | Capacitance in pF | Capacitance tolerance | Rated temperature and V/Temperature | WVDC |
|---|---|---|---|---|
| CDR1 -B-0R1AB-- | 0.1 | B | BP | 50 |
| CDR1 -B-0R2AB-- | 0.2 | B | BP | 50 |
| CDR1 -B-0R3A--- | 0.3 | B, C | BP | 50 |
| CDR1 -B-0R4A--- | 0.4 | B, C | BP | 50 |
| CDR1 -B-0R5A--- | 0.5 | B, C, D | BP | 50 |
| CDR1 -B-0R6A--- | 0.6 | B, C, D | BP | 50 |
| CDR1 -B-0R7A--- | 0.7 | B, C, D | BP | 50 |
| CDR1 -B-0R8A--- | 0.8 | B, C, D | BP | 50 |
| CDR1 -B-0R9A--- | 0.9 | B, C, D | BP | 50 |
| CDR1 -B-1R0A--- | 1.0 | B, C, D | BP | 50 |
| CDR1 -B-1R1A--- | 1.1 | B, C, D | BP | 50 |
| CDR1 -B-1R2A--- | 1.2 | B, C, D | BP | 50 |
| CDR1 -B-1R3A--- | 1.3 | B, C, D | BP | 50 |
| CDR1 -B-1R4A--- | 1.4 | B, C, D | BP | 50 |
| CDR1 -B-1R5A--- | 1.5 | B, C, D | BP | 50 |
| CDR1 -B-1R6A--- | 1.6 | B, C, D | BP | 50 |
| CDR1 -B-1R7A--- | 1.7 | B, C, D | BP | 50 |
| CDR1 -B-1R8A--- | 1.8 | B, C, D | BP | 50 |
| CDR1 -B-1R9A--- | 1.9 | B, C, D | BP | 50 |
| CDR1 -B-2R0A--- | 2.0 | B, C, D | BP | 50 |
| CDR1 -B-2R1A--- | 2.1 | B, C, D | BP | 50 |
| CDR1 -B-2R2A--- | 2.2 | B, C, D | BP | 50 |
| CDR1 -B-2R4A--- | 2.4 | B, C, D | BP | 50 |
| CDR1 -B-2R7A--- | 2.7 | B, C, D | BP | 50 |
| CDR1 -B-3R0A--- | 3.0 | B, C, D | BP | 50 |
| CDR1 -B-3R3A--- | 3.3 | B, C, D | BP | 50 |
| CDR1 -B-3R6A--- | 3.6 | B, C, D | BP | 50 |
| CDR1 -B-3R9A--- | 3.9 | B, C, D | BP | 50 |
| CDR1 -B-4R3A--- | 4.3 | B, C, D | BP | 50 |
| CDR1 -B-4R7A--- | 4.7 | B, C, D | BP | 50 |
| CDR1 -B-5R1A--- | 5.1 | B, C, D | BP | 50 |
| CDR1 -B-5R6A--- | 5.6 | B, C, D | BP | 50 |
| CDR1 -B-6R2A--- | 6.2 | B, C, D | BP | 50 |
| CDR1 -B-6R8A--- | 6.8 | B, C, J, K, M | BP | 50 |
| CDR1 -B-7R5A--- | 7.5 | B, C, J, K, M | BP | 50 |
| CDR1 -B-8R2A--- | 8.2 | B, C, J, K, M | BP | 50 |
| CDR1 -B-9R1A--- | 9.1 | B, C, J, K, M | BP | 50 |
| CDR1 -B-100A--- | 10 | F, G, J, K, M | BP | 50 |
| CDR1 -B-110A--- | 11 | F, G, J, K, M | BP | 50 |
| CDR1 -B-120A--- | 12 | F, G, J, K, M | BP | 50 |
| CDR1 -B-130A--- | 13 | F, G, J, K, M | BP | 50 |
| CDR1 -B-150A--- | 15 | F, G, J, K, M | BP | 50 |
| CDR1 -B-160A--- | 16 | F, G, J, K, M | BP | 50 |
| CDR1 -B-180A--- | 18 | F, G, J, K, M | BP | 50 |
