

CHR27

MIL-PRF-39022/13

Type 820P



Capacitor,
Fixed,
Metallized paper-plastic film dielectric,
Direct current
Hermetically sealed in metal cases,
Established reliability

GENERAL CHARACTERISTICS

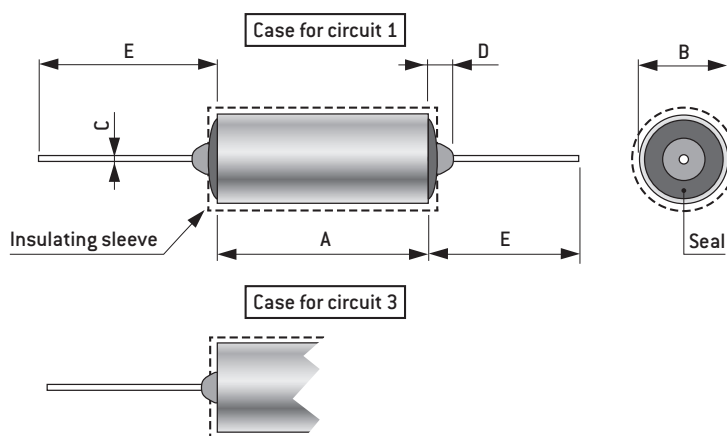
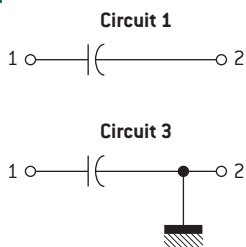
Dielectric material	Normally polyphenylene sulfide
Rated temperature	-55°C to +125°C.
Capacitance range	0.047µF to 22µF
Voltage range	50 V to 600 V
Capacitance tolerance	± 1%, ± 2%, ± 5%, ± 10%
Failure rate level (% per 1,000 hours)	M (1%), P (0.1%), R (0.01%), and S (0.001%).

Full details and most up to date information found at government website.

DIMENSIONS

A		B	
See tables on the next pages			
Inches	(mm)	Inches	(mm)
See note 1	0.172 max	{4.37 max}	1.625 ⁺¹ ₋₀ {41.28 ^{+25.4} ₋₀ }

CIRCUIT DIAGRAM



INSULATION RESISTANCE

In megohms:	
At +25°C ± 3°C (need not exceed)	250,000
At +85°C +4°C, -0°C (need not exceed)	25,000
At +125°C +4°C, -0°C (need not exceed)	15,000
In megohms x microfarads (minimum):	
At +25°C ± 3°C	100,000
At +85°C +4°C, -0°C	6,000
At +125°C +4°C, -0°C	1,000

NOTES

- Number 24 AWG wire 0.020" ± 0.002 (0.51 ± 0.05 mm) for case diameters of 0.175" (4.45 mm) and .195 (4.95 mm).
- Number 22 AWG wire 0.025" ± 0.002 (0.64 ± 0.05 mm) for case diameters of .235" (5.97 mm) and .312 (7.92 mm).
- Number 20 AWG wire 0.032" ± 0.002 (0.81 ± 0.05 mm) for case diameters of 0.400" (10.16 mm) and over.
- Number 18 AWG wire 0.040" ± 0.002 (1.02 ± 0.05 mm) for case diameters of 1.0" (25.4 mm)
- See table below for additional dimensions.
- Dimensions are in inches.
- Metric equivalents are given for general information only.
- Insulating sleeve shall extend beyond the capacitor body but shall not exceed .031" (0.79 mm) on either end. Insulating sleeve thickness shall not exceed .016" (0.41 mm).
- Plastic insulating sleeve shall be transparent; marking shall be placed on the capacitor case.
- Lead length may be a minimum of 1.0" (25.4 mm) long for use in tape and reel packaging, when specified in the ordering data.

