

INCH-POUND

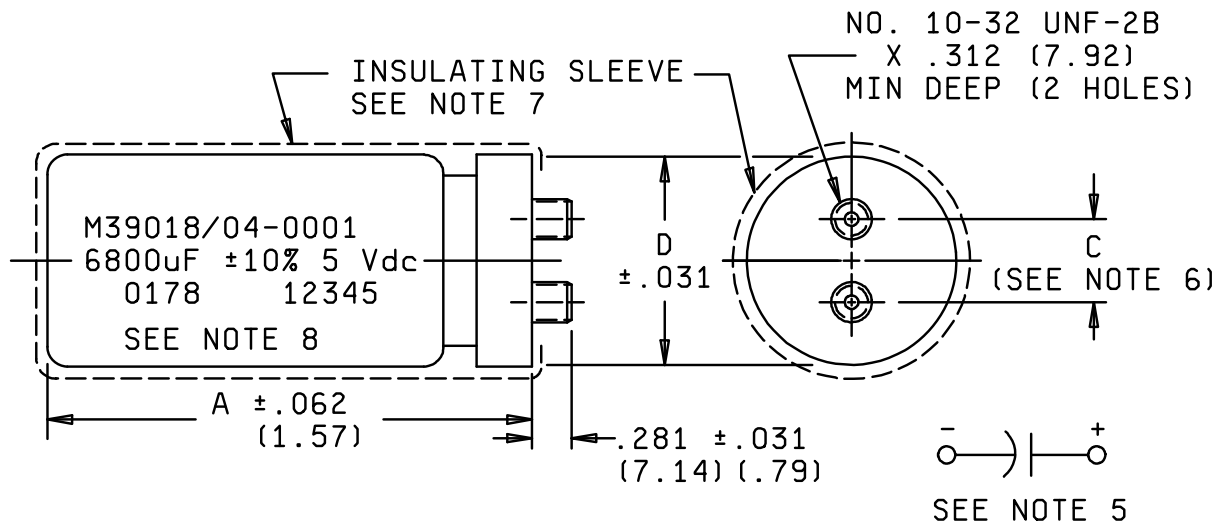
MIL-PRF-39018/4E
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SUPERSEDING
MIL-PRF-39018/4D
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PERFORMANCE SPECIFICATION SHEET

CAPACITORS, FIXED, ELECTROLYTIC (ALUMINUM OXIDE)
(POLARIZED), NON-ESTABLISHED RELIABILITY AND ESTABLISHED RELIABILITY
STYLES CU71 (INSULATED) AND CUR71 (INSULATED)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and [MIL-PRF-39018](#).



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Metric equivalents are in parentheses.
4. Capacitors are mounted by means of a wraparound, footed-type bracket.
5. There is an indeterminate resistance between the metal case and the negative terminal.
6. "C" dimension is .500 (12.70 mm) ±.016 (0.41 mm) for case diameter of 1.375 (34.92 mm); .875 (22.22 mm) ±.016 (0.41 mm) for case diameter of 2.00 (50.8 mm); 1.125 (28.58 mm) ±.016 (0.41 mm) for case diameter of 2.50 (63.5 mm); and 1.250 (31.75 mm) ±.016 (0.41 mm) for case diameter of 3.0 (76.2 mm).
7. Insulating sleeve thickness shall not exceed .016 (0.41 mm) and shall overlap the ends of the capacitor body.
8. Example of marking and its relative location on the capacitor body.

FIGURE 1. Styles CU71 and CUR71 insulated capacitors.

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Case size	Dimensions		Case size	Dimensions	
	L $\pm$.062 (1.57) Nominal	D $\pm$.031 (0.79) Nominal		L $\pm$.062 (1.57) Nominal	D $\pm$.031 (0.79) Nominal
A0	2.125 (53.98)	1.375 (34.92)	F1	5.625 (142.88)	2.000 (50.80)
B0	3.125 (79.38)	1.375 (34.92)	B2	3.125 (79.38)	2.500 (63.50)
C0	4.125 (104.78)	1.375 (34.92)	C2	4.125 (104.78)	2.500 (63.50)
D0	4.625 (117.48)	1.375 (34.92)	D2	4.625 (117.48)	2.500 (63.50)
E0	5.125 (130.18)	1.375 (34.92)	E2	5.125 (130.18)	2.500 (63.50)
F0	5.625 (142.88)	1.375 (34.92)	F2	5.625 (142.88)	2.500 (63.50)
A1	2.125 (53.98)	2.000 (50.80)	C3	4.125 (104.78)	3.000 (76.20)
B1	3.125 (79.38)	2.000 (50.80)	D3	4.625 (117.48)	3.000 (76.20)
C1	4.125 (104.78)	2.000 (50.80)	E3	5.125 (130.18)	3.000 (76.20)
D1	4.625 (117.48)	2.000 (50.80)	F3	5.625 (142.88)	3.000 (76.20)
E1	5.125 (130.18)	2.000 (50.80)			

FIGURE 1. Styles CU71 and CUR71 insulated capacitors - Continued.

