

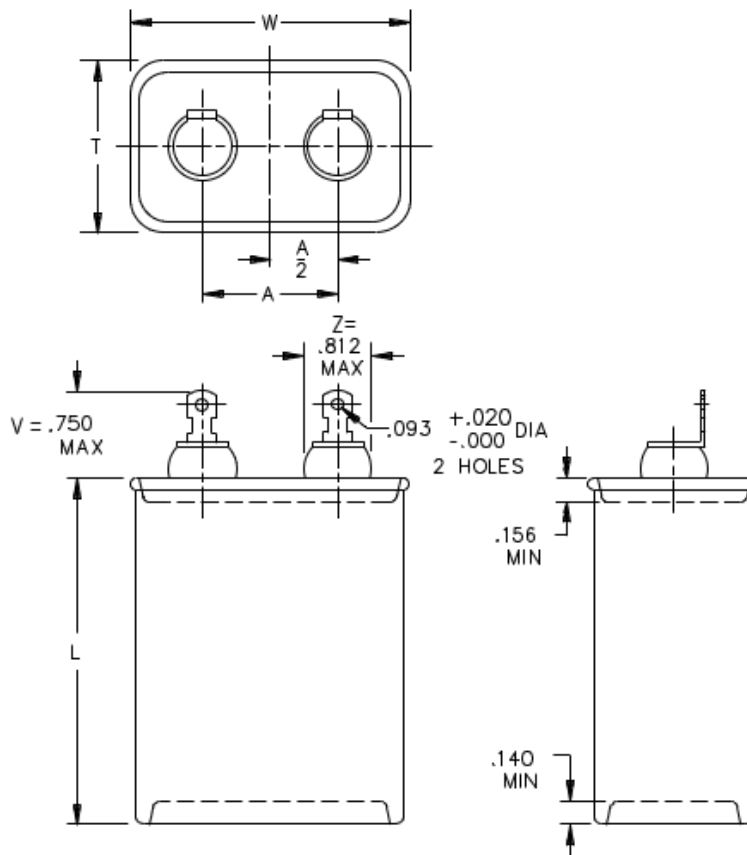
PERFORMANCE SPECIFICATION SHEET

CAPACITOR, FIXED, PLASTIC (OR PAPER-PLASTIC) DIELECTRIC,
HERMETICALLY SEALED IN METAL CASES, STYLE CQ72

This specification sheet 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-19978](#).