HOW TO ORDER

M39022	/13	A	473	F	M
Performance Specification number	Specification sheet number	Circuit and voltage code	Capacitance in code	Capacitance tolerance in code	Product level designator
		A, B, C, D, E, F, G, H, J, K, L, M (see page 6)	Examples: 101 = 100pF 472 = 4.7nF 473 = 47nF	F = ± 1% G = ± 2% J = ± 5% K = ± 10%	M = 1%/1,000 hours P = 0.1%/1,000 hours R = 0.01%/1,000 hours S = 0.001%/1,000 hours

ELECTRICAL CHARACTERISTICS, DIMENSIONS, AND DASH NUMBERS

Part or Identifying Number (PIN)*	Capacitance (μF)	Capacitance Tolerance (in code)	Failure rate Level (in code)	Dimensions**			
				A ±0.062(±1.57 mm)		B +0.031/-0.05(+0.79 / -1.30 mm)	
				Inches	(mm)	Inches	(mm)
Rated voltage 50 V_{DC}							
M39022/13 - 473 --	0.047	F, G, J, K	M, P, R, S	0.531	(0.021)	0.174	(0.007)
M39022/13 - 563 --	0.056	F, G, J, K	M, P, R, S	0.531	(0.021)	0.174	(0.007)
M39022/13 - 683 --	0.068	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 823 --	0.082	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 104 --	0.10	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 124 --	0.12	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 154 --	0.15	F, G, J, K	M, P, R, S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 184 --	0.18	F, G, J, K	M, P, R, S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 224 --	0.22	F, G, J, K	M, P, R, S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 274 --	0.27	F, G, J, K	M, P, R, S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 334 --	0.33	F, G, J, K	M, P, R, S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 394 --	0.39	F, G, J, K	M, P, R, S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 474 --	0.47	F, G, J, K	M, P, R, S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 564 --	0.56	F, G, J, K	M, P, R, S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 684 --	0.68	F, G, J, K	M, P, R, S	0.843	(0.033)	0.312	(0.012)
M39022/13 - 824 --	0.82	F, G, J, K	M, P, R, S	0.843	(0.033)	0.312	(0.012)
M39022/13 - 105 --	1.0	F, G, J, K	M, P, R, S	0.843	(0.033)	0.312	(0.012)
M39022/13 - 125 --	1.2	F, G, J, K	M, P, R, S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 155 --	1.5	F, G, J, K	M, P, R, S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 185 --	1.8	F, G, J, K	M, P, R, S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 205 --	2.0	F, G, J, K	M, P, R, S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 225 --	2.2	F, G, J, K	M, P, R, S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 275 --	2.7	F, G, J, K	M, P, R, S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 305 --	3.0	F, G, J, K	M, P, R, S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 335 --	3.3	F, G, J, K	M, P, R, S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 395 --	3.9	F, G, J, K	M, P, R, S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 475 --	4.7	F, G, J, K	M, P, R, S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 505 --	5.0	F, G, J, K	M, P, R, S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 565 --	5.6	F, G, J, K	M, P, R, S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 685 --	6.8	F, G, J, K	M, P, R, S	1.125	(0.044)	0.562	(0.022)
M39022/13 - 825 --	8.2	F, G, J, K	M, P, R, S	1.312	(0.052)	0.562	(0.022)
M39022/13 - 106 --	10.0	F, G, J, K	M, P, R, S	1.312	(0.052)	0.670	(0.026)
M39022/13 - 126 --	12.0	F, G, J, K	M, P, R, S	1.312	(0.052)	0.670	(0.026)
M39022/13 - 156 --	15.0	F, G, J, K	M, P, R, S	1.375	(0.054)	0.750	(0.030)
M39022/13 - 186 --	18.0	F, G, J, K	M, P, R, S	1.375	(0.054)	0.750	(0.030)
M39022/13 - 206 --	20.0	F, G, J, K	M, P, R, S	1.625	(0.064)	0.750	(0.030)
M39022/13 - 226 --	22.0	F, G, J, K	M, P, R, S	1.625	(0.064)	0.750	(0.030)
Rated voltage 100 V_{DC}							
M39022/13 - 103 --	0.01	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 123 --	0.012	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 153 --	0.015	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 183 --	0.018	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 223 --	0.022	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 273 --	0.027	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 333 --	0.033	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 393 --	0.039	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 473 --	0.047	F, G, J, K	M, P, R, S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 563 --	0.056	F, G, J, K	M, P, R, S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 683 --	0.068	F, G, J, K	M, P, R, S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 823 --	0.082	F, G, J, K	M, P, R, S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 104 --	0.10	F, G, J, K	M, P, R, S	0.688	(0.027)	0.235	(0.009)
M39022/13 - 124 --	0.12	F, G, J, K	M, P, R, S	0.688	(0.027)	0.235	(0.009)

* The complete PIN will include additional symbols to indicate circuit and voltage code, capacitance tolerance (K, J, G, or F), and FRL (M, P, R, or S).