TABLE I. Styles CU71 and CUR71 capacitors.

DC rated voltage at 85°C	Capacitance	DC surge voltage at 85°C	Equivalent series resistance		Maximum impedance at -55°C and 120 Hz	DC leakage		Maximum AC ripple current $\frac{1}{120}$ Hz at 85°C	Case size	CU71 dash number	CUR71 dash number $\frac{2}{1}$
			25°	85°		25°	85°				
Volts	μF	Volts	Ω		Ω	mA		Amps			
5	6,800	7	.15	.19	1.2	.28	1.68	2.50	A0	0001	2001-
5	8,000	7	.13	.17	1.00	.30	1.85	2.68	A0	1002	2002-
5	10,000	7	.10	.13	.88	.34	2.04	2.85	A0	0002	2003-
5	15,000	7	.07	.08	.55	.41	2.46	4.24	B0	0003	2004-
5	17,000	7	.06	.07	.48	.45	2.63	4.54	B0	1005	2005-
5	22,000	7	.05	.06	.33	.50	3.00	5.84	C0	0004	2006-
5	25,000	7	.045	.06	.30	.53	3.18	6.14	C0	1007	2007-
5	29,000	7	.039	.05	.28	.57	3.43	6.98	D0	1008	2008-
5	33,000	7	.032	.040	.25	.61	3.66	8.30	F0	0005	2009-
5	34,000	7	.032	.040	.24	.62	3.71	7.81	E0	1010	2010-
5	37,000	7	.032	.040	.21	.65	3.86	8.14	F0	1011	2011-
5	40,000	7	.033	.040	.18	.67	4.02	7.62	B1	1012	2012-
5	47,000	7	.034	.040	.15	.73	4.38	9.40	C1	0006	2013-
5	60,000	7	.031	.033	.13	.82	4.61	10.23	C1	1014	2014-
5	67,000	7	.028	.030	.12	.87	4.95	10.88	B2	1015	2015-
5	68,000	7	.023	.027	.11	.88	5.28	10.30	D1	0007	2016-
5	80,000	7	.022	.025	.095	.95	6.04	13.11	E1	1017	2017-
5	90,000	7	.021	.024	.082	.99	6.32	14.37	F1	1018	2018-
5	100,000	7	.021	.024	.071	1.1	6.60	14.40	C2	0008	2019-
5	130,000	7	.019	.021	.066	1.2	7.07	15.68	E2	1020	2020-
5	150,000	7	.017	.018	.056	1.3	7.70	16.42	F2	0009	2021-
5	150,000	7	.017	.018	.048	1.3	7.80	15.20	C3	1022	2022-
5	170,000	7	.015	.017	.046	1.4	8.30	16.98	D3	1023	2023-
5	200,000	7	.014	.015	.043	1.5	9.05	17.58	E3	1024	2024-
5	220,000	7	.012	.013	.040	1.6	9.60	18.20	E3	0010	2025-
10	4,700	15	.17	.22	1.1	.33	1.98	2.36	A0	0011	2026-
10	6,800	15	.12	.15	.88	.42	2.35	2.96	B0	0012	2027-
10	10,000	15	.08	.11	.60	.47	2.82	3.85	B0	0013	2028-
10	15,000	15	.052	.065	.33	.58	3.48	5.35	C0	0014	2029-
10	17,000	15	.046	.057	.29	.61	3.63	6.04	D0	1030	2030-
10	20,000	15	.041	.052	.28	.65	4.00	6.56	E0	1031	2031-
10	22,000	15	.037	.049	.27	.70	4.20	7.40	F0	0015	2032-
10	24,000	15	.034	.045	.25	.74	4.52	6.38	B1	1033	2033-
10	33,000	15	.032	.040	.16	.86	5.16	8.50	C1	0016	2034-
10	37,000	15	.029	.036	.16	.90	5.34	8.62	C1	1035	2035-
10	42,000	15	.026	.032	.15	.94	5.61	9.09	B2	1036	2036-
10	43,000	15	.025	.031	.15	.96	5.70	10.00	D1	1037	2037-
10	47,000	15	.022	.028	.15	1.0	6.00	9.85	D1	0017	2038-
10	55,000	15	.020	.025	.13	1.1	6.70	12.23	F1	1039	2039-
10	68,000	15	.019	.023	.11	1.2	7.20	14.40	C2	0018	2040-
10	75,000	15	.019	.023	.09	1.2	7.60	13.51	D2	1041	2041-
10	86,000	15	.018	.022	.08	1.3	8.30	14.08	E2	1042	2042-
10	96,000	15	.017	.021	.06	1.4	8.78	14.78	F2	1043	2043-
10	100,000	15	.017	.021	.055	1.5	9.00	16.40	C3	0019	2044-
10	120,000	15	.014	.017	.052	1.6	9.72	15.79	E3	1045	2045-
10	150,000	15	.012	.014	.049	1.8	10.80	17.60	E3	0020	2046-

See footnotes at end of table.