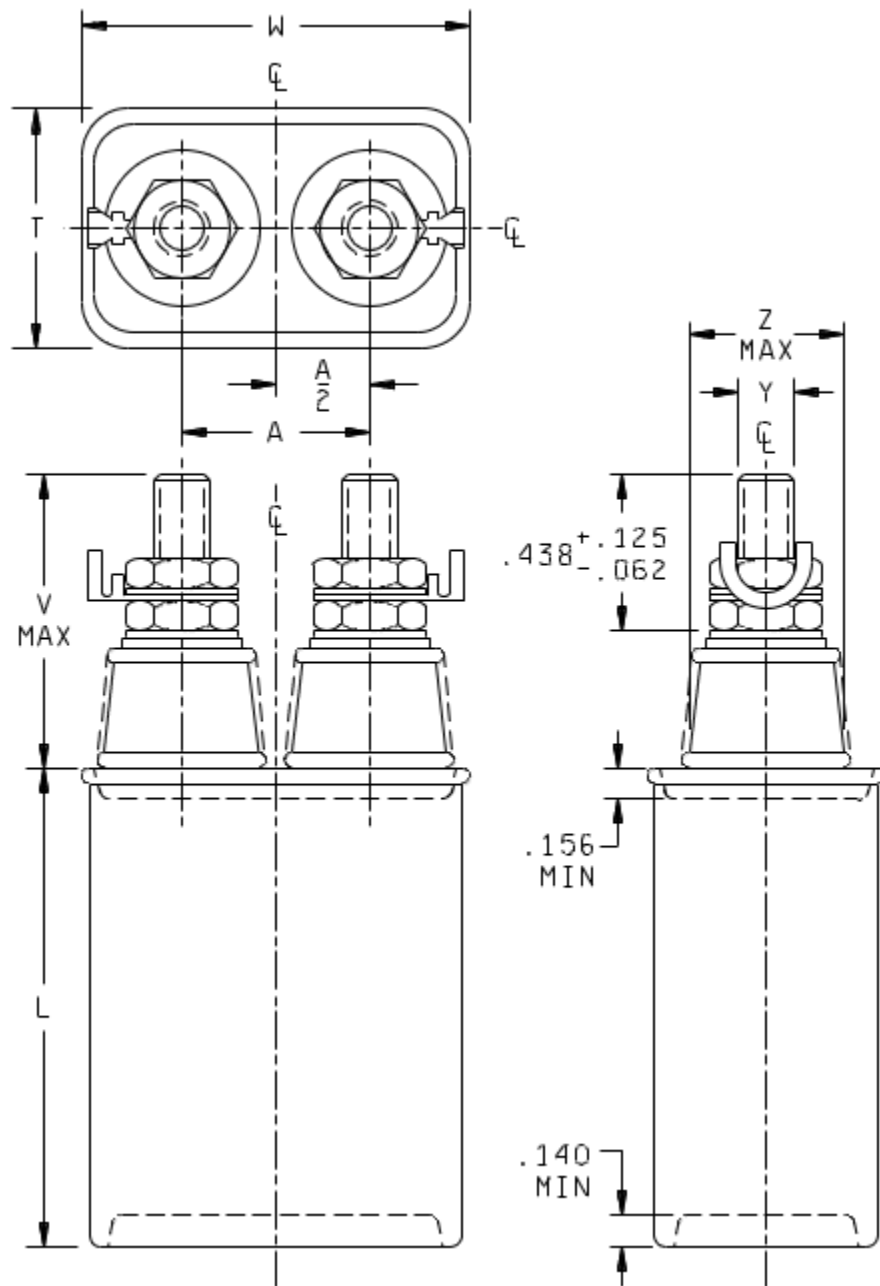
Characteristic K is inactive for new design after 22 July 1991.



TERMINAL TYPE: SOLDER LUG (B)

FIGURE 1. Style CQ72 capacitors.





TERMINAL TYPE: PILLAR INSULATOR (D, E, OR H)

FIGURE 1. Style CQ72 capacitors - continued.

MIL-PRF-19978/3L

Symbol	Type of terminal
B	Solder lug (nonremovable)
D,H	Pillar insulator (for use at altitudes up to 7,500 feet)
E	Pillar insulator (for use at altitudes up to 50,000 feet)

Terminal number	Terminal symbols	Terminal dimensions			
		V, max	Y, min	Y, max	Z, max
1	B	.75			.812
2	E	1.375	.190-32 UNF-2A	.216-24 UNF-2A	.812
3	E	1.75	.190-32 UNF-2A	.216-24 UNF-2A	1.00
4	D,E	2.75	.190-32 UNF-2A	.3125-18 UNF-2A	1.438
5	H	4.250	.375-16 UNF-2A	.500-13 UNF-2A	3.000

Inches	mm	Inches	mm	Inches	mm
.020	0.51	.156	3.69	1.438	36.53
.062	1.57	.438	11.13	1.75	44.45
.063	1.60	.75	19.05	2.75	69.85
.093	2.36	.812	20.62	3.000	76.20
.125	3.18	1.00	25.40	4.250	107.95
.140	3.56	1.375	34.93		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are in millimeters and are given for general information only.
3. Unless otherwise specified, tolerances are $\pm .005$ inch (0.13 mm) for three place decimals and $\pm .02$ inch (0.51 mm) for two place decimals.
4. Shape of terminal B (drilled, punches, forked, or slotted) is optional.
5. Capacitors having terminal D or E shall be supplied with necessary terminal hardware for each terminal (two nuts (one of these may be fixed cap nut on the bushing) and one lockwasher); in addition, capacitors rated at 3,000 volts dc or less shall be supplied with a solder lug capable of accommodating a wire of .063 inch (1.60 mm) (No. 14 AWG) for each terminal.

FIGURE 1. Style CQ72 capacitors - continued.

REQUIREMENTS:

Qualification: Not required.

Qualification for retainers: Not required; however, retainers shall be capable of meeting the applicable requirements specified in [MIL-PRF-19978](#).