** Dimensions are for circuit 1. For circuit 3, deduct 0.062" (1.57 mm) from length.

ELECTRICAL CHARACTERISTICS, DIMENSIONS, AND DASH NUMBERS

Part or Identifying Number (PIN)*	Capacitance (µF)	Capacitance Tolerance (in code)	Failure rate Level (in code)	Dimensions**			
				A ±0.062(±1.57 mm)		B +0.031/-0.05(+0.79 / -1.30 mm)	
				Inches	(mm)	Inches	(mm)
Rated voltage 50 V_{DC}							
M39022/13 - 473 --	0.047	F,G,J,K	M,P,R,S	0.531	(0.021)	0.174	(0.007)
M39022/13 - 563 --	0.056	F,G,J,K	M,P,R,S	0.531	(0.021)	0.174	(0.007)
M39022/13 - 683 --	0.068	F,G,J,K	M,P,R,S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 823 --	0.082	F,G,J,K	M,P,R,S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 104 --	0.10	F,G,J,K	M,P,R,S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 124 --	0.12	F,G,J,K	M,P,R,S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 154 --	0.15	F,G,J,K	M,P,R,S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 184 --	0.18	F,G,J,K	M,P,R,S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 224 --	0.22	F,G,J,K	M,P,R,S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 274 --	0.27	F,G,J,K	M,P,R,S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 334 --	0.33	F,G,J,K	M,P,R,S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 394 --	0.39	F,G,J,K	M,P,R,S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 474 --	0.47	F,G,J,K	M,P,R,S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 564 --	0.56	F,G,J,K	M,P,R,S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 684 --	0.68	F,G,J,K	M,P,R,S	0.843	(0.033)	0.312	(0.012)
M39022/13 - 824 --	0.82	F,G,J,K	M,P,R,S	0.843	(0.033)	0.312	(0.012)
M39022/13 - 105 --	1.0	F,G,J,K	M,P,R,S	0.843	(0.033)	0.312	(0.012)
M39022/13 - 125 --	1.2	F,G,J,K	M,P,R,S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 155 --	1.5	F,G,J,K	M,P,R,S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 185 --	1.8	F,G,J,K	M,P,R,S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 205 --	2.0	F,G,J,K	M,P,R,S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 225 --	2.2	F,G,J,K	M,P,R,S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 275 --	2.7	F,G,J,K	M,P,R,S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 305 --	3.0	F,G,J,K	M,P,R,S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 335 --	3.3	F,G,J,K	M,P,R,S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 395 --	3.9	F,G,J,K	M,P,R,S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 475 --	4.7	F,G,J,K	M,P,R,S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 505 --	5.0	F,G,J,K	M,P,R,S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 565 --	5.6	F,G,J,K	M,P,R,S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 685 --	6.8	F,G,J,K	M,P,R,S	1.125	(0.044)	0.562	(0.022)
M39022/13 - 825 --	8.2	F,G,J,K	M,P,R,S	1.312	(0.052)	0.562	(0.022)
M39022/13 - 106 --	10.0	F,G,J,K	M,P,R,S	1.312	(0.052)	0.670	(0.026)
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M39022/13 - 156 --	15.0	F,G,J,K	M,P,R,S	1.375	(0.054)	0.750	(0.030)
M39022/13 - 186 --	18.0	F,G,J,K	M,P,R,S	1.375	(0.054)	0.750	(0.030)
M39022/13 - 206 --	20.0	F,G,J,K	M,P,R,S	1.625	(0.064)	0.750	(0.030)
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M39022/13 - 103 --	0.01	F,G,J,K	M,P,R,S	0.625	(0.025)	0.174	(0.007)
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M39022/13 - 333 --	0.033	F,G,J,K	M,P,R,S	0.625	(0.025)	0.174	(0.007)
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M39022/13 - 823 --	0.082	F,G,J,K	M,P,R,S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 104 --	0.10	F,G,J,K	M,P,R,S	0.688	(0.027)	0.235	(0.009)
M39022/13 - 124 --	0.12	F,G,J,K	M,P,R,S	0.688	(0.027)	0.235	(0.009)

* The complete PIN will include additional symbols to indicate circuit and voltage code, capacitance tolerance (K, J, G, or F), and FRL (M, P, R, or S).