| CDR1 -B-200A--- | 20 | F, G, J, K, M | BP | 50 |
| CDR1 -B-220A--- | 22 | F, G, J, K, M | BP | 50 |
| CDR1 -B-240A--- | 24 | F, G, J, K, M | BP | 50 |
| CDR1 -B-270A--- | 27 | F, G, J, K, M | BP | 50 |
| CDR1 -B-300A--- | 30 | F, G, J, K, M | BP | 50 |
| CDR1 -B-330A--- | 33 | F, G, J, K, M | BP | 50 |
| CDR1 -B-360A--- | 36 | F, G, J, K, M | BP | 50 |
| CDR1 -B-390A--- | 39 | F, G, J, K, M | BP | 50 |
| CDR1 -B-430A--- | 43 | F, G, J, K, M | BP | 50 |
| CDR1 -B-470A--- | 47 | F, G, J, K, M | BP | 50 |
| CDR1 -B-510A--- | 51 | F, G, J, K, M | BP | 50 |
| CDR1 -B-560A--- | 56 | F, G, J, K, M | BP | 50 |
| CDR1 -B-620A--- | 62 | F, G, J, K, M | BP | 50 |
| CDR1 -B-680A--- | 68 | F, G, J, K, M | BP | 50 |
| CDR1 -B-750A--- | 75 | F, G, J, K, M | BP | 50 |
| CDR1 -B-820A--- | 82 | F, G, J, K, M | BP | 50 |
| CDR1 -B-910A--- | 91 | F, G, J, K, M | BP | 50 |
| CDR1 -B-101A--- | 100 | F, G, J, K, M | BP | 50 |
| CDR1 -B-111A--- | 110 | F, G, J, K, M | BP | 50 |
| CDR1 -B-121A--- | 120 | F, G, J, K, M | BP | 50 |
| CDR1 -B-131A--- | 130 | F, G, J, K, M | BP | 50 |
| CDR1 -B-151A--- | 150 | F, G, J, K, M | BP | 50 |
| CDR1 -B-161A--- | 160 | F, G, J, K, M | BP | 50 |
| CDR1 -B-181A--- | 180 | F, G, J, K, M | BP | 50 |
| CDR1 -B-201A--- | 200 | F, G, J, K, M | BP | 50 |
| CDR1 -B-221A--- | 220 | F, G, J, K, M | BP | 50 |
| CDR1 -B-241A--- | 240 | F, G, J, K, M | BP | 50 |
| CDR1 -B-271A--- | 270 | F, G, J, K, M | BP | 50 |
| CDR1 -B-301A--- | 300 | F, G, J, K, M | BP | 50 |
| CDR1 -B-331A--- | 330 | F, G, J, K, M | BP | 50 |
| CDR1 -B-361A--- | 360 | F, G, J, K, M | BP | 50 |
| CDR1 -B-391A--- | 390 | F, G, J, K, M | BP | 50 |
| CDR1 -B-431A--- | 430 | F, G, J, K, M | BP | 50 |
| CDR1 -B-471A--- | 470 | F, G, J, K, M | BP | 50 |
| CDR1 -B-511A--- | 510 | F, G, J, K, M | BP | 50 |
| CDR1 -B-561A--- | 560 | F, G, J, K, M | BP | 50 |
| CDR1 -B-621A--- | 620 | F, G, J, K, M | BP | 50 |
| CDR1 -B-681A--- | 680 | F, G, J, K, M | BP | 50 |
| CDR1 -B-751A--- | 750 | F, G, J, K, M | BP | 50 |
| CDR1 -B-821A--- | 820 | F, G, J, K, M | BP | 50 |
| CDR1 -B-911A--- | 910 | F, G, J, K, M | BP | 50 |
| CDR1 -B-102A--- | 1000 | F, G, J, K, M | BP | 50 |