Inspection of product for delivery: Inspection of product for delivery shall consist of group A (non-ER) and group B inspections as specified in [MIL-PRF-19978](#).

Certification: The acquiring activity, at its discretion, may accept a certificate of compliance with group B requirements in lieu of performing group B tests.

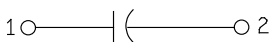
Acquisition data: In addition to that specified in [MIL-PRF-19978](#), the acquisition documents should specify whether the manufacturer performs the group B tests or provides certification of compliance with group B requirements.

Design and construction:

Dimensions and configuration: See [figure 1](#) and [table II](#).

Construction: Extended foil or laid-in-tab.

Terminals: See [figure 1](#).

CIRCUIT DIAGRAM - 

Rated voltage: See [table II](#).

Rated temperature:

Characteristic	Rated temperature
E	-65°C to +85°C
K	-65°C to +125°C
F and G	-55°C to +85°C

Capacitance (cap.) (nom): See [table II](#).

Capacitance tolerance: ± 10 percent.

Vibration grade: See [table II](#).

Dissipation factor (DF) (max): 1.0 percent.

Seal: [MIL-STD-202-112](#), test condition letter A, or in accordance with [MIL-PRF-19978](#) (alternative test).

Barometric pressure: In accordance with [MIL-PRF-19978](#); terminal D capacitors not applicable.

Test condition letter: B (3.44 inches of mercury - 50,000 feet).

Test points: Between ungrounded terminal and case.

Test potential: 125 percent of dc rated voltage.

Insulation resistance (IR):

Terminal to terminal: See [table I](#).

Terminals to case: Greater than 10,000 megohms.

Vibration:

Low frequency (grade 1): [MIL-STD-202-201](#).

High frequency (grade 3): [MIL-STD-202-204](#), test condition B, with the following exception:

Direction and duration of motion: 4 hours in each of two mutually perpendicular directions (total of 8 hours), one parallel and the other perpendicular to the cylindrical axis.

Salt spray (corrosion): In accordance with [MIL-PRF-19978](#).

Solderability: Not applicable.

Terminal strength: [MIL-STD-202-211](#), test condition letters A and E.

Stability at low and high temperatures:

Low temperature:

Test temperature: -55°C (F and G) or -65°C (E and K).

Capacitance change (max): -10 percent.

High temperature:

Test temperature: +85°C (E, F, and G) or +125°C (K).

Capacitance change (max): +10 percent.

Life:

Capacitance change (max): +10 percent.

Resistance to soldering heat: Not applicable.

TABLE I. Terminal-to-terminal insulation resistance.

Capacitance rating	Minimum insulation resistance
Characteristic E	
0 to 0.6 microfarad Greater than 0.6 microfarad	<u>At +25°C</u> 25,000 megohms
	15,000 megohm-microfarads <u>1/</u>
0 to 0.15 microfarad Greater than 0.15 microfarad	<u>At +85°C</u> 2,000 megohms
	300 megohm-microfarads <u>1/</u>
Characteristic K	
0 to 0.6 microfarad Greater than 0.6 microfarad	<u>At +25°C</u> 25,000 megohms
	15,000 megohm-microfarads <u>1/</u>
0 to 0.08 microfarad Greater than 0.08 microfarad	<u>At +125°C</u> 250 megohms
	20 megohm-microfarads <u>1/</u>
Characteristic F	
0.33 microfarad and less Greater than 0.33 microfarad	<u>At +25°C</u> 6,000 megohms
	2,000 megohm-microfarads <u>1/</u>
0.033 microfarad and less Greater than 0.033 microfarad	<u>At +85°C</u> 600 megohms
	20 megohm-microfarads <u>1/</u>
Characteristic G	
0.33 microfarad and less Greater than 0.33 microfarad	<u>At +25°C</u> 4,500 megohms
	1,500 megohm-microfarads <u>1/</u>
0.033 microfarad and less Greater than 0.033 microfarad	<u>At +85°C</u> 450 megohms
	15 megohm-microfarads <u>1/</u>

1/ Product obtained by multiplying the capacitance in microfarads by the insulation resistance in megohms.

TABLE II. Style CQ72 capacitors.