TABLE I. Styles CU71 and CUR71 capacitors - Continued.

DC rated voltage at 85°C	Capacitance	DC surge voltage at 85°C	Equivalent series resistance		Maximum impedance at -55°C and 120 Hz	DC leakage		Maximum AC ripple current $\frac{1}{120}$ Hz at 85°C	Case size	CU71 dash number	CUR71 dash number $\frac{2}{1}$
			25°	85°		25°	85°				
Volts	μF	Volts	Ω		Ω	mA		Amps			
15	3,300	20	.240	.320	1.35	.36	1.99	2.00	A0	0021	2047-
15	4,700	20	.154	.225	.93	.40	2.40	2.30	A0	0022	2048-
15	6,800	20	.120	.150	.71	.48	2.88	3.42	B0	0023	2049-
15	8,000	20	.108	.135	.58	.52	3.16	4.02	B0	1050	2050-
15	10,000	20	.080	.110	.43	.58	3.48	4.20	C0	0024	2051-
15	12,000	20	.070	.098	.38	.66	3.79	5.42	C0	1052	2052-
15	15,000	20	.052	.070	.27	.71	4.26	5.80	E0	0025	2053-
15	18,000	20	.050	.066	.25	.80	4.65	7.66	F0	1054	2054-
15	22,000	20	.048	.060	.23	.92	5.17	7.30	B1	0026	2055-
15	33,000	20	.032	.040	.15	1.10	6.30	8.40	C1	0027	2056-
15	40,000	20	.031	.036	.14	1.20	7.05	11.58	E1	1057	2057-
15	42,000	20	.030	.035	.13	1.23	7.27	9.74	B2	1058	2058-
15	45,000	20	.029	.033	.12	1.27	7.50	12.48	F1	1059	2059-
15	47,000	20	.028	.032	.11	1.30	7.80	12.50	C2	0028	2060-
15	51,000	20	.027	.032	.10	1.35	7.97	13.00	C2	1061	2061-
15	59,000	20	.027	.032	.095	1.46	8.30	14.18	D2	1062	2062-
15	68,000	20	.027	.031	.085	1.49	9.00	15.61	E2	1063	2063-
15	68,000	20	.027	.031	.072	1.50	9.00	16.00	C3	0029	2064-
15	76,000	20	.024	.030	.067	1.60	9.45	16.70	F2	1065	2065-
15	76,000	20	.024	.029	.067	1.61	9.47	16.91	C3	1066	2066-
15	89,000	20	.021	.025	.059	1.70	10.10	16.85	D3	1067	2067-
15	100,000	20	.017	.021	.051	1.80	10.80	17.50	E3	0030	2068-
15	110,000	20	.013	.017	.045	1.90	11.50	18.03	F3	1069	2069-
20	2,800	30	.120	.180	1.70	.43	2.58	2.10	A0	1070	2070-
20	5,100	30	.060	.089	1.22	.48	2.88	3.48	B0	1071	2071-
20	8,600	30	.040	.076	.490	.55	3.30	4.67	C0	1072	2072-
20	10,000	30	.034	.049	.430	.60	3.60	5.40	D0	1073	2073-
20	13,000	30	.027	.039	.350	.65	3.90	6.60	F0	1074	2074-
20	20,000	30	.020	.029	.240	.79	4.73	8.28	C1	1075	2075-
20	24,000	30	.018	.025	.210	.88	5.28	8.94	B2	1076	2076-
20	26,000	30	.015	.021	.190	.92	5.52	10.50	E1	1077	2077-
20	30,000	30	.014	.020	.170	1.02	6.12	11.32	F1	1078	2078-
20	37,000	30	.013	.018	.140	1.15	6.90	11.76	C2	1079	2079-
20	47,000	30	.010	.014	.110	1.36	8.16	14.70	E2	1080	2080-
20	54,000	30	.010	.014	.099	1.50	9.00	15.29	C3	1081	2081-
20	55,000	30	.010	.013	.097	1.52	9.12	15.41	F2	1082	2082-
20	63,000	30	.010	.013	.091	1.63	9.78	15.90	D3	1083	2083-
20	73,000	30	.010	.013	.069	1.77	10.62	16.50	E3	1084	2084-
20	82,000	30	.010	.013	.062	1.90	11.40	16.98	F3	1085	2085-

See footnotes at end of table.

TABLE I. Styles CU71 and CUR71 capacitors - Continued.