**1**/Complete type designation will include additional symbols to indicate style, voltage-temperature limits, capacitance tolerance (where applicable), termination finish ("M" or "N" for style CDR11, and "S", "U", "W", "Y" or "Z" for style CDR12) and failure rate level.

### TABLE II: STYLES CDR13 AND CDR14 CAPACITOR CHARACTERISTICS

| Type Designation 1/ | Capacitance in pF | Capacitance tolerance | Rated temperature and V/Temperature | WVDC |
|---|---|---|---|---|
| CDR1 -B-0R1*B-- | 0.1 | B | BP | 200/500 |
| CDR1 -B-0R2*B-- | 0.2 | B | BP | 200/500 |
| CDR1 -B-0R3*--- | 0.3 | B, C | BP | 200/500 |
| CDR1 -B-0R4*--- | 0.4 | B, C | BP | 200/500 |
| CDR1 -B-0R5*--- | 0.5 | B, C, D | BP | 200/500 |
| CDR1 -B-0R6*--- | 0.6 | B, C, D | BP | 200/500 |
| CDR1 -B-0R7*-- | 0.7 | B, C, D | BP | 200/500 |
| CDR1 -B-0R8*--- | 0.8 | B, C, D | BP | 200/500 |
| CDR1 -B-0R9*--- | 0.9 | B, C, D | BP | 200/500 |
| CDR1 -B-1R0*--- | 1.0 | B, C, D | BP | 200/500 |
| CDR1 -B-1R1*--- | 1.1 | B, C, D | BP | 200/500 |
| CDR1 -B-1R2*--- | 1.2 | B, C, D | BP | 200/500 |
| CDR1 -B-1R3*--- | 1.3 | B, C, D | BP | 200/500 |
| CDR1 -B-1R4*--- | 1.4 | B, C, D | BP | 200/500 |
| CDR1 -B-1R5*--- | 1.5 | B, C, D | BP | 200/500 |
| CDR1 -B-1R6*--- | 1.6 | B, C, D | BP | 200/500 |
| CDR1 -B-1R7*--- | 1.7 | B, C, D | BP | 200/500 |
| CDR1 -B-1R8*--- | 1.8 | B, C, D | BP | 200/500 |
| CDR1 -B-1R9*--- | 1.9 | B, C, D | BP | 200/500 |
| CDR1 -B-2R0*--- | 2.0 | B, C, D | BP | 200/500 |
| CDR1 -B-2R1*--- | 2.1 | B, C, D | BP | 200/500 |
| CDR1 -B-2R2*-- | 2.2 | B, C, D | BP | 200/500 |
| CDR1 -B-2R4*--- | 2.4 | B, C, D | BP | 200/500 |
| CDR1 -B-2R7*--- | 2.7 | B, C, D | BP | 200/500 |
| CDR1 -B-3R0*--- | 3.0 | B, C, D | BP | 200/500 |
| CDR1 -B-3R3*--- | 3.3 | B, C, D | BP | 200/500 |
| CDR1 -B-3R6*--- | 3.6 | B, C, D | BP | 200/500 |
| CDR1 -B-3R9*--- | 3.9 | B, C, D | BP | 200/500 |
| CDR1 -B-4R3*--- | 4.3 | B, C, D | BP | 200/500 |
| CDR1 -B-4R7*--- | 4.7 | B, C, D | BP | 200/500 |
| CDR1 -B-5R1*--- | 5.1 | B, C, D | BP | 200/500 |
| CDR1 -B-5R6*--- | 5.6 | B, C, D | BP | 200/500 |
| CDR1 -B-6R2*--- | 6.2 | B, C, D | BP | 200/500 |
| CDR1 -B-6R8*--- | 6.8 | B, C, J, K, M | BP | 200/500 |
| CDR1 -B-7R5*--- | 7.5 | B, C, J, K, M | BP | 200/500 |
| CDR1 -B-8R2*--- | 8.2 | B, C, J, K, M | BP | 200/500 |
| CDR1 -B-9R1*--- | 9.1 | B, C, J, K, M | BP | 200/500 |
| CDR1 -B-100*--- | 10 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-110*--- | 11 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-120*--- | 12 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-130*--- | 13 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-150*--- | 15 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-160*--- | 16 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-180*--- | 18 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-200*--- | 20 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-220*--- | 22 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-240*--- | 24 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-270*--- | 27 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-300*--- | 30 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-330*--- | 33 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-360*--- | 36 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-390*--- | 39 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-430*--- | 43 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-470*--- | 47 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-510*--- | 51 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-560*--- | 56 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-620*--- | 62 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-680*--- | 68 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-750*--- | 75 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-820*--- | 82 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-910*--- | 91 | F, G, J, K, M | BP | 200/500 |

