

INCH POUND

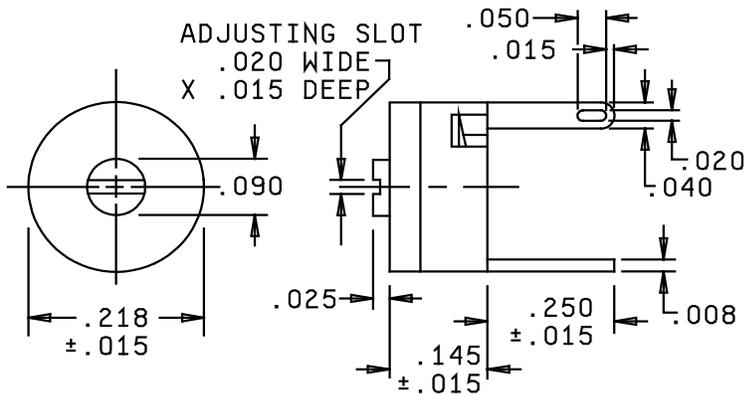
MIL-PRF-81/6F
21 April 2011
SUPERSEDING
MIL-PRF-81/6E
21 April 2006

PERFORMANCE SPECIFICATION SHEET

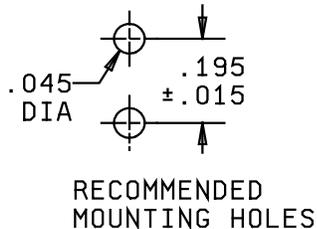
CAPACITORS, VARIABLE, CERAMIC DIELECTRIC,
STYLES CV35 AND CV36

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](#).

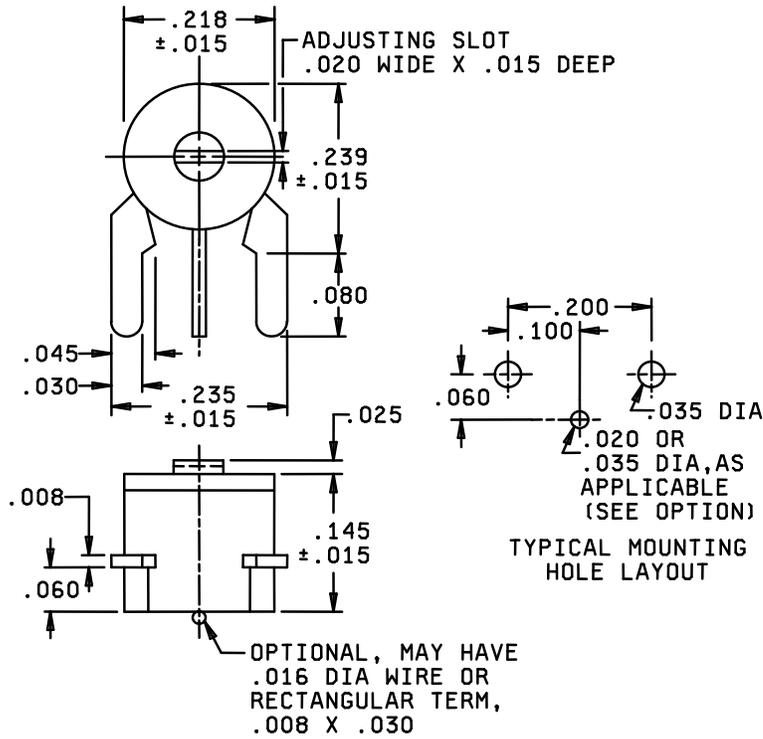


Inches	mm
.008	0.20
.015	0.38
.020	0.51
.025	0.64
.040	1.02
.065	1.65
.090	2.29
.145	3.68
.195	4.95
.218	5.54
.250	6.35



Style CV35

FIGURE 1. Dimensions and configurations.



Inches	mm
.008	0.20
.015	0.38
.016	0.41
.020	0.51
.025	0.64
.030	0.76
.035	0.89
.045	1.14
.060	1.52
.080	2.03
.100	2.54
.145	3.68
.200	5.08
.218	5.54
.235	5.97
.239	6.07

Style CV36

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ±.005.