DC rated voltage at 85°C	Capacitance	DC surge voltage at 85°C	Equivalent series resistance		Maximum impedance at -55°C and 120 Hz	DC leakage		Maximum AC ripple current $\frac{1}{120}$ Hz at 85°C	Case size	CU71 dash number	CUR71 dash number $\frac{2}{1}$
			25°	85°		25°	85°				
Volts	μF	Volts	Ω		Ω	mA		Amps			
25	2,200	40	.240	.360	2.0	.35	2.10	2.10	A0	0031	2086-
25	3,300	40	.160	.240	1.5	.46	2.58	2.60	B0	0032	2087-
25	4,700	40	.110	.170	.99	.51	3.06	2.90	B0	0033	2088-
25	6,800	40	.080	.115	.58	.62	3.72	4.20	C0	0034	2089-
25	7,500	40	.074	.101	.55	.65	3.85	4.55	C0	1090	2090-
25	8,700	40	.065	.095	.50	.70	4.00	4.83	D0	1091	2091-
25	10,000	40	.052	.080	.44	.75	4.50	5.00	E0	0035	2092-
25	15,000	40	.044	.060	.27	.92	5.52	8.20	C1	0036	2093-
25	20,000	40	.040	.050	.22	1.01	6.29	9.06	D1	1094	2094-
25	20,000	40	.039	.050	.22	1.01	6.29	8.56	B2	1095	2095-
25	22,000	40	.036	.047	.19	1.1	6.60	11.00	C2	0037	2096-
25	23,000	40	.034	.045	.17	1.2	6.80	9.93	E1	1097	2097-
25	30,000	40	.029	.036	.14	1.3	8.20	11.03	C2	1098	2098-
25	33,000	40	.024	.032	.13	1.4	8.40	13.00	D2	0038	2099-
25	40,000	40	.023	.030	.10	1.5	9.10	14.43	E2	1100	2100-
25	45,000	40	.022	.026	.091	1.6	9.40	15.92	F2	1101	2101-
25	47,000	40	.022	.025	.083	1.6	9.60	16.00	C3	0039	2102-
25	52,000	40	.020	.023	.079	1.7	10.17	16.42	D3	1103	2103-
25	60,000	40	.017	.020	.072	1.85	10.74	17.05	E3	1104	2104-
25	68,000	40	.014	.017	.066	2.0	12.00	17.50	F3	0040	2105-
30	2,200	45	.150	.225	2.0	.39	2.34	2.08	A0	1106	2106-
30	4,400	45	.075	.115	1.32	.48	2.88	3.38	B0	1107	2107-
30	6,600	45	.050	.74	.61	.56	3.36	4.71	C0	1108	2108-
30	7,700	45	.043	.64	.53	.61	3.66	5.19	D0	1109	2109-
30	8,800	45	.038	.56	.49	.65	3.90	5.72	E0	1110	2110-
30	9,900	45	.034	.50	.45	.69	4.14	6.36	F0	1111	2111-
30	10,000	45	.038	.55	.44	.70	4.20	5.85	B1	1112	2112-
30	15,000	45	.026	.37	.27	.90	5.40	7.94	C1	1113	2113-
30	17,000	45	.022	.31	.25	.97	5.82	8.97	D1	1114	2114-
30	18,000	45	.023	.32	.24	1.01	6.06	8.52	B2	1115	2115-
30	22,000	45	.017	.24	.19	1.17	7.02	11.11	F1	1116	2116-
30	26,000	45	.016	.22	.16	1.27	7.62	11.42	C2	1117	2117-
30	30,000	45	.014	.019	.14	1.38	8.28	12.88	D2	1118	2118-
30	34,000	45	.012	.016	.13	1.48	8.88	14.50	E2	1119	2119-
30	38,000	45	.012	.016	.11	1.58	9.48	15.08	C3	1120	2120-
30	39,000	45	.011	.014	.10	1.61	9.66	15.91	F2	1121	2121-
30	45,000	45	.011	.014	.091	1.76	10.56	16.42	D3	1122	2122-
30	58,000	45	.010	.013	.075	2.10	12.60	18.40	F3	1123	2123-

See footnotes at end of table.

TABLE I. Styles CU71 and CUR71 capacitors - Continued.