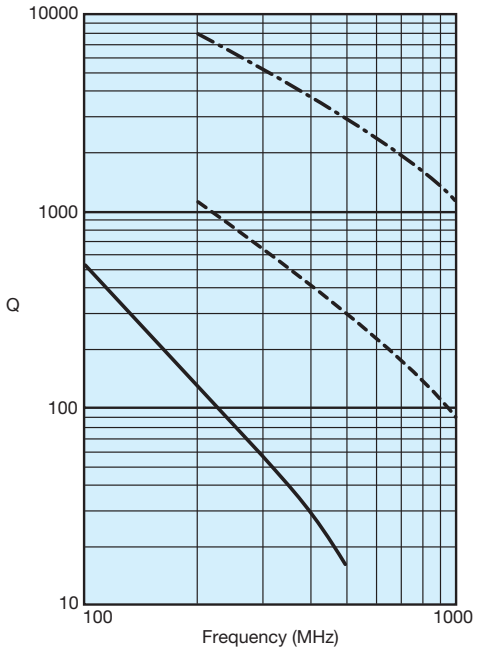
| Type Designation 1/ | Capacitance in pF | Capacitance tolerance | Rated temperature and V/Temperature | WVDC |
|---|---|---|---|---|
| CDR1 -B-101*--- | 100 | F, G, J, K, M | BP | 200/500 |
| CDR1 -B-111‡--- | 110 | F, G, J, K, M | BP | 200/300 |
| CDR1 -B-121‡--- | 120 | F, G, J, K, M | BP | 200/300 |
| CDR1 -B-131‡--- | 130 | F, G, J, K, M | BP | 200/300 |
| CDR1 -B-151‡--- | 150 | F, G, J, K, M | BP | 200/300 |
| CDR1 -B-161‡--- | 160 | F, G, J, K, M | BP | 200/300 |
| CDR1 -B-181‡--- | 180 | F, G, J, K, M | BP | 200/300 |
| CDR1 -B-201‡--- | 200 | F, G, J, K, M | BP | 200/300 |
| CDR1 -B-221C--- | 220 | F, G, J, K, M | BP | 200 |
| CDR1 -B-241C--- | 240 | F, G, J, K, M | BP | 200 |
| CDR1 -B-271C--- | 270 | F, G, J, K, M | BP | 200 |
| CDR1 -B-301C--- | 300 | F, G, J, K, M | BP | 200 |
| CDR1 -B-331C--- | 330 | F, G, J, K, M | BP | 200 |
| CDR1 -B-361C--- | 360 | F, G, J, K, M | BP | 200 |
| CDR1 -B-391C--- | 390 | F, G, J, K, M | BP | 200 |
| CDR1 -B-431C--- | 430 | F, G, J, K, M | BP | 200 |
| CDR1 -B-471C--- | 470 | F, G, J, K, M | BP | 200 |
| CDR1 -B-511B--- | 510 | F, G, J, K, M | BP | 100 |
| CDR1 -B-561B--- | 560 | F, G, J, K, M | BP | 100 |
| CDR1 -B-621B--- | 620 | F, G, J, K, M | BP | 100 |
| CDR1 -B-681A--- | 680 | F, G, J, K, M | BP | 50 |
| CDR1 -B-751A--- | 750 | F, G, J, K, M | BP | 50 |
| CDR1 -B-821A--- | 820 | F, G, J, K, M | BP | 50 |
| CDR1 -B-911A--- | 910 | F, G, J, K, M | BP | 50 |
| CDR1 -B-102A--- | 1000 | F, G, J, K, M | BP | 50 |
| CDR1 -B-112A--- | 1100 | F, G, J, K, M | BP | 50 |
| CDR1 -B-122A--- | 1200 | F, G, J, K, M | BP | 50 |
| CDR1 -B-132A--- | 1300 | F, G, J, K, M | BP | 50 |
| CDR1 -B-152A--- | 1500 | F, G, J, K, M | BP | 50 |
| CDR1 -B-162A--- | 1600 | F, G, J, K, M | BP | 50 |
| CDR1 -B-182A--- | 1800 | F, G, J, K, M | BP | 50 |
| CDR1 -B-202A--- | 2000 | F, G, J, K, M | BP | 50 |
| CDR1 -B-222A--- | 2200 | F, G, J, K, M | BP | 50 |
| CDR1 -B-242A--- | 2400 | F, G, J, K, M | BP | 50 |
| CDR1 -B-272A--- | 2700 | F, G, J, K, M | BP | 50 |
| CDR1 -B-302A--- | 3000 | F, G, J, K, M | BP | 50 |
| CDR1 -B-332A--- | 3300 | F, G, J, K, M | BP | 50 |
| CDR1 -B-362A--- | 3600 | F, G, J, K, M | BP | 50 |
| CDR1 -B-392A--- | 3900 | F, G, J, K, M | BP | 50 |
| CDR1 -B-432A--- | 4300 | F, G, J, K, M | BP | 50 |
| CDR1 -B-472A--- | 4700 | F, G, J, K, M | BP | 50 |
| CDR1 -B-502A--- | 5000 | F, G, J, K, M | BP | 50 |
| CDR1 -B-512A--- | 5100 | F, G, J, K, M | BP | 50 |

**1**/Complete type designation will include additional symbols to indicate style, voltage-temperature limits, capacitance tolerance (where applicable), termination finish ("M" or "N" for style CDR13, and "S", "U", "W", "Y" or "Z" for style CDR14) and failure rate level.

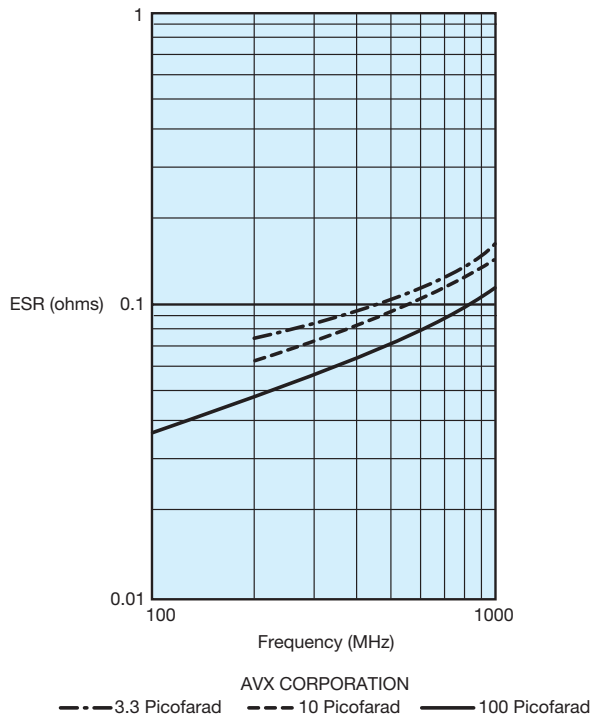
*C=200V; E=500V.

‡C=200V; D=300V.

