INCH-POUND
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SUPERSEDING
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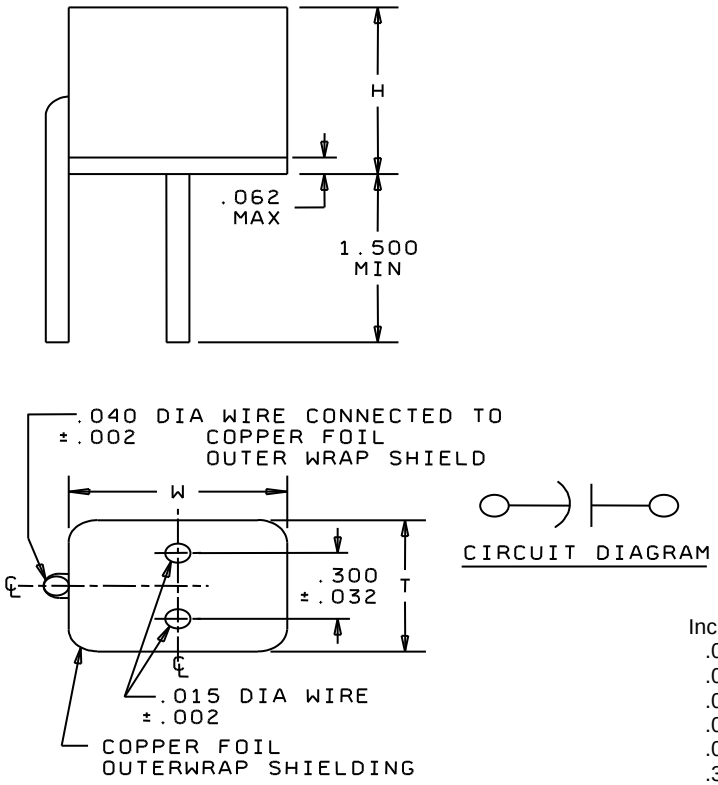
PERFORMANCE SPECIFICATION SHEET

CAPACITORS, FIXED, METALLIZED PLASTIC DIELECTRIC, DC, IN NONMETAL CASES, ESTABLISHED RELIABILITY, STYLE CFR29

The specification sheet 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-55514.



Inches	mm
.002	0.05
.015	0.38
.032	0.81
.040	1.02
.062	1.57
.300	7.62
1.500	38.10

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information.

FIGURE 1. Configuration and dimensions.

REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figure 1.

Case: Non-hermetic.

Dielectric: Normally polyphenylene sulfide (characteristic U) or metallized polycarbonate (characteristic R).

Characteristics: R or U.

Capacitance value: See table I.

Capacitance tolerance: See table I.

Operating temperature range: -55°C to +85°C, when properly voltage derated (see figure 2), characteristic R and U capacitors will operate to +125°C.

Voltage rating: See table I.

Preconditioning: Not applicable.

Burn-in: In accordance with MIL-PRF-55514 except for the following conditions:

a. DC burn-in voltage shall be 140 percent of the dc rated voltage applied for 48 hours minimum at +125°C, +4°C, -0°C.

b. AC burn-in: Not applicable.

Insulation resistance: Insulation resistance shall be measured at rated voltage at the applicable temperature. Charge time 2 minutes maximum; however, for capacitance values greater than 1.0 μF, an additional 1 minute per μF is permitted. The following limits shall apply:

Temperature	Insulation resistance
+25°C	50,000
+85°C	5,000
+125°C	500

Marking: In accordance with MIL-PRF-55514.

TABLE I. Capacitor characteristics and dimensions.

Part or identifying number (PIN) 1/	Capacitance µF	Capacitance tolerance	Rated voltage at +85°C volts, dc	ESR milliohms at 100 kHz	Ripple current max at +25°C	Resonant frequency kHz	Dimensions		
							T 2/ 4/	W 2/ 4/	H 3/ 4/
CFR29R-A106--	10.0	J, K, M	50	11	12.6	318	.562	.862	.750
CFR29R-A206--	20.0	J, K, M	50	10	14.8	214	.718	.968	.875
CFR29R-A506--	50.0	J, K, M	50	6	23.5	130	1.000	1.375	1.000
CFR29R-G305--	3.0	J, K, M	75	15	10.3	672	.468	.718	.750
CFR29R-G505--	5.0	J, K, M	75	13	11.6	427	.500	.750	.875
CFR29R-G106--	10.0	J, K, M	75	12	13.5	301	.718	1.031	.875
CFR29R-G206--	20.0	J, K, M	75	11	16.5	205	.937	1.312	1.000
CFR29R-G506--	50.0	J, K, M	75	6	24.2	120	1.312	1.687	1.250
CFR29R-B305--	3.0	J, K, M	100	15	10.6	684	.437	.750	.875
CFR29R-B505--	5.0	J, K, M	100	13	12.4	427	.593	.906	.875
CFR29R-B106--	10.0	J, K, M	100	12	14.6	290	.781	1.093	1.000
CFR29R-B206--	20.0	J, K, M	100	11	17.1	192	.906	1.281	1.250
CFR29R-B506--	50.0	J, K, M	100	6	23.6	115	1.437	1.812	1.375