DC rated voltage at 85°C	Capacitance	DC surge voltage at 85°C	Equivalent series resistance		Maximum impedance at -55°C and 120 Hz	DC leakage		Maximum AC ripple current $\frac{1}{120}$ Hz at 85°C	Case size	CU71 dash number	CUR71 dash number $\frac{2}{1}$
			25°	85°		25°	85°				
Volts	μF	Volts	Ω		Ω	mA		Amps			
40	1,800	55	.180	.270	3.51	.41	2.46	1.84	A0	1124	2124-
40	3,700	55	.090	.135	1.83	.43	2.58	3.04	B0	1125	2125-
40	5,500	55	.060	.089	.82	.60	3.60	4.23	C0	1126	2126-
40	6,400	55	.051	.076	.73	.64	3.84	4.75	D0	1127	2127-
40	7,400	55	.045	.067	.60	.69	4.14	5.34	E0	1128	2128-
40	8,200	55	.041	.061	.51	.72	4.32	5.88	F0	1129	2129-
40	9,000	55	.045	.066	.38	.78	4.78	5.39	B1	1130	2130-
40	13,000	55	.030	.044	.29	.98	5.88	7.28	C1	1131	2131-
40	15,000	55	.026	.037	.24	1.08	6.48	7.36	D1	1132	2132-
40	15,000	55	.027	.039	.24	1.08	6.48	7.86	B2	1133	2133-
40	18,000	55	.023	.032	.22	1.23	7.48	9.24	E1	1134	2134-
40	19,000	55	.020	.028	.21	1.27	7.62	10.38	F1	1135	2135-
40	22,000	55	.019	.026	.19	1.37	8.22	10.52	C2	1136	2136-
40	25,000	55	.016	.022	.15	1.48	8.88	12.02	D2	1137	2137-
40	28,000	55	.014	.019	.15	1.59	9.54	13.38	F2	1138	2138-
40	32,000	55	.014	.019	.14	1.73	10.38	14.05	C3	1139	2139-
40	33,000	55	.013	.018	.14	1.76	10.56	14.70	F2	1140	2140-
40	37,000	55	.013	.017	.14	1.91	11.46	15.14	D3	1141	2141-
40	43,000	55	.012	.016	.13	2.12	12.72	16.25	E3	1142	2142-
40	48,000	55	.011	.014	.12	2.30	13.80	17.62	F3	1143	2143-
50	1,000	75	.250	.330	3.80	.34	2.04	1.20	A0	0041	2144-
50	1,400	75	.206	.270	3.23	.40	2.36	1.54	A0	1145	2145-
50	2,200	75	.120	.150	2.10	.50	3.00	2.00	B0	0042	2146-
50	2,900	75	.095	.130	1.46	.57	3.38	3.18	B0	1147	2147-
50	3,300	75	.080	.100	1.10	.61	3.66	3.60	C0	0043	2148-
50	4,400	75	.065	.090	.89	.69	4.06	4.09	C0	1149	2149-
50	4,700	75	.056	.084	.77	.73	4.38	4.50	F0	0044	2150-
50	5,100	75	.053	.079	.73	.77	4.42	4.62	D0	1151	2151-
50	5,800	75	.048	.073	.65	.84	4.84	5.16	E0	1152	2152-
50	6,600	75	.042	.060	.57	.91	5.16	5.61	F0	1153	2153-
50	6,600	75	.040	.058	.55	.93	5.25	8.50	B1	1300	2154-
50	6,600	75	.040	.058	.55	.93	5.25	8.50	F0	1301	2155-
50	6,800	75	.040	.058	.55	.93	5.25	5.30	C1	0045	2156-
50	10,000	75	.034	.040	.33	1.10	6.60	5.80	C1	0046	2157-
50	11,000	75	.032	.037	.31	1.14	6.84	8.11	D1	1156	2158-
50	12,000	75	.029	.034	.29	1.18	7.08	7.77	B2	1157	2159-
50	13,000	75	.027	.031	.26	1.22	7.32	9.13	E1	1158	2160-
50	15,000	75	.022	.026	.22	1.30	7.80	9.85	F1	1160	2161-
50	15,000	75	.022	.026	.22	1.30	7.80	10.00	C2	0047	2162-
50	17,000	75	.021	.026	.20	1.39	8.32	10.61	C2	1161	2163-
50	20,000	75	.019	.025	.18	1.51	9.10	11.72	D2	1162	2164-
50	22,000	75	.018	.024	.16	1.60	9.60	12.83	E2	1163	2165-
50	22,000	75	.018	.024	.16	1.60	9.60	15.50	C3	0048	2166-
50	25,000	75	.017	.023	.14	1.74	10.13	14.54	F2	1165	2167-
50	30,000	75	.016	.022	.12	1.83	11.03	14.34	D3	1166	2168-
50	33,000	75	.012	.016	.10	2.10	11.56	16.00	E3	0049	2169-
50	39,000	75	.010	.013	.08	2.37	12.64	17.36	F3	1168	2170-

See footnotes at end of table.

TABLE I. Styles CU71 and CUR71 capacitors - Continued.