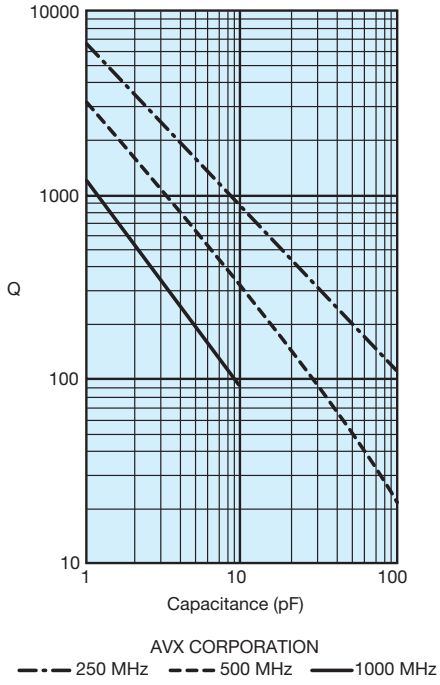
**TYPICAL Q vs. FREQUENCY**
**AQ11/12**
**MIL-PRF-55681E - BG**
**STANDARD - M**



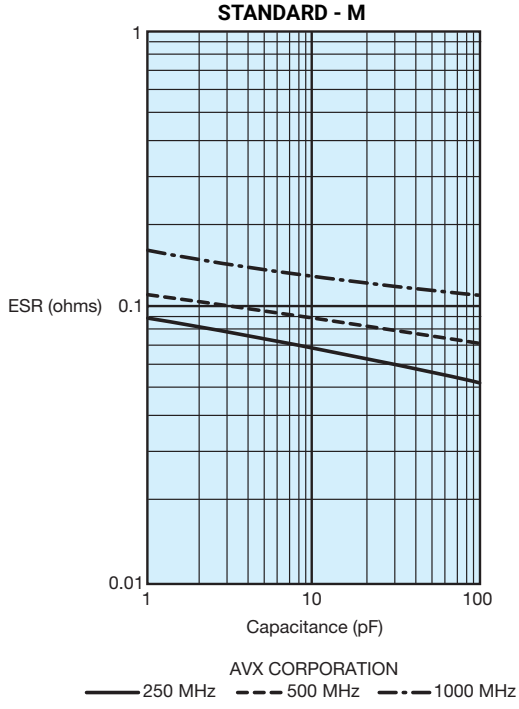

**TYPICAL ESR vs. FREQUENCY**
**AQ11/12**
**MIL-PRF-55681E - BG**
**STANDARD - M**



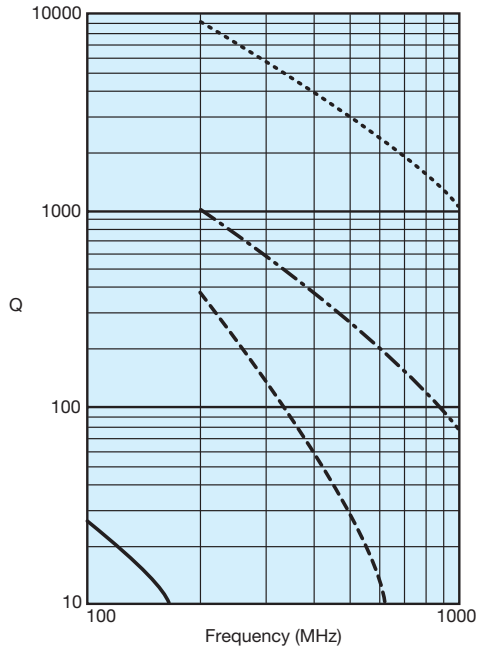

**TYPICAL Q vs. CAPACITANCE**
**AQ11/12**
**MIL-PRF-55681E - BG**
**STANDARD - M**



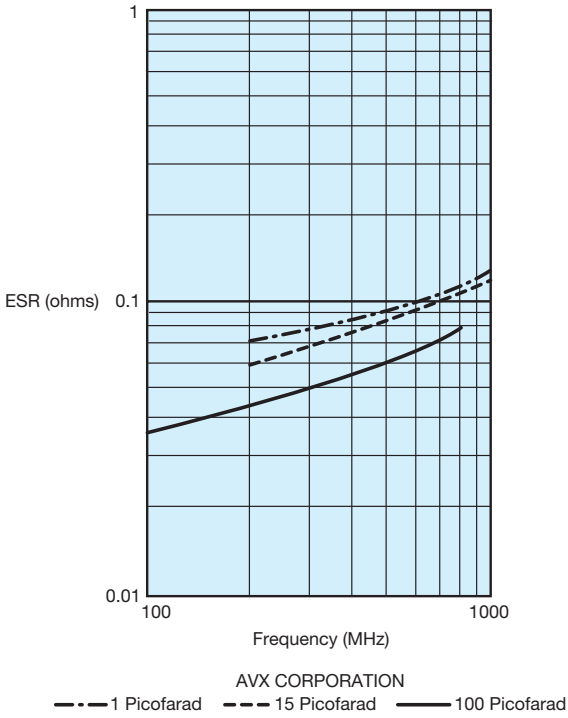

**TYPICAL ESR vs. CAPACITANCE**
**AQ11/12**
**MIL-PRF-55681E - BG**
**STANDARD - M**



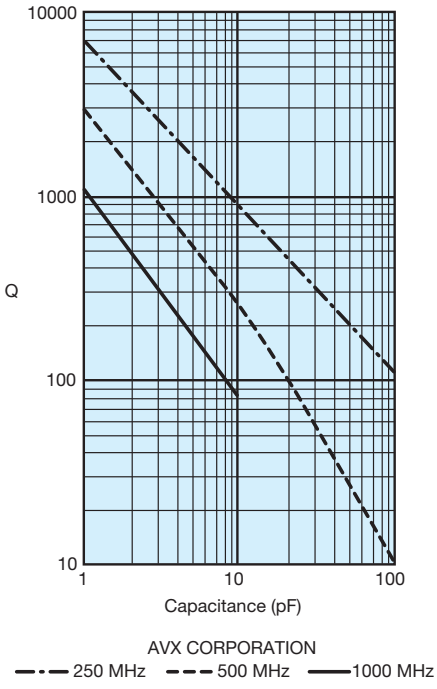
**TYPICAL Q vs. FREQUENCY**
**AQ13/14**
**MIL-PRF-55681E - BG**
**STANDARD - M**



