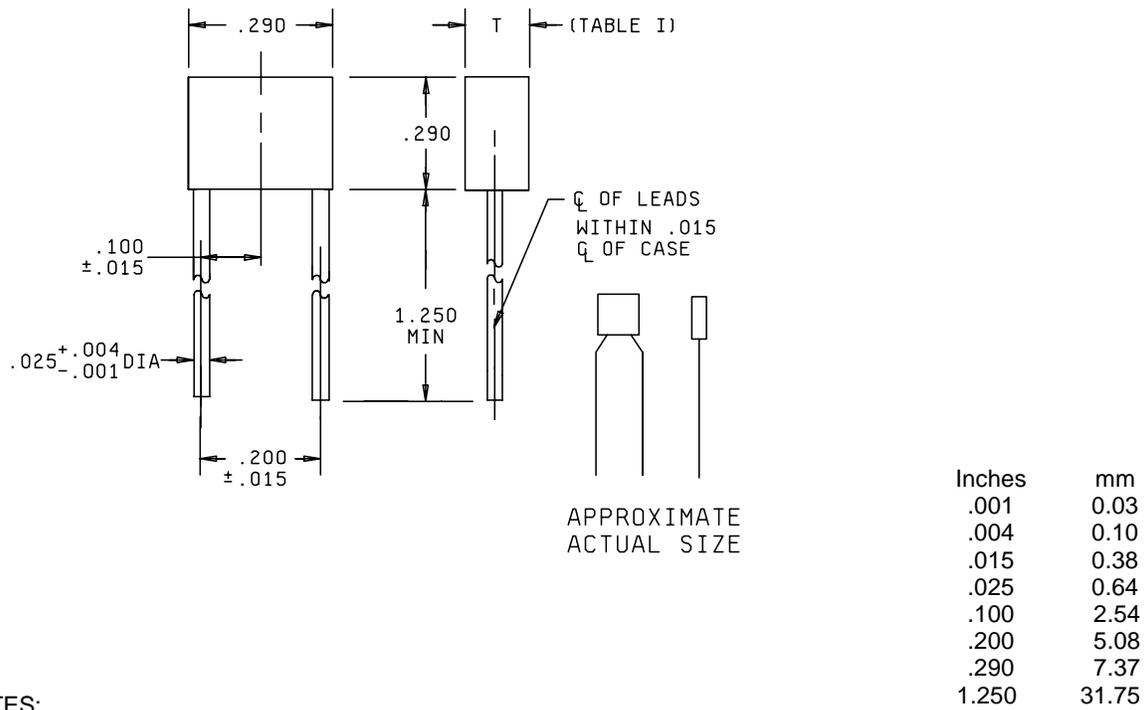


PERFORMANCE SPECIFICATION SHEET

CAPACITORS, FIXED, CERAMIC DIELECTRIC (GENERAL PURPOSE),
ESTABLISHED RELIABILITY, STYLE CKR08

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-39014](#).



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .010$ (0.25 mm).
4. Insulating coating shall not extend more than .010 (0.25 mm) along lead wires.

FIGURE 1. Capacitor style CKR08.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Case: Molded or preformed.

Capacitance value: See table I.

Capacitance tolerance: See table I.

Operating temperature range: -55°C to +125°C.

Voltage rating: See table I.

Dissipation factor: Not more than 2.5 percent.

Dielectric withstanding voltage:

Body insulation: Shall be able to withstand 1,300 volts between leads and case.

* Insulation resistance:

At 25°C: Not less than 100,000 megohms or 1,000 megohm-microfarads, whichever is less.

At 125°C: Not less than 10,000 megohms or 100 megohm-microfarads, whichever is less.

Insertion loss: Not applicable.

Seal: Not applicable.

Voltage-temperature limits: In accordance with [MIL-PRF-39014](#).

Capacitance change with reference to 25°C	
Steps A through D of table V Bias = 0 volts	Steps E through G of table V Bias = rated voltage
±15 percent	+15, -25 percent

Immersion:

IR: Not less than 50 percent of initial 25°C requirements.

Salt spray (corrosion): In accordance with [MIL-PRF-39014](#).

Resistance to soldering heat:

ΔC: +15, -5 percent of the initial 25°C measurement.

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Life:

Rated conditions, 100 percent of dc rated voltage at 125°C.

0 through 3,000 hours:

IR: At 25°C, not less than 50 percent of initial 25°C requirement.

At 125°C, not less than 50 percent of initial 125°C requirement.

ΔC: ±20 percent from initial measured value.

Dissipation factor: Not greater than 2.5 percent.

4,000 through 32,000 hours:

IR: At 25°C, not less than 15 percent of initial 25°C requirement.

At 125°C, not less than 15 percent of initial 125°C requirement.

ΔC: ±20 percent from initial measured value.

Dissipation factor: Not greater than 2.5 percent.

Accelerated conditions, 200 percent of dc rated voltage at 125°C.

0 and 250 hours:

IR: At 25°C, not less than 50 percent of initial 25°C requirement.

At 125°C, not less than 50 percent of initial 125°C requirement.

ΔC: ±20 percent from initial measured value.

Dissipation factor: Not greater than 2.5 percent.

1,000, 2,000 and 4,000 hours:

IR: At 25°C, not less than 15 percent of initial 25°C requirement.

At 125°C, not less than 15 percent of initial 125°C requirement.

ΔC: ±20 percent from initial measured value.

Dissipation factor: Not greater than 2.5 percent.

* Part or identifying number (PIN): M39014/20- (dash number from table I).

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TABLE I. Electrical characteristics and dash number.

Dash number <u>1/</u>				Capacitance, pF	Capacitance tolerance, ± percent	DC rated voltage, volts	Dimension, inches <u>2/</u>	
Failure rate level (%/1,000 hours)								
M (1.0)	P (0.1)	R (0.01)	S (0.001)					
0004	0007	0010	0013	1,200,000	10	50	.130 (3.30)	±.010 (.25)
0005	0008	0011	0014	1,500,000	10	50	.130 (3.30)	±.010 (.25)
0006	0009	0012	0015	2,000,000	10	50	.130 (3.30)	±.010 (.25)
0104	0107	0110	0113	1,200,000	10	50	.145 (3.68)	±.015 (.38)
0105	0108	0111	0114	1,500,000	10	50	.145 (3.68)	±.015 (.38)
0106	0109	0112	0115	2,000,000	10	50	.145 (3.68)	±.015 (.38)

- * 1/ Complete PIN is in the format M39014/20-NNNN, where NNNN is the 4 digit dash number from the table.
- * 2/ Metric equivalents are given in parentheses.

TABLE II. Substitutability data.

Dash numbers in MIL-PRF-39014/20E <u>1/</u>				Substitutable for dash numbers in: MIL-C-39014/20A(EC)				
M	P	R	S	L	M	P	R	S
0004	0007	0010	0013	0001	0004	0007	0010	0013
0005	0008	0011	0014	0002	0005	0008	0011	0014
0006	0009	0012	0015	0003	0006	0009	0012	0015
0104	0107	0110	0113	0101	0104	0107	0110	0113
0105	0108	0111	0114	0102	0105	0108	0111	0114
0106	0109	0112	0115	0103	0106	0109	0112	0115

- * 1/ Dash numbers in lower FR level columns are substitutable for dash numbers in all higher FR level columns.

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 - 11
 DLA - CC

Preparing activity:
 DLA - CC
 (Project 5910-2006-005)

* Review activities:
 * Navy - AS, MC, OS, SH, TD

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