DC rated voltage at 85°C	Capacitance	DC surge voltage at 85°C	Equivalent series resistance		Maximum impedance at -55°C and 120 Hz	DC leakage		Maximum AC ripple current $\frac{1}{120}$ Hz at 85°C	Case size	CU71 dash number	CUR71 dash number $\frac{2}{1}$
			25°	85°		25°	85°				
Volts	μF	Volts	Ω		Ω	mA		Amps			
75	530	100	.270	.405	5.03	.29	1.74	1.38	A0	1169	2171-
75	1,000	100	.135	.202	3.10	.35	2.10	2.28	B0	1170	2172-
75	1,600	100	.091	.135	2.81	.44	2.64	3.12	C0	1171	2173-
75	1,800	100	.077	.115	2.57	.46	2.76	3.60	D0	1172	2174-
75	2,000	100	.068	.100	2.10	.49	2.94	3.96	E0	1173	2175-
75	2,400	100	.061	.088	1.53	.55	3.30	4.38	F0	1174	2176-
75	2,600	100	.065	.094	1.32	.59	3.54	4.14	B1	1175	2177-
75	3,900	100	.044	.063	.98	.75	4.50	5.68	C1	1176	2178-
75	4,400	100	.038	.054	.85	.82	4.92	6.12	B2	1177	2179-
75	4,500	100	.037	.052	.82	.83	4.98	6.42	D1	1178	2180-
75	5,000	100	.033	.046	.74	.90	5.40	7.08	E1	1179	2181-
75	5,800	100	.029	.040	.63	.95	5.70	7.86	F1	1180	2182-
75	6,600	100	.028	.037	.52	1.01	6.06	8.04	C2	1181	2183-
75	7,700	100	.024	.033	.47	1.08	6.48	9.12	D2	1182	2184-
75	8,800	100	.021	.029	.41	1.15	6.90	10.15	E2	1183	2185-
75	9,500	100	.020	.027	.32	1.20	7.20	11.40	C3	1184	2186-
75	9,900	100	.019	.025	.31	1.23	7.38	11.18	F2	1185	2187-
75	11,000	100	.019	.025	.29	1.30	7.80	11.53	D3	1186	2188-
75	13,000	100	.017	.022	.24	1.45	8.58	12.68	E3	1187	2189-
75	14,000	100	.015	.020	.22	1.50	9.00	13.88	F3	1188	2190-
100	250	150	.620	.950	13.10	.20	1.21	.81	A0	1189	2191-
100	330	150	.480	.720	9.90	.27	1.62	.88	A0	0050	2192-
100	470	150	.320	.510	5.90	.33	1.98	1.33	B0	0051	2193-
100	680	150	.235	.345	4.40	.39	2.34	1.40	B0	0052	2194-
100	800	150	.220	.300	3.76	.42	2.52	1.79	C0	1193	2195-
100	900	150	.180	.270	3.20	.44	2.65	2.08	D0	1194	2196-
100	1,000	150	.160	.240	2.70	.47	2.82	2.28	E0	0053	2197-
100	1,200	150	.140	.200	2.35	.52	3.17	2.45	B1	1196	2198-
100	1,500	150	.110	.160	1.90	.58	3.48	3.00	B1	0054	2199-
100	1,800	150	.095	.143	1.63	.62	3.77	3.32	C1	1198	2200-
100	2,100	150	.075	.126	1.36	.67	4.06	3.58	D1	1199	2201-
100	2,200	150	.072	.110	1.30	.70	4.20	4.20	B2	0055	2202-
100	2,600	150	.066	.100	1.18	.74	4.46	4.59	F1	1201	2203-
100	3,300	150	.048	.072	.88	.86	5.16	5.60	C2	0056	2204-
100	4,100	150	.044	.060	.72	.93	5.60	5.92	E2	1203	2205-
100	4,500	150	.043	.056	.67	.95	5.72	7.16	F2	1204	2206-
100	4,700	150	.042	.054	.63	1.00	6.00	7.50	C3	0057	2207-
100	5,500	150	.035	.046	.52	1.12	6.70	7.96	D3	1206	2208-
100	6,800	150	.030	.039	.44	1.20	7.20	9.60	E3	0058	2209-

See footnotes at end of table.

TABLE I. Styles CU71 and CUR71 capacitors - Continued.

