

INCH POUND

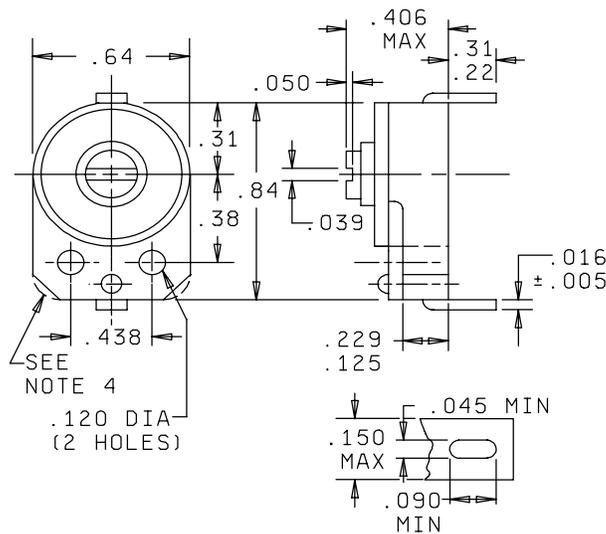
MIL-PRF-81/1C
 25 May 1999
 SUPERSEDING
 MIL-C-81/1B
 16 January 1992

PERFORMANCE SPECIFICATION SHEET

CAPACITORS, VARIABLE, CERAMIC DIELECTRIC,
 STYLE CV11

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 and MIL-PRF-81.



Inches	mm
.005	0.13
.016	0.41
.039	0.99
.045	1.14
.050	1.27
.090	2.29
.120	3.05
.125	3.18
.150	3.81
.22	5.59
.229	5.82
.31	7.87
.38	9.65
.406	10.31
.438	11.13
.64	16.26
.84	21.34

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ± 0.03 (0.76 mm) for two decimal places and ± 0.010 (0.25 mm) for three decimal places.
4. Limiting dimensions as shown.

FIGURE 1. Dimensions and configurations.

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REQUIREMENTS:

Dimensions and configuration: See figure 1.

Capacitance value: See table I.

DC rated voltage: See table I.

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

Characteristics: See table I.

Dielectric withstanding voltage:

Method 301 of MIL-STD-202:

A dc potential of 2.2 times rated voltage applied between terminals for 3 seconds \pm 2 seconds.

TABLE I. Style CV11.

Type designation	Capacitance (pF)		DC rated voltage (volts)	Characteristics				
				Symbol	Capacitance change from value at 25°C			
	At -55°C				At +85°C			
	Minimum percent	Maximum percent			Minimum percent	Maximum percent		
CV11A070	1.5	7.0	500	A	-4.5	+2.0	-2.5	+2.0
CV11A120	3.0	12.0	500	A	-4.5	+2.0	-2.5	+2.0
CV11A250	4.5	25.0	500	A	-4.5	+2.0	-2.5	+2.0
CV11B130	3.0	13.0	500	B	-1.0	+3.5	-2.5	-0.5
CV11B200	5.0	20.0	500	B	-1.0	+3.5	-2.5	-0.5
CV11C300	4.0	30.0	500	C	-1.0	+6.5	-4.0	-1.0
CV11C450	7.0	45.0	500	C	-1.0	+6.5	-4.0	-1.0
CV11D060	2.0	6.0	500	D	+1.5	+8.2	-5.0	-1.5
CV11D300	4.0	30.0	500	D	+1.5	+8.2	-5.0	-1.5
CV11D450	7.0	45.0	500	D	+1.5	+8.2	-5.0	-1.5

Barometric pressure:

Method 105 of MIL-STD-202, condition D (100,000 feet) and condition B (50,000 feet).

Test potential: 80 percent of dc rated voltage for condition D and 125 percent dc rated voltage for condition B.

Insulation resistance:

Method 302 of MIL-STD-202, condition A, 100 volts dc applied: 10,000 megohms, minimum.

Capacitance:

Method 305 of MIL-STD-202.

DF: At 1 MHz \pm 100 kHz, at maximum and minimum capacitance: Shall be not more than 0.2 percent.

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Temperature coefficient: Within the limits specified for the applicable characteristic.

Capacitance drift: Within 0.75 percent of initial step 1 measurement or 0.50 pF, whichever is greater.

Terminal strength:

Pull test: Capacitor held by body and 4-pound load applied to each terminal for at least 10 seconds.

Torque: Not less than 4 ounce-inches nor more than 24 ounce-inches.

Fatigue:

ΔC : Shall not exceed 12 percent or 0.75 pF, whichever is greater.

Torque: Not less than 4 ounce-inches nor more than 36 ounce-inches.

Life:

Qualification test: 1,000 hours at +85°C, 750 volts dc with a 100 Hz or less 250 volt ac peak potential applied.

Insulation resistance: Initial requirement.

Capacitance change: Shall not exceed ± 5 percent of initial value or 0.5 pF, whichever is greater.

Group C life: Conditions and requirements are the same as that required for qualification.

Shock (specified pulse):

Method 213 of MIL-STD-202, condition I (100 g's).

Vibration:

Method 204 of MIL-STD-202, condition B (15 g's).

Capacitance change: Shall not exceed ± 2 percent or 0.5 pF, whichever is greater.

DF: Shall be not more than 0.2 percent.

Dielectric withstanding voltage: 1,100 volts dc applied for 3 seconds ± 2 seconds.

Insulation resistance: 10,000 megohms, minimum.

Moisture resistance:

Method 106 of MIL-STD-202:

Insulation resistance: 10,000 megohms, minimum.

Capacitance change: Shall not exceed ± 10 percent of initial value or 0.5 pF, whichever is greater.

DF: Shall be not more than 0.5 percent.

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Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC
(Project 5910-2010-01)

Review activities:
Army - AR, MI
Air Force - 19