** Dimensions are for circuit 1. For circuit 3, deduct 0.062" (1.57 mm) from length.

ELECTRICAL CHARACTERISTICS, DIMENSIONS, AND DASH NUMBERS

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				Inches	(mm)	Inches	(mm)
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M39022/13 - 184 --	0.18	F, G, J, K	M, P, R, S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 224 --	0.22	F, G, J, K	M, P, R, S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 274 --	0.27	F, G, J, K	M, P, R, S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 334 --	0.33	F, G, J, K	M, P, R, S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 394 --	0.39	F, G, J, K	M, P, R, S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 474 --	0.47	F, G, J, K	M, P, R, S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 564 --	0.56	F, G, J, K	M, P, R, S	0.625	(0.025)	0.312	(0.012)
M39022/13 - 684 --	0.68	F, G, J, K	M, P, R, S	0.843	(0.033)	0.312	(0.012)
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M39022/13 - 125 --	1.2	F, G, J, K	M, P, R, S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 155 --	1.5	F, G, J, K	M, P, R, S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 185 --	1.8	F, G, J, K	M, P, R, S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 205 --	2.0	F, G, J, K	M, P, R, S	0.843	(0.033)	0.400	(0.016)
M39022/13 - 225 --	2.2	F, G, J, K	M, P, R, S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 275 --	2.7	F, G, J, K	M, P, R, S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 305 --	3.0	F, G, J, K	M, P, R, S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 335 --	3.3	F, G, J, K	M, P, R, S	1.125	(0.044)	0.400	(0.016)
M39022/13 - 395 --	3.9	F, G, J, K	M, P, R, S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 475 --	4.7	F, G, J, K	M, P, R, S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 505 --	5.0	F, G, J, K	M, P, R, S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 565 --	5.6	F, G, J, K	M, P, R, S	1.125	(0.044)	0.500	(0.020)
M39022/13 - 685 --	6.8	F, G, J, K	M, P, R, S	1.125	(0.044)	0.562	(0.022)
M39022/13 - 825 --	8.2	F, G, J, K	M, P, R, S	1.312	(0.052)	0.562	(0.022)
M39022/13 - 106 --	10.0	F, G, J, K	M, P, R, S	1.312	(0.052)	0.670	(0.026)
M39022/13 - 126 --	12.0	F, G, J, K	M, P, R, S	1.312	(0.052)	0.670	(0.026)
M39022/13 - 156 --	15.0	F, G, J, K	M, P, R, S	1.375	(0.054)	0.750	(0.030)
M39022/13 - 186 --	18.0	F, G, J, K	M, P, R, S	1.375	(0.054)	0.750	(0.030)
M39022/13 - 206 --	20.0	F, G, J, K	M, P, R, S	1.625	(0.064)	0.750	(0.030)
M39022/13 - 226 --	22.0	F, G, J, K	M, P, R, S	1.625	(0.064)	0.750	(0.030)
Rated voltage 100 V_{DC}							
M39022/13 - 103 --	0.01	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 123 --	0.012	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 153 --	0.015	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 183 --	0.018	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 223 --	0.022	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 273 --	0.027	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 333 --	0.033	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 393 --	0.039	F, G, J, K	M, P, R, S	0.625	(0.025)	0.174	(0.007)
M39022/13 - 473 --	0.047	F, G, J, K	M, P, R, S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 563 --	0.056	F, G, J, K	M, P, R, S	0.625	(0.025)	0.193	(0.008)
M39022/13 - 683 --	0.068	F, G, J, K	M, P, R, S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 823 --	0.082	F, G, J, K	M, P, R, S	0.625	(0.025)	0.235	(0.009)
M39022/13 - 104 --	0.10	F, G, J, K	M, P, R, S	0.688	(0.027)	0.235	(0.009)
M39022/13 - 124 --	0.12	F, G, J, K	M, P, R, S	0.688	(0.027)	0.235	(0.009)

* The complete PIN will include additional symbols to indicate circuit and voltage code, capacitance tolerance (K, J, G, or F), and FRL (M, P, R, or S).

** Dimensions are for circuit 1. For circuit 3, deduct 0.062" (1.57 mm) from length.

Technical Informations

TERMINAL

The terminal is identified by a single letter in accordance with table below.

Symbol	Type of terminal
A	Axial wire lead
B	Solder lug (nonremovable)
C	Threaded stud and nuts
D and H	Pillar insulator for use at altitudes up to 7,500 feet (22.8 inches of mercury)
E	Pillar insulator for use at altitudes up to 50,000 feet (3.4 inches of mercury)
R	Radial wire-lead
L	Lugs

CHARACTERISTIC

The characteristic is identified by a single letter in accordance with table below.