Part or identifying number (PIN) 1/	DC voltage rating (Volts)	Capacitance (μF)	Vibration grade	Case size				Available terminal identification number			
				Characteristic				Terminal			
				E	K	F	G	B	D	E	H
CQ72-1KE254K3	400	0.25	3	--	A1	--	--	1	---	2	---
CQ72-1-E504K3	400	0.5	3	A1	A2	--	--	1	---	2	---
CQ72-1-E105K3	400	1.0	3	A1	A3	--	--	1	---	2	---
CQ72-1-E205K3	400	2	3	A2	A5	--	--	1	---	2	---
CQ72-1-E405K3	400	4	3	B2	B6	--	--	1	---	2	---
CQ72-1-E605K3	400	6	3	B6	C3	--	--	1	---	2	---
CQ72-1-E805K3	400	8	3	C3	D4	--	--	1	---	2	---
CQ72-1-E106K3	400	10	3	C4	E4	--	--	1	---	2	---
CQ72-1-E126K3	400	12	3	D2	E6	--	--	1	---	2	---
CQ72-1-E156K3	400	15	3	D5	G4	--	--	1	---	2	---
CQ72-1FF254K1	600	0.25	1	--	--	A1	--	1	---	2	---
CQ72-1-F504K3	600	0.5	3	A1	A2	--	--	1	---	2	---
CQ72-1-F105K-	600	1.0	1,3	A2	A3	--	--	1	---	2	---
CQ72-1-F205K-	600	2	1,3	A2	B4	A4	A3	1	---	2	---
CQ72-1-F405K-	600	4	1,3	B3	D2	B4	B3	1	---	2	---
CQ72-1-F605K-	600	6	1,3	B6	E4	C2	B6	1	---	2	---
CQ72-1-F805K-	600	8	1,3	C2	F1	C3	C2	1	---	2	---
CQ72-1-F106K-	600	10	1,3	C4	J2	D3	C4	1	---	2	---
CQ72-1-F126K3	600	12	3	E2	J3	--	--	1	---	2	---
CQ72-1-F156K3	600	15	3	E5	J6	--	--	1	---	2	---
CQ72-1FG104K1	1,000	0.1	1	--	--	A1	--	1	---	2	---
CQ72-1-G254K-	1,000	0.25	1,3	--	A2	A2	--	1	---	2	---
CQ72-1-G504K-	1,000	0.5	1,3	A1	A3	A2	--	1	---	2	---
CQ72-1-G105K-	1,000	1.0	1,3	A2	B3	A3	A2	1	---	2	---
CQ72-1-G205K-	1,000	2	1,3	A5	C4	A6	A5	1	---	2	---
CQ72-1-G405K-	1,000	4	1,3	B6	F1	C2	B6	1	---	2	---
CQ72-1-G605K-	1,000	6	1,3	C4	G2	D3	C4	1	---	2	---
CQ72-1-G805K-	1,000	8	1,3	D2	J2	D5	D2	1	---	2	---
CQ72-1-G106K-	1,000	10	1,3	D5	J5	E5	D5	1	---	2	---
CQ72-1-G126K-	1,000	12	1,3	E4	J6	E6	E4	1	---	2	---
CQ72-1-G156K-	1,000	15	1,3	F1	J11	G2	F1	1	---	2	---
CQ72-1-H104K-	1,500	0.1	1,3	A1	A1	A2	--	1	---	2	---
CQ72-1-H254K-	1,500	0.25	1,3	A1	A2	A3	A2	1	---	2	---
CQ72-1-H504K-	1,500	0.5	1,3	A2	A5	A3	--	1	---	2	---
CQ72-1-H105K-	1,500	1.0	1,3	A5	B5	A6	A5	1	---	2	---
CQ72-1-H205K-	1,500	2	1,3	B6	D4	B6	B5	1	---	2	---
CQ72-1-H405K-	1,500	4	1,3	D5	G4	D4	C4	1	---	2	---
CQ72-1-H605K-	1,500	6	1,3	G1	J6	E5	D5	1	---	2	---
CQ72-1-H805K-	1,500	8	1,3	J2	J10	F2	F1	1	---	2	---
CQ72-1-H106K-	1,500	10	1,3	J4	--	G4	G2	1	---	2	---
CQ72-1-H126K-	1,500	12	1,3	J6	--	J3	G2	1	---	2	---
CQ72-1-H156K-	1,500	15	1,3	J10	--	J6	J3	1	---	2	---
CQ72E1FJ254K1	2,000	0.25	1	--	--	B1	--	---	---	3	---
CQ72E1FJ504K1	2,000	0.5	1	--	--	B2	--	---	---	3	---
CQ72E1-J105K-	2,000	1.0	1,3	--	C3	B6	B3	---	---	3	---
CQ72E1-J205K-	2,000	2	1,3	C4	E6	C4	C3	---	---	3	---
CQ72E1-J405K-	2,000	4	1,3	F1	J4	E6	E3	---	---	3	---
CQ72E1-J605K-	2,000	6	1,3	G3	J8	G4	G1	---	---	3	---
CQ72E1-J805K-	2,000	8	1,3	J2	--	J4	G3	---	---	3	---
CQ72E1-J106K-	2,000	10	1,3	J5	--	J7	J3	---	---	3	---
CQ72E1-J126K-	2,000	12	1,3	J6	--	J9	J5	---	---	3	---
CQ72E1-J156K-	2,000	15	1,3	J11	--	J10	J7	---	---	3	---