DC rated voltage at 85°C	Capacitance	DC surge voltage at 85°C	Equivalent series resistance		Maximum impedance at -55°C and 120 Hz	DC leakage		Maximum AC ripple current $\frac{1}{120}$ Hz at 85°C	Case size	CU71 dash number	CUR71 dash number $\frac{2}{1}$
			25°	85°		25°	85°				
Volts	μF	Volts	Ω		Ω	mA		Amps			
150	220	250	.700	1.000	13.20	.27	1.60	.80	A0	0059	2210-
150	330	250	.480	.680	9.00	.36	2.00	.98	A0	0060	2211-
150	470	250	.340	.480	6.20	.42	2.39	1.46	B0	0061	2212-
150	680	250	.230	.310	4.40	.47	2.82	1.88	D0	0062	2213-
150	1,000	250	.200	.225	2.90	.58	3.48	2.68	B1	0063	2214-
150	1,500	250	.130	.150	1.80	.71	4.26	3.12	C1	0064	2215-
150	2,200	250	.090	.100	1.35	.86	5.16	5.10	C2	0065	2216-
150	3,300	250	.060	.070	.90	1.10	6.30	6.80	C3	0066	2217-
150	4,700	250	.042	.056	.62	1.34	7.60	8.90	F3	0067	2218-
200	150	300	1.000	1.500	18.30	.26	1.56	.66	A0	0068	2219-
200	220	300	.700	1.000	12.80	.31	1.86	1.00	B0	0069	2220-
200	330	300	.480	.680	8.30	.39	2.34	1.50	A1	0070	2221-
200	470	300	.320	.480	5.80	.46	2.76	1.54	C0	0071	2222-
200	680	300	.230	.320	4.00	.55	3.30	1.97	E0	0072	2223-
200	1,000	300	.200	.230	2.70	.72	4.02	2.74	C1	0073	2224-
200	1,500	300	.130	.150	1.70	.82	4.92	3.20	E1	0074	2225-
200	2,200	300	.090	.100	1.35	1.00	6.00	5.40	D2	0075	2226-
200	3,300	300	.060	.070	.90	1.20	7.20	7.00	D3	0076	2227-
200	4,100	300	.048	.065	.72	1.36	8.20	8.70	F3	0077	2228-
250	100	300	1.300	2.000	27.50	.24	1.44	.60	A0	0078	2229-
250	220	300	.600	.900	12.50	.35	2.10	1.10	A1	0079	2230-
250	330	300	.400	.600	8.30	.43	2.58	1.40	C0	0080	2231-
250	470	300	.420	.450	5.80	.51	3.06	1.90	B1	0081	2232-
250	680	300	.300	.310	4.00	.62	3.72	2.50	C1	0082	2233-
250	1,000	300	.200	.210	2.70	.75	4.50	3.00	D1	0083	2234-
250	1,500	300	.130	.140	1.70	.92	5.52	3.70	C2	0084	2235-
250	2,200	300	.090	.110	1.20	1.10	6.60	5.20	C3	0085	2236-
250	3,300	300	.060	.075	.83	1.45	8.17	7.70	F3	0086	2237-

See footnotes at end of table.

TABLE I. Styles CU71 and CUR71 capacitors - Continued.

DC rated voltage at 85°C	Capacitance	DC surge voltage at 85°C	Equivalent series resistance		Maximum impedance at -55°C and 120 Hz	DC leakage		Maximum AC ripple current <u>1/</u> 120 Hz at 85°C	Case size	CU71 dash number	CUR71 dash number <u>2/</u>
			25°	85°		25°	85°				
Volts	μF	Volts	Ω		Ω	mA		Amps			
300	100	350	1.300	1.850	27.50	.26	1.56	.60	A0	0087	2238-
300	150	350	.900	1.250	18.30	.32	1.92	.90	B0	0088	2239-
300	220	350	.600	.850	12.50	.41	2.32	1.10	C0	0089	2240-
300	310	350	.600	.850	8.90	.30	1.80	1.25	C0	1304	2241-
300	330	350	.480	.560	8.30	.50	2.83	1.40	B1	0090	2242-
300	470	350	.340	.400	5.80	.60	3.38	2.00	C1	0091	2243-
300	680	350	.250	.270	4.00	.68	4.08	2.60	B2	0092	2244-
300	1,000	350	.170	.190	2.70	.82	4.92	3.50	C2	0093	2245-
300	1,500	350	.130	.130	1.70	1.00	6.00	4.20	C3	0094	2246-
300	2,200	350	.090	.100	1.70	1.22	7.28	5.80	E3	0095	2247-
300	3,400	350	.060	.070	.80	1.00	6.00	5.80	F3	1302	2248-
300	3,400	350	.080	.090	.90	1.43	8.00	6.70	F3	1303	2249-
350	68	400	2.300	2.700	40.70	.23	1.38	.50	A0	0096	2250-
350	150	400	1.100	1.250	18.30	.34	2.04	.97	A1	0097	2251-
350	220	400	.700	.800	12.80	.42	2.52	1.10	C0	0098	2252-
350	330	400	.480	.560	8.30	.54	3.06	1.40	C0	0099	2253-
350	470	400	.340	.400	5.80	.61	3.66	2.10	C1	0100	2254-
350	680	400	.230	.270	4.00	.78	4.39	3.30	C2	0101	2255-
350	1,000	400	.160	.180	2.70	.89	5.34	4.00	E2	0102	2256-
350	1,500	400	.130	.140	1.70	1.08	6.48	5.00	D3	0103	2257-
350	1,800	400	.110	.120	1.50	1.19	7.13	5.70	E3	0104	2258-
350	2,200	400	.090	.100	1.20	1.40	7.90	6.70	F3	0105	2259-

1/ The ripple current values shown are representative values not supported by test data.

2/ The last letter in dash number will indicate FR level symbol ("M", "P", "R", or "S").

