

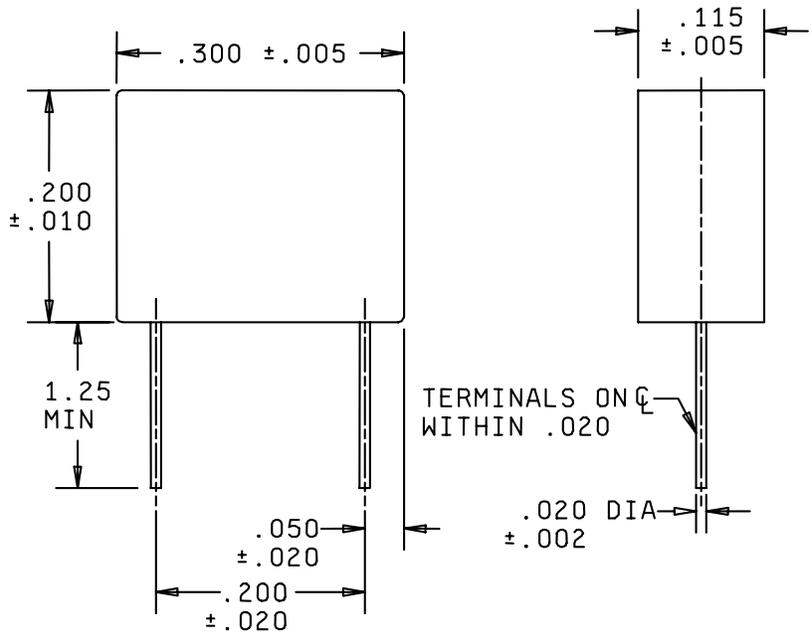
INCH-POUND

MIL-C-11272/13B
7 February 2003
SUPERSEDING
MIL-C-11272/13A(USAF)
7 January 1970

MILITARY SPECIFICATION
CAPACITORS, FIXED, GLASS DIELECTRIC
STYLE CY06

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

INACTIVE FOR DESIGN AFTER
7 JAN 1970. USE MIL-PRF-23269.



Inches	mm
.002	.05
.005	.13
.010	.25
.020	.51
.050	1.27
.115	2.92
.200	5.08
.300	7.62
1.25	31.75

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

FIGURE 1. Capacitors, fixed, glass dielectric,
style CY06

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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.

Material:

Dielectric: Glass.

Case: Epoxy.

Lead: Type D2 (gold-plated copper clad iron-nickel alloy) of MIL-STD-1276. Type D5 (Hot solder dip copper clad iron-nickel alloy) of MIL-STD-1276 may be furnished when specified in the contract or purchase order.

Capacitance: See table I.

Capacitance tolerance: C: $\pm 0.25\text{pF}$, D: $\pm 0.50\text{pF}$, F: 1%, G: 2%, J: 5%.

DC rated voltage: 300 volts.

Dissipation factor:

Not to exceed 0.002 for capacitance values of 1 to 100 pF.

Not to exceed 0.001 for capacitance values greater than 100 pF.

Quality factor (Q):

Method 306 of MIL-STD-202.

Test frequency: 1 MHz ± 200 kHz.

Not less than 500 for capacitance values of 1 to 100 pF.

Not less than 2,000 for capacitance values greater than 100 pF.

Immersion: Method 104 of MIL-STD-202, test condition B.

Dielectric withstanding voltage: No breakdown.

Insulation resistance: Not less than initial requirement.

Capacitance: Change not more than 0.5 percent of nominal value or 0.5 pF, whichever is greater, from initial value.

Dissipation factor: Not to exceed 0.002 for capacitance values of 1 to 100 pF. Not to exceed 0.001 for capacitance values greater than 100 pF.

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TABLE I. Styles CY06.