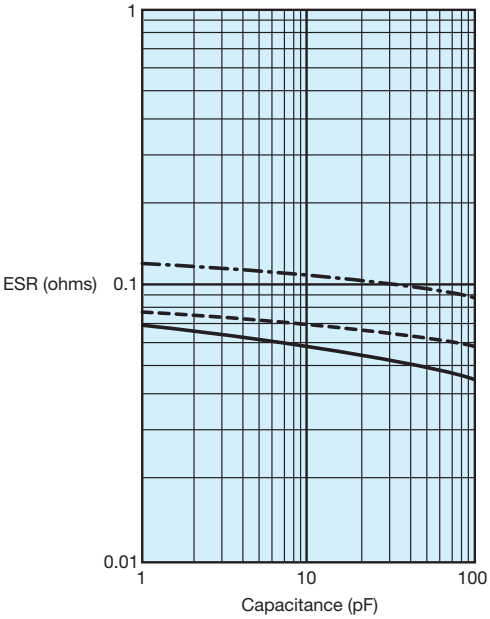

**TYPICAL ESR vs. FREQUENCY**
**AQ13/14**
**MIL-PRF-55681E - BG**
**STANDARD - M**



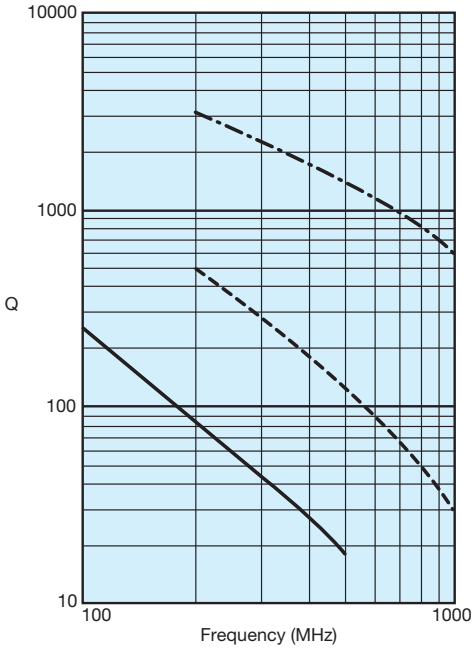

**TYPICAL Q vs. CAPACITANCE**
**AQ13/14**
**MIL-PRF-55681E - BG**
**STANDARD - M**



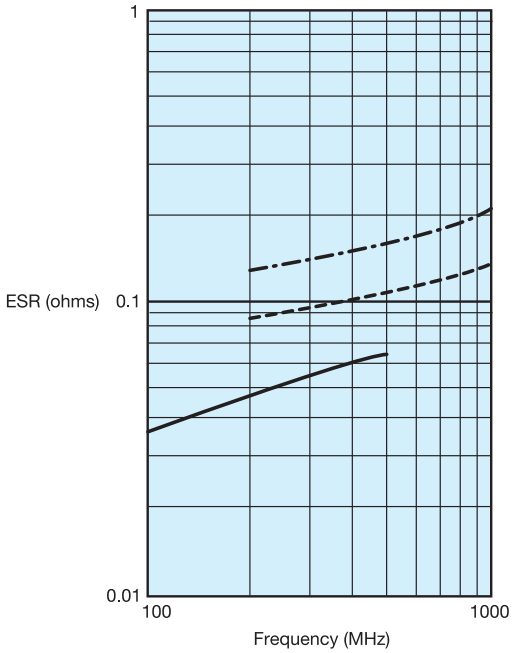

**TYPICAL ESR vs. CAPACITANCE**
**AQ13/14**
**MIL-PRF-55681E - BG**
**STANDARD - M**



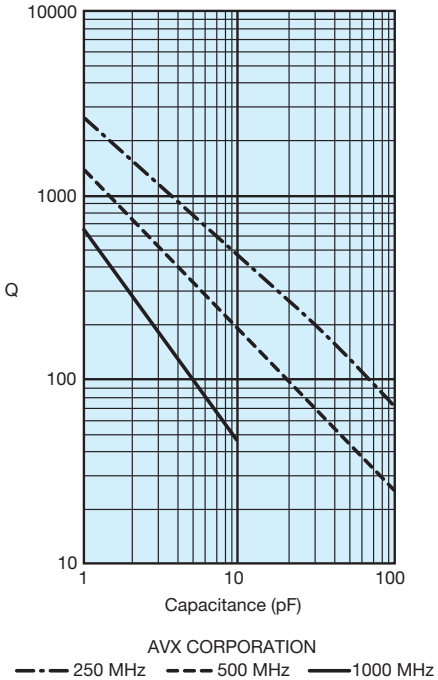
**TYPICAL Q vs. FREQUENCY**
**AQ11/12**
**MIL-PRF-55681E - BP**
**STANDARD - A**