Characteristic	Values of characteristics								
	E	F	G	K (2)	M	P	Q (4)	T	V
High ambient test temperature $\pm 3^{\circ}\text{C}$ (1)	+85°C	+85°C	+85°C	+125°C	+85°C	+65°C	+125°C	+170°C	+125°C
Low ambient test temperature +0°C, -5°C	-65°C	-55°C	-55°C	-65°C	-65°C	-65°C	-55°C	-65°C	-55°C

Life-test dc voltage, percent of the dc voltage rating: Watt-second group:									
I (0.5 watt-second and less)	140	140	140	140	140	140	150	140	150
II (0.5+ to 5 watt-seconds)	140	130	130	140 (3)	-	-	-	-	-
III (5+ to 50 watt-seconds)	140	110	110	140	-	-	-	-	-
IV (greater than 50 watt-seconds)	140	90	90	140	-	-	-	-	-
Flashpoint of impregnant of filling compound (°C)	+142°C	+135°C	+135°C	+142°C	+142°C	+142°C	+142°C	+217°C	+142°C

- (1) For characteristic K, voltage derating may be necessary at the high ambient test temperature.
 (2) For tubular units of characteristic K rated at 1,000 volts dc, life test voltage is 1,200 volts.
 (3) For tubular units of characteristic K in watt-seconds group II, use 130 percent of the dc voltage at +40°C for the life-test dc voltage.
 (4) Characteristic Q capacitors are no longer available

Characteristic	Construction		Operating temperature range
	Dielectric material	Electrode	
K	Polypropylene	Foil	-55°C to +105°C
L	Polypropylene	Metallized polypropylene	-55°C to +105°C
M	Polyethylene terephthalate	Foil	-55°C to +85°C
N	Polyethylene terephthalate	Metallized polyethylene terephthalate	-55°C to +85°C
Q	Polycarbonate	Foil	-55°C to +125°C (1)
R	Polycarbonate	Metallized polycarbonate	-55°C to +125°C (1)
U	Polyphenylene sulfide	Metallized polyphenylene sulfide	-55°C to +125°C (1)
V	Polyphenylene sulfide	Foil	-55°C to +125°C (1)

- (1) For operation at +125°C, characteristics Q, R, U and V capacitors are voltage derated (see table below)

Symbol	DC voltage rating at +85°C (1)	Characteristics Q and V DC voltage rating at +125°C	Characteristics R and U DC voltage rating at +125°C
A	50 V	33.3 V	25 V
B	100 V	66.7 V	50 V
C	200 V	133.3 V	100 V
D	300 V	200.0 V	150 V
E	400 V	266.7 V	200 V
F	600 V	400.0 V	300 V
G	75 V	50.0 V	37.5 V
H	150 V	100.0 V	75 V
J	25 V	16.7 V	12.5 V
K	250 V	166.7 V	125 V
L	800 V	533.3 V	400 V

- (1) DC voltage rating for characteristics K and L at +105°C are the same as those at +85°C.

VOLTAGE

The dc voltage rating for continuous operation at the high ambient test temperature specified in table III (except for characteristic K which is for +85°C operation), is identified by a single letter in accordance with table below.

Symbol	DC voltage rating (Volts)	Symbol	DC voltage rating (Volts)
Z	30 V	K	2,500 V
A	50 V	L	3,000 V
B	100 V	M	4,000 V
C	200 V	N	5,000 V
D	300 V	P	6,000 V
E	400 V	R	7,500 V
F	600 V	S	10,000 V
G	1,000 V	T	12,500 V
H	1,500 V	U	15,000 V
J	2,000 V		

CAPACITANCE TOLERANCE

The capacitance tolerance in percent is identified by a single letter in accordance with table below.

Symbol	Capacitance tolerance
C	$\pm 0.25\%$
D	$\pm 0.5\%$
F	$\pm 1\%$
G	$\pm 2\%$
J	$\pm 5\%$
K	$\pm 10\%$
M	$\pm 20\%$

CIRCUIT AND VOLTAGE CODES

Code	Circuit	Voltage (V)
A	1	50
B	3	50
C	1	100
D	3	100
E	1	200
F	3	200
G	1	400
H	3	400
J	1	600
K	3	600
L	1	300
M	3	300

Specifications, standards, and handbooks.

