INCH-POUND

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7 February 2003
SUPERSEDING
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6 July 1973

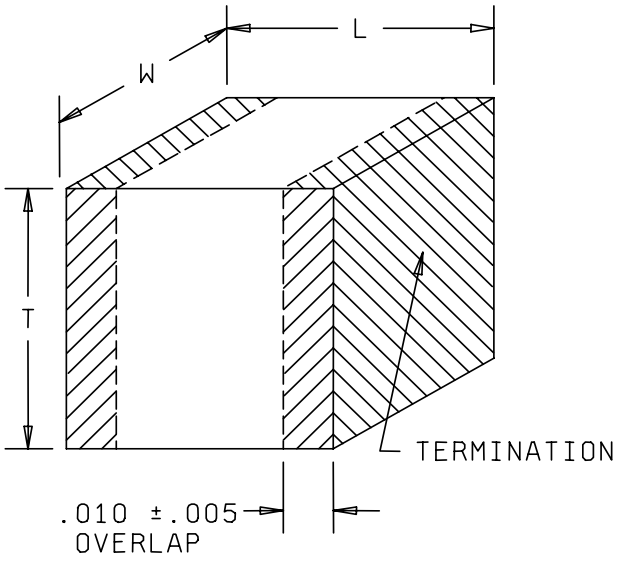
MILITARY SPECIFICATION

CAPACITORS, FIXED, PORCELAIN DIELECTRIC,

STYLES CY81 AND CY82

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

INACTIVE FOR DESIGN AFTER
16 JULY 1979. USE MIL-PRF-55681/4.



Inches	mm
.005	.13
.010	.25
.020	.51
.030	.76
.055	1.40

Dimensions				
			T	
Style	L	W	Min.	Max.
CY81	.055 ±.010	.055 ±.010	.030	.055
CY82	.055 ±.020	.055 ±.010	.030	.055

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

FIGURE 1. Capacitors, fixed, glass dielectric, styles CY81 and CY82.

TABLE I. Styles CY81 and CY82.

PIN 1/	Capacitance	Rated voltage	Capacitance tolerance available
	pF	Volts, dc	
CY8-D0R1B	0.1	50	B
CY8-D0R2B	0.2	50	B
CY8-D0R3-	0.3	50	B, C
CY8-D0R4-	0.4	50	B, C
CY8-D0R5-	0.5	50	B, C, D
CY8-D0R6-	0.6	50	B, C, D
CY8-D0R7-	0.7	50	B, C, D
CY8-D0R8-	0.8	50	B, C, D
CY8-D0R9-	0.9	50	B, C, D
CY8-D1R0-	1.0	50	B, C, D
CY8-D1R1-	1.1	50	B, C, D
CY8-D1R2-	1.2	50	B, C, D
CY8-D1R3-	1.3	50	B, C, D
CY8-D1R4-	1.4	50	B, C, D
CY8-D1R5-	1.5	50	B, C, D
CY8-D1R6-	1.6	50	B, C, D
CY8-D1R7-	1.7	50	B, C, D
CY8-D1R8-	1.8	50	B, C, D
CY8-D1R9-	1.9	50	B, C, D
CY8-D2R0-	2.0	50	B, C, D
CY8-D2R1-	2.1	50	B, C, D
CY8-D2R2-	2.2	50	B, C, D
CY8-D2R4-	2.4	50	B, C, D
CY8-D2R7-	2.7	50	B, C, D
CY8-D3R0-	3.0	50	B, C, D
CY8-D3R3-	3.3	50	B, C, D
CY8-D3R6-	3.6	50	B, C, D
CY8-D3R9-	3.9	50	B, C, D
CY8-D4R3-	4.3	50	B, C, D
CY8-D4R7-	4.7	50	B, C, D
CY8-D5R1-	5.1	50	B, C, D
CY8-D5R6-	5.6	50	B, C, D
CY8-D6R2-	6.2	50	B, C, D
CY8-D6R8-	6.8	50	B, C, J, K, M
CY8-D7R5-	7.5	50	B, C, J, K, M
CY8-D8R2-	8.2	50	B, C, J, K, M
CY8-D9R1-	9.1	50	B, C, J, K, M
CY8-D100-	10	50	F, G, J, K, M
CY8-D110-	11	50	F, G, J, K, M
CY8-D120-	12	50	F, G, J, K, M
CY8-D130-	13	50	F, G, J, K, M
CY8-D150-	15	50	F, G, J, K, M
CY8-D160-	16	50	F, G, J, K, M
CY8-D180-	18	50	F, G, J, K, M
CY8-D200-	20	50	F, G, J, K, M
CY8-D220-	22	50	F, G, J, K, M
CY8-D240-	24	50	F, G, J, K, M
CY8-D270-	27	50	F, G, J, K, M

See footnote at end of table.

TABLE 1. Styles CY81 and CY82 - Continued.

PIN 1/	Capacitance	Rated Voltage	Capacitance Tolerance available
CY8-D300-	30	50	F, G, J, K, M
CY8-D330-	33	50	F, G, J, K, M
CY8-D360-	36	50	F, G, J, K, M
CY8-D390-	39	50	F, G, J, K, M
CY8-D430-	43	50	F, G, J, K, M
CY8-D470-	47	50	F, G, J, K, M
CY8-D510-	51	50	F, G, J, K, M
CY8-D560-	56	50	F, G, J, K, M
CY8-D620-	62	50	F, G, J, K, M
CY8-D680-	68	50	F, G, J, K, M
CY8-D750-	75	50	F, G, J, K, M
CY8-D820-	82	50	F, G, J, K, M
CY8-D910-	91	50	F, G, J, K, M
CY8-D101-	100	50	F, G, J, K, M

1/ Complete PIN will include an additional digit to indicate the style, and an additional letter symbol to indicate the capacitance tolerance, where applicable.

REQUIREMENTS:

Requirements: Requirements shall be in accordance with MIL-C-11272, and as specified herein.

Design and construction: Capacitors shall be of the design, construction, and physical dimensions specified on figure 1 and in table I.

Case type: Multi-layer, unencapsulated, monolithic.

Material: Porcelain.

Terminations:

Style CY81: Metallized.

Style CY82: Solder coated, 372°F, 62 Sn, 36P6, 2 percent Ag.

Inspection conditions: All visual examinations shall be performed using a stereo microscope having a minimum magnification of 20 power.

Capacitance (Cap.) value: See table I.

Capacitance tolerance - F: 1%, G: 2%, J: 5%, K: 10%, M: 20%.

DC rated voltage: 50 volts.

Insulation resistance (IR):

At +25°C: 10^6 megohms, minimum.

At +125°C: 10^5 megohms, minimum.

Quality factor: 10,000. 1 MHz -0 +100 kHz.

Life:

At +25°C and +125°C:

IR: Not less than initial requirement.

Cap.: Change not more than 0.2 percent or 0.2 pF, whichever is greater, from the nominal value.

Temperature coefficient and capacitance drift: See table II.

TABLE II. Temperature coefficient and capacitance drift.

Temperature coefficient	Capacitance drift (-55°C to +125°C)
Parts/million/°C 90 ±20	0.1 percent or 0.1 pF whichever is greater

NOTE: These capacitors are intended for use in RF solid-state circuitry up to and including 25 gigahertz, and cannot be replaced in the field.

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

Review activities:
Army - MI
Air Force - 99
DLA - IS

Preparing activity:
DLA - CC

(Project 5910-2163-08)