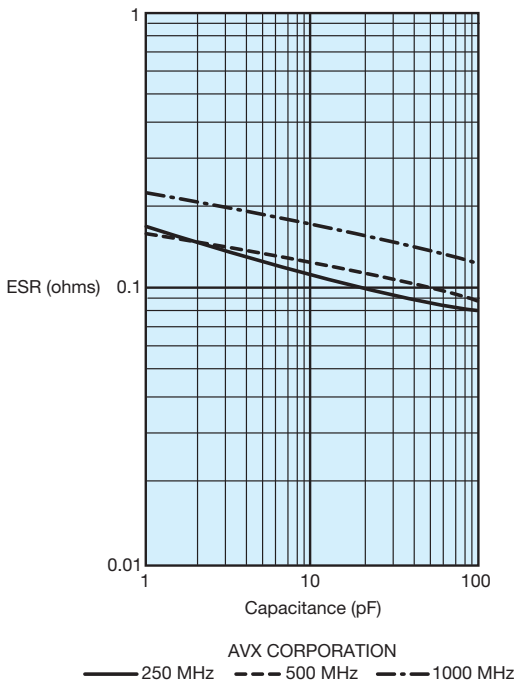

**TYPICAL ESR vs. FREQUENCY**
**AQ13/14**
**MIL-PRF-55681E - BP**
**STANDARD - A**



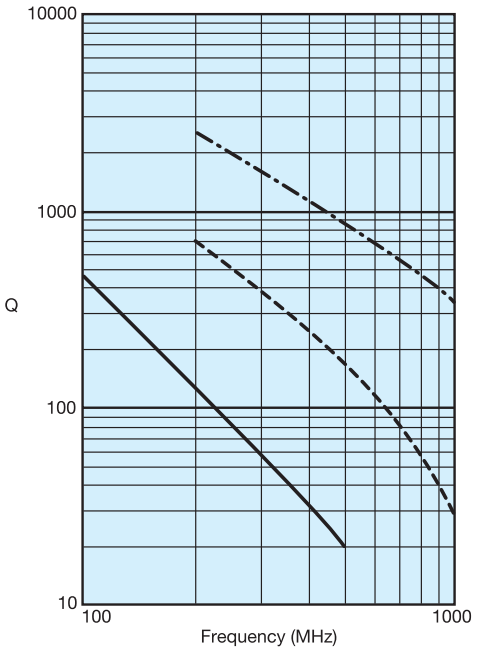

**TYPICAL Q vs. CAPACITANCE**
**AQ11/12**
**MIL-PRF-55681E - BP**
**STANDARD - A**



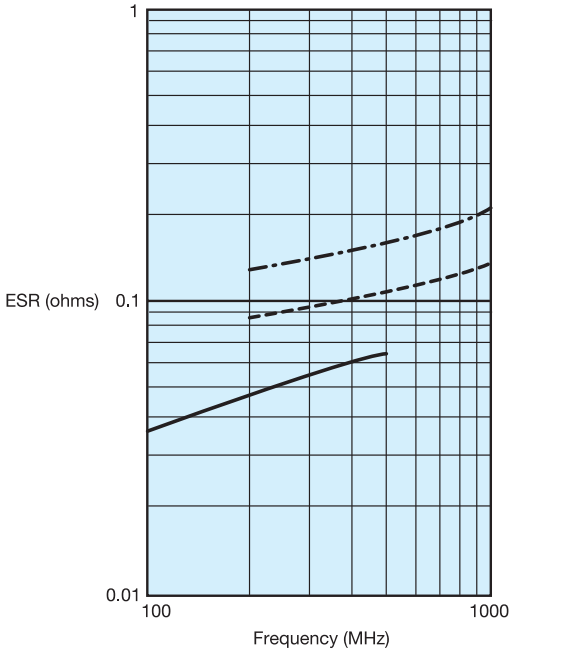

**TYPICAL ESR vs. CAPACITANCE**
**AQ11/12**
**MIL-PRF-55681E - BP**
**STANDARD - A**



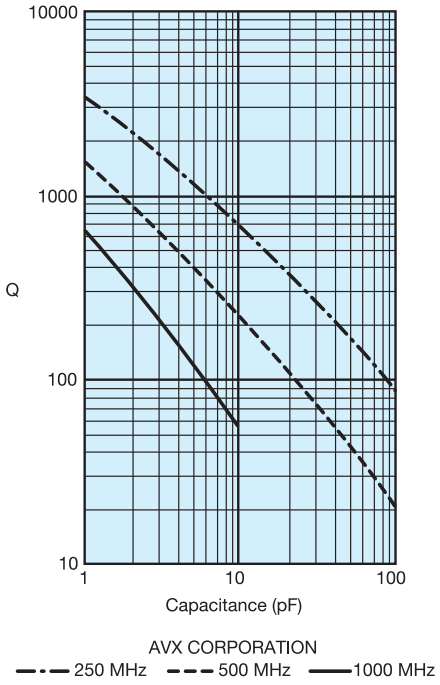
**TYPICAL Q vs. FREQUENCY**
**AQ13/14**
**MIL-PRF-55681E - BP**
**STANDARD - A**



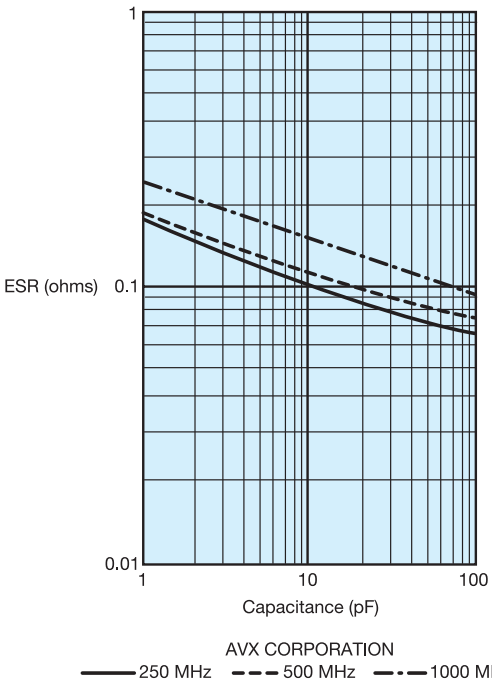