PIN 1/	Capacitance	DC rated voltage	Capacitance tolerances available	PIN 1/	Capacitance	DC rated voltage	Capacitance tolerances available
	<u>pF</u>				<u>pF</u>	<u>volts</u>	
CY06C1R0C	1	300	C	CY06C360-	36	300	FGJ
CY06C1R5C	1.5	300	C	CY06C390-	39	300	FGJ
CY06C2R2-	2.2	300	CD	CY06C430-	43	300	FGJ
CY06C2R7C	2.7	300	C	CY06C470-	47	300	FGJ
CY06C3R0-	3.0	300	CD	CY06C510-	51	300	FGJ
CY06C3R3C	3.3	300	C	CY06C560-	56	300	FGJ
CY06C3R6-	3.6	300	CD	CY06C620-	62	300	FGJ
CY06C3R9C	3.9	300	C	CY06C680-	68	300	FGJ
CY06C4R3-	4.3	300	CD	CY06C750-	75	300	FGJ
CY06C4R7C	4.7	300	C	CY06C820-	82	300	FGJ
CY06C5R1-	5.1	300	CJ	CY06C910-	91	300	FGJ
CY06C5R6-	5.6	300	CJ	CY06C101-	100	300	FGJ
CY06C6R2-	6.2	300	CJ	CY06C111-	110	300	FGJ
CY06C6R8-	6.8	300	CJ	CY06C121-	120	300	FGJ
CY06C7R5-	7.5	300	CJ	CY06C131-	130	300	FGJ
CY06C8R2-	8.2	300	CJ	CY06C151-	150	300	FGJ
CY06C9R1-	9.1	300	CJ	CY06C161-	160	300	FGJ
CY06C100-	10	300	CJ	CY06C181-	180	300	FGJ
CY06C110-	11	300	CJ	CY06C201-	200	300	FGJ
CY06C120-	12	300	CJ	CY06C221-	220	300	FGJ
CY06C130-	13	300	CGJ	CY06C241-	240	300	FGJ
CY06C150-	15	300	CGJ	CY06C271-	270	300	FGJ
CY06C160-	16	300	CGJ	CY06C301-	300	300	FGJ
CY06C180-	18	300	CGJ	CY06C331-	330	300	FGJ
CY06C200-	20	300	CGJ	CY06C361-	360	300	FGJ
CY06C220-	22	300	CGJ	CY06C391-	390	300	FGJ
CY06C240-	24	300	CGJ	CY06C431-	430	300	FGJ
CY06C270-	27	300	FGJ	CY06C471-	470	300	FGJ
CY06C300-	30	300	FGJ	CY06C511-	510	300	FGJ
CY06C330-	33	300	FGJ	CY06C561-	560	300	FGJ

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

Example: - CY06C1R0C

Moisture resistance: Method 106 of MIL-STD-202.

At 90 to 95 percent relative humidity:

Insulation resistance:- Not less than 1,000 megohms.

At 50 ±5 percent relative humidity:

Dielectric withstanding voltage: No breakdown.

Insulation resistance: Not less than initial requirement.

Capacitance: Change not more than 0.5 percent of nominal value or 0.5 pF, whichever is greater.

Dissipation factor: Not to exceed 0.003 for capacitance values of 100 pF or less; 0.001 for capacitance values greater than 100 pF.

Life: 150 percent dc rated voltage, at 125°C +4,-0°C for 2,000 hours.

Group A test: 250 hours: group B continuation test for 1,750 hours.

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Qualification inspection: Capacitors shall meet the following requirements, as applicable:

For qualification test:

At 25°C:

Insulation resistance: Not less than initial requirement.

Capacitance: Change not more than 0.5 percent of nominal or 0.5 pF, whichever is greater, from initial value.

Dissipation factor: Not to exceed 0.0045 for values of 100 pF, or less; 0.0025 for values greater than 100 pF.

At 125°C:

Insulation resistance: Not less than 10,000 megohms.

Capacitance: Change not more than 0.5 percent of nominal or 0.5 pF, whichever is greater, from initial 125°C value.

Dissipation factor: Not to exceed 0.009 for values of 100 pF, or less; 0.007 for values greater than 100 pF.

Performance check: Capacitors shall meet the following requirements:

For performance check:

Insulation resistance: Not less than initial requirement.

Capacitance: Change not more than 0.5 percent of nominal or 0.5 pF, whichever is greater, from initial value.

Dissipation factor: Not to exceed 0.0045 for values of 100 pF or less; 0.0025 for values greater than 100 pF.

Temperature coefficient and capacitance drift: The temperature coefficient and capacitance drift shall be within the limits specified in table II.

TABLE II. Temperature coefficient and capacitance drift.

Temperature coefficient	Capacitance drift (-55° to +125°C)
parts/million/°C 140 ±25	0.1 percent or 0.1 pF, whichever is greater.

VERIFICATION

Sampling and inspection: MIL-C-11272 and as specified herein.

Group A inspection: MIL-C-11272. Successful performance of group A inspection.

Group B inspection: MIL-C-11272: Successful performance of group B inspection.

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Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in the applicable Qualified Products List whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from Defense Supply Center Columbus, P. O. Box 3990, Columbus OH 43216-5000.

Custodian:

Air Force - 11
Navy - EC
DLA - CC

Preparing activity:

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