REQUIREMENTS:

Dimensions and configuration: See [figure 1](#).

Case: Type - Tubular.

Material - Metal.

Leads - See [figure 1](#).

DC rated voltage: See [table I](#).

Reverse voltage: 1.5 volts maximum.

Capacitance (Cap.) value: See [table I](#).

Cap. tolerance: -10, +50 percent.

Operating temperature range: -55°C to +85°C.

DC leakage (DCL): See [table I](#).

Equivalent series resistance (ESR): See [table I](#).

Low temperature exposure:

DCL: See [table I](#).

Cap.: See [table I](#).

ESR: See [table I](#).

Terminal strength: [Method 211 of MIL-STD-202](#), test condition E.

Torque: 8 pounds-inches for case diameter of 1.375 inch (34.92 mm); 15 pound-inches for other case diameters.

Stability at reduced and high temperatures:

Step 1 (at +25°C):

DCL: See [table I](#).

Cap.: See [table I](#).

ESR: See [table I](#).

Step 2 (at -55°C):

Impedance: See [table I](#).

ΔCap.: Within the following percentages of the step 1 value:

5 V dc: ±35 percent.

10 to 25 V dc inclusive: ±25 percent

30 to 100 V dc inclusive: ±20 percent.

150 to 350 V dc inclusive: ±30 percent.

Step 3 (at +25°C):

DCL: See [table I](#).

ΔCap.: Within ±5 percent of step 1 value.

ESR: See [table I](#).

Step 4 (at +85°C):

DCL: See [table I](#).

ΔCap.: Within ±30 percent of step 1 value.

ESR: See [table I](#).

Step 5 (at +25°C):

DCL: See [table I](#).

ΔCap.: Within ±5 percent of step 1 value.

ESR: See [table I](#).

Life: [Method 108 of MIL-STD-202](#).

For qualification: Condition F (2,000 hours) at +85°C.

DCL: See [table I](#).

ΔCap.: Within ±10 percent of initial measured value.

ESR: Not more than 130 percent of initial requirement.

For conformance: Performance check, condition B (250 hours) at +85°C (non-ER).

DCL: See [table I](#).

ΔCap.: Within ±10 percent of initial measured value.

ESR: See [table I](#).

For conformance: Continuation test (1,750 hours) at +85°C (non-ER).

DCL: See [table I](#).

ΔCap.: Within ±10 percent of initial measured value.

ESR: Not more than 130 percent of initial requirement.

For conformance: 10,000 hours (ER) at +85°C.

DCL: At +25°C initial limit, at +85°C, 125 percent of initial limit.

ΔCap.: Within ±25 percent of initial measured value.

ESR: Not more than 200 percent of initial requirement.

Case insulation: In accordance with [MIL-PRF-39018](#).

Shock (specified pulse): [Method 213 of MIL-STD-202](#), condition H.

Vibration:

- * Low frequency: In accordance with [MIL-PRF-39018](#).

Thermal shock and immersion:

Thermal shock: [Method 107 of MIL-STD-202](#), condition A.

Immersion: [Method 104 of MIL-STD-202](#), condition B (2 cycles, 30 minutes each).

DCL: See [table I](#).

Δ Cap.: Within ± 5 percent of initial measured value.

ESR: See [table I](#).

Case insulation: Shall meet initial requirement.

Surge voltage:

DCL: See [table I](#).

Δ Cap.: Within ± 6 percent of initial measured value.

ESR: See [table I](#).

Vent: In accordance with [MIL-PRF-39018](#).

Moisture resistance: [Method 106 of MIL-STD-202](#).

DCL: See [table I](#).

Δ Cap.: Within ± 6 percent of initial measured value.

ESR: See [table I](#).

Case Insulation: Shall meet initial requirement.

High temperature exposure (500 hours at $+85^{\circ}\text{C}$):

DCL: Not more than 200 percent of initial requirement.

Δ Cap.: Within ± 10 percent of initial measured value.

ESR: Not more than 115 percent of initial requirement.

Reverse voltage aging: In accordance with [MIL-PRF-39018](#).

Marking: In accordance with [MIL-PRF-39018](#).

Part or Identifying Number (PIN): M39018/04- (Dash number from [table I](#)).

APPLICATION NOTE:

Torque: The minimum and maximum torque applied to the steel screw/aluminum insert shall be as follows:

	<u>Min</u>	<u>Max</u>
With a minimum of 3 engaged threads - - - - -	12 pound-inches	18 pound-inches
With a minimum of 6 engaged threads - - - - -	20 pound-inches	25 pound-inches

NOTES:

Reference document. [MIL-PRF-39018](#).
[MIL-STD-202](#).

Changes from previous issue. The margins of this specification are marked with asterisks to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC
(Project 5910-2009-023)

Review activities:
Army - MI
Navy - AS, MC, OS, SH
Air Force - 19

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil/>.