1/ The complete PIN will include additional symbols to indicate, characteristic (U or R), capacitance tolerance, and product level (C, M, P, R, or S).
2/ Tolerances: Thickness and width +.062 inch, -.156 inch (+1.57 mm, -3.96 mm) on .437 inch through .500 inch (11.10 mm through 12.7 mm) and +.093 inch, -.187 inch (+2.36 mm, -4.75 mm) on .562 inch (14.27 mm) and greater.
3/ Tolerances: Length +.093 inch, -.062 inch (+2.36 mm, -1.57 mm).
4/ See dimension table below:

Inches	mm	Inches	mm	Inches	mm
.437	11.10	.862	21.89	1.250	31.76
.468	11.89	.875	22.23	1.281	32.54
.500	12.70	.906	23.01	1.312	33.32
.562	14.27	.937	23.80	1.375	34.93
.593	15.06	.968	24.59	1.437	36.50
.718	18.24	1.000	25.40	1.687	42.85
.750	19.05	1.031	26.19	1.812	46.02
.781	19.84	1.093	27.76		

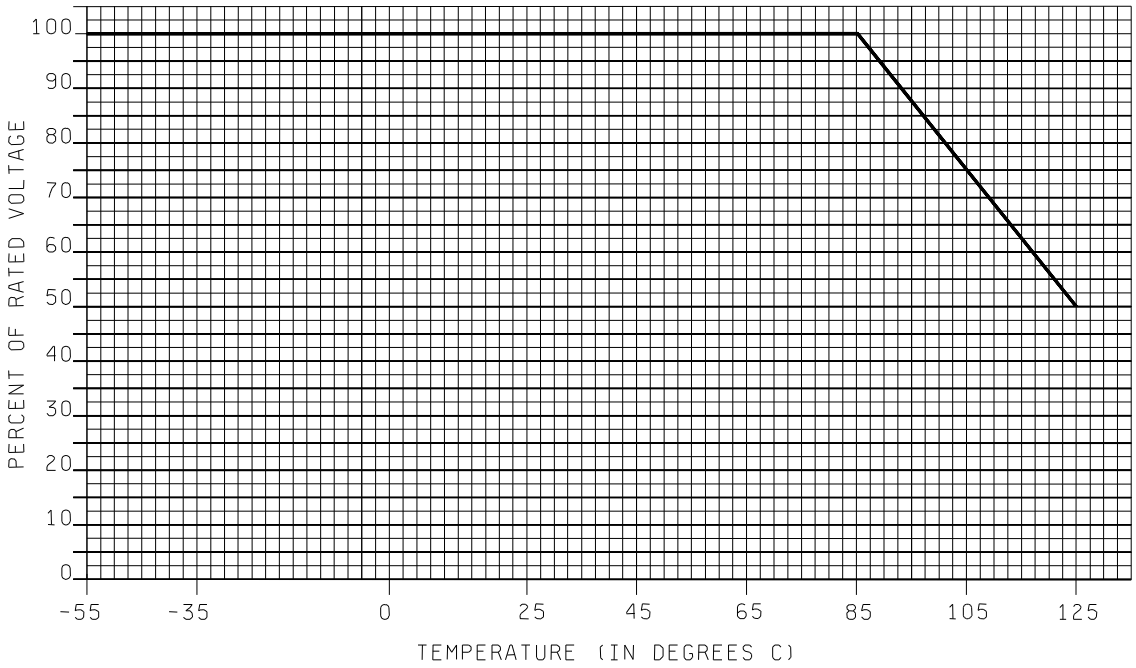


FIGURE 2. Voltage derating with temperature.

Changes from previous issue: The margins of this specification are marked with vertical lines 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.

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Navy - EC
Air Force - 85
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Preparing activity:
Army - CR

Agent:
DLA - CC

Review Activities:
Navy - AS, MC, OS
Air Force - 19

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