FIGURE 2. Dimensions and configurations - Continued.

REQUIREMENTS:

Dimensions and configuration: See [figure 1](#) or [figure 2](#).

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

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

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

Characteristics: See [table I](#).

Dielectric withstanding voltage:

[Method 301 of MIL-STD-202](#):

A dc potential of 200 V dc applied between terminals for 3 seconds \pm 2 seconds.

TABLE I. [Style CV35 and CV36](#).

Type designation	Capacitance (pF)		DC rated voltage (volts)	Characteristic						
				Symbol	Capacitance change from value at 25°C					
	At -55°C				At +85°C		At +125°C			
	Min. percent	Max. percent			Min. percent	Max. percent	Min. percent	Max. percent		
CV35A030	1.0	3.0	100	A	-4.5	+2.0	-2.5	+2.0	-4.2	+3.4
CV36A030	1.25	3.0	100	A	-4.5	+2.0	-2.5	+2.0	-4.2	+3.4
CV3-A050 ^{2/}	2.0	5.0	100	A	-4.5	+2.0	-2.5	+2.0	-4.2	+3.4
CV3-A090	2.5	9.0	100	A	-4.5	+2.0	-2.5	+2.0	-4.2	+3.4
CV3-A200	3.5	20.0	100	A	-4.5	+2.0	-2.5	+2.0	-4.2	+3.4
CV3-A150 ^{2/}	5.0	15.0	100	A	-4.5	+2.0	-2.5	+2.0	-4.2	+3.4
CV3-A250	5.0	25.0	100	A	-4.5	+2.0	-2.5	+2.0	-4.2	+3.4
CV3-C400	7.0	40.0	100	C	-1.0	+6.5	-4.0	-1.0	-6.7	-1.7
CV3-G400	7.0	40.0	25	G	-0.0	+14.0	-8.0	-3.0	-14.0	-5.0

^{1/} Where applicable, the complete type designation will include an additional digit to indicate CV35 or CV36.

^{2/} Characteristic F is hereby canceled and there is no superseding part.

Barometric pressure (reduced): [Method 105 of MIL-STD-202](#), condition D (100,000 feet). Test potential: 100 percent of dc rated voltage.

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 for characteristic A and 0.5 percent for characteristics C and G.

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

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Capacitance drift: Within 0.75 percent of initial step 1 measurement or 0.50 (picofarad) 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 0.3 ounce-inch nor more than 3 ounce-inches.

Shock (specified pulse): [Method 213 of MIL-STD-202](#), condition I (100 g's).

Vibration, high frequency: [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 for characteristic A and 0.5 percent for characteristics C and G.

Dielectric withstanding voltage: 200 volts dc, applied for 3 seconds ± 2 seconds.

Insulation resistance: 10,000 megohms, minimum.

Fatigue:

Capacitance change: Shall not exceed ± 12 percent of initial value or 0.75 pF, whichever is greater.

Torque: Not less than .3 ounce-inches, nor more than 3 ounce-inches.

Life:

Qualification test: 1,000 hours at 85°C, 150 percent of rated volts dc with a peak alternating voltage of 50 percent of rated volts dc (100 hertz or less) superimposed.

Insulation resistance: Initial requirement.

Capacitance change: Shall not exceed ± 8 percent of initial value or 0.5 pF, whichever is greater.

Group C life: Conditions and requirements are the same as that for qualification except that capacitance change shall not exceed ± 5 percent of initial value or 0.5 pF, whichever is greater.

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

Insulation resistance: 10,000 megohms, minimum.

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

DF: Shall not be more than 0.5 percent for characteristic A and 1.25 percent for characteristics C and G.

CHANGES FROM PREVIOUS ISSUE: The margins of this specification sheet 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.

MIL-PRF-81/6F

Reference documents. In addition to [MIL-PRF-81](#), this document the following.
[MIL-STD-202](#).

Custodians:
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

Review activity:
Air Force – 19, 99

(Project 5910-2011-004)

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