The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract (see 6.2).

FEDERAL STANDARDS

FED-STD-H28 - Screw-Thread Standards for Federal Services

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-C-18312 - Capacitors, Fixed, Metallized (Paper, Paper-Plastic, or Plastic Film) Dielectric, Direct Current (Hermetically Sealed in Metal Cases), General Specification for

MIL-PRF-83421/1 - Capacitors, Fixed, Metallized, Plastic Film Dielectric, DC and AC, Hermetically Sealed In Metal Cases, Established Reliability,

MIL-PRF-83421/2 - Capacitor, Fixed, Metallized Plastic Film, Dielectric, (DC, AC, or DC and AC), Hermetically Sealed in Metal Cases, Established Reliability,

MIL-PRF-83421/6 - Capacitor, Fixed, Metallized Plastic Film Dielectric, DC and AC, Hermetically Sealed in Metal Cases, Established Reliability,

MIL-PRF-11693/7 - Capacitors, Feed Through, Radio-Interference Reduction, DC (Hermetically Sealed in Metal Cases), Established and Non-Established Reliability,

MIL-PRF-83421/6 - Capacitors, Fixed, Metallized Plastic Film Dielectric, DC and AC, Hermetically Sealed In Metal Cases, Established Reliability.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-202 - Test Methods Standard Electronic and Electrical Component Parts

MIL-STD-202-101 - Method 101, Salt Atmosphere (Corrosion)

MIL-STD-202-104 - Method 104, Immersion

MIL-STD-202-105 - Method 105, Barometric Pressure (Reduced)

MIL-STD-202-106 - Method 106, Moisture Resistance

MIL-STD-202-107 - Method 107, Thermal Shock

MIL-STD-202-108 - Method 108, Life (at Elevated Ambient Temperature)

MIL-STD-202-112 - Method 112, Seal

MIL-STD-202-201 - Method 201, Vibration

MIL-STD-202-204 - Method 204, Vibration, High Frequency

MIL-STD-202-208 - Method 208, Solderability

MIL-STD-202-209 - Method 209, Radiographic Inspection

MIL-STD-202-210 - Method 210, Resistance to Soldering Heat

MIL-STD-202-211 - Method 211, Terminal Strength

MIL-STD-202-213 - Method 213, Shock (Specified Pulse)

MIL-STD-202-214 - Method 214, Random Vibration

MIL-STD-202-215 - Method 215, Resistance to Solvents

MIL-STD-202-301 - Method 301, Dielectric Withstanding Voltage

MIL-STD-202-302 - Method 302, Insulation Resistance

MIL-STD-202-305 - Method 305, Capacitance

MIL-STD-220 - Method of Insertion Loss Measurement

MIL-STD-690 - Failure Rate Sampling Plans and Procedures

MIL-STD-790 - Standard Practice for Established Reliability and High Reliability Qualified Products List (QPL) Systems for Electrical, Electronic, and Fiber Optic Parts Specifications

MIL-STD-810 - Environmental Engineering Considerations and Laboratory Tests

MIL-STD-1276 - Leads for Electronic Component Parts

MIL-STD-1285 - Marking of Electrical and Electronic Parts



Government Documents



Non-Government publications.

The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents are those listed in the solicitation or contract.

ASTM INTERNATIONAL (ASTM)

ASTM D92 - Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester

SAE INTERNATIONAL (SAE)

SAE EIA-554-1 - Assessment of Average Outgoing Quality Levels in Parts Per Million (PPM)

ASSOCIATION CONNECTING ELECTRONICS INDUSTRIES (IPC)

IPC/JEDEC J-STD-002 - Solderability Tests for Component Leads, Terminations, Lugs, Terminals and Wires

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO/IEC 17025 - General Requirements for the Competence of Testing and Calibration laboratories

ISO 10012 - Measurement Management Systems - Requirements for Measurement Processes and Measuring Equipment

NATIONAL CONFERENCE OF STANDARDS LABORATORIES (NCSL)

NCSL Z540.3 - Requirements for the Calibration of Measuring and Test Equipment

SAE INTERNATIONAL (SAE)

SAE EIA-554-1 - Assessment of Average Outgoing Quality Levels in Parts per Million (PPM)

SOLID STATE TECHNOLOGY ASSOCIATION (JEDEC)

JEDEC JESD557 - Statistical Process Control Systems

Order of precedence.

Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein (except for related specification sheets), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.