**TYPICAL ESR vs. FREQUENCY**
**AQ13/14**
**MIL-PRF-55681E - BP**
**STANDARD - A**



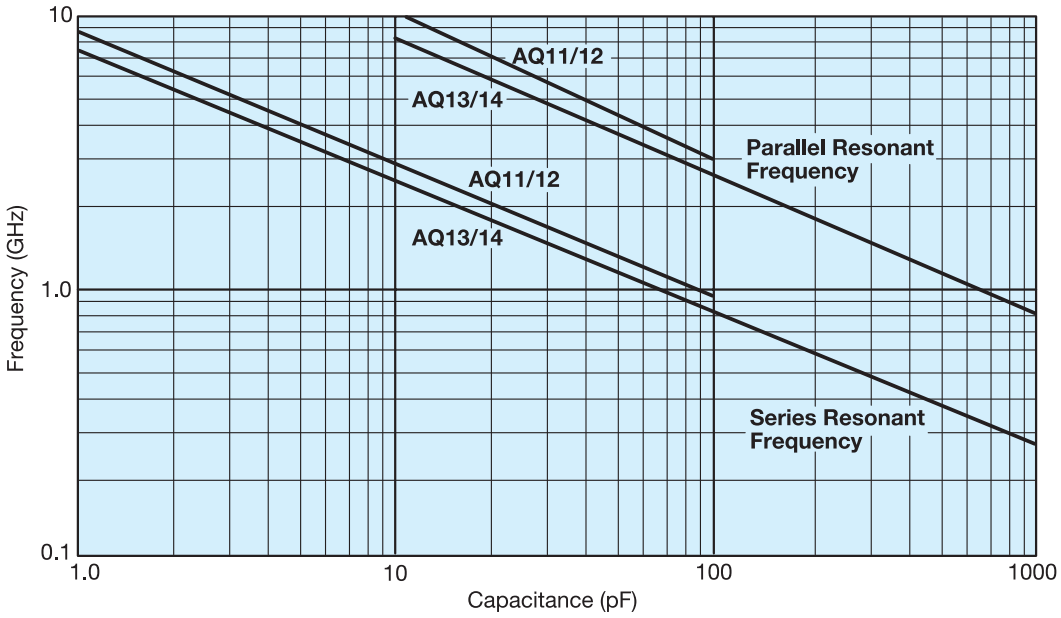

**TYPICAL Q vs. CAPACITANCE**
**AQ13/14**
**MIL-PRF-55681E - BP**
**STANDARD - A**




**TYPICAL ESR vs. CAPACITANCE**
**AQ13/14**
**MIL-PRF-55681E - BP**
**STANDARD - A**



### TYPICAL RESONANT FREQUENCY vs. CAPACITANCE
### AVX AQ11-14 (CDR11-14)




### TYPICAL RESONANT FREQUENCY vs. CAPACITANCE AVX 0603