See footnote at end of table.

TABLE II. Style CQ72 capacitors - continued.

PIN <u>1/</u>	DC voltage rating (Volts)	Capacitance (μ F)	Vibration grade	Case size				Available terminal identification number			
				Characteristic				Terminal			
				E	K	F	G	B	D	E	H
CQ72E1FK104K1	2,500	0.1	1	--	--	B1	--	---	---	3	---
CQ72E1-K254K1	2,500	0.25	1	--	--	B2	B1	---	---	3	---
CQ72E1-K504K-	2,500	0.5	1,3	--	B5	B4	B3	---	---	3	---
CQ72E1-K105K-	2,500	1.0	1,3	--	D2	D2	D1	---	---	3	---
CQ72E1-K205K-	2,500	2	1,3	C4	G4	E5	D5	---	---	3	---
CQ72E1-K405K-	2,500	4	1,3	E6	J8	J2	--	---	---	3	---
CQ72E1-K605K-	2,500	6	1,3	J2	--	J6	J4	---	---	3	---
CQ72E1-K805K-	2,500	8	1,3	J5	--	J8	J6	---	---	3	---
CQ72E1-K106K-	2,500	10	1,3	J7	--	J10	J8	---	---	3	---
CQ72E1-K126K-	2,500	12	1,3	J11	--	K3	J10	---	---	3	---
CQ72E1-L104K1	3,000	0.1	1	---	---	B2	B1	---	---	3	---
CQ72E1-L254K1	3,000	0.25	1	---	---	B3	B2	---	---	3	---
CQ72E1-L504K1	3,000	0.5	1	---	---	B6	B5	---	---	3	---
CQ72E1-L105K-	3,000	1.0	1,3	D1	E4	E4	E3	---	---	3	---
CQ72E1-L205K-	3,000	2	1,3	E3	J2	G2	G1	---	---	3	---
CQ72E1-L405K-	3,000	4	1,3	G4	J11	J7	J3	---	---	3	---
CQ72E1-L605K-	3,000	6	1,3	J5	---	K2	J9	---	---	3	---
CQ72E1FM104K1	4,000	0.1	1	--	--	E1	--	---	---	4	---
CQ72E1-M254K-	4,000	0.25	1,3	--	C1	E3	E1	---	---	4	---
CQ72E1-M504K-	4,000	0.5	1,3	--	C4	E5	E3	---	---	4	---
CQ72E1-M105K-	4,000	1.0	1,3	C2	F2	G2	E6	---	---	4	---
CQ72E1-M205K-	4,000	2	1,3	E6	J7	J6	J4	---	---	4	---
CQ72E1-M405K-	4,000	4	1,3	J5	--	J11	J10	---	---	4	---
CQ72E1-N104K-	5,000	0.1	1,3	C1	--	E1	--	---	---	4	---
CQ72E1-N254K-	5,000	0.25	1,3	C1	--	E3	--	---	---	4	---
CQ72E1-N504K-	5,000	0.5	1,3	C1	E4	E6	E4	---	---	4	---
CQ72E1-N105K-	5,000	1.0	1,3	D2	G4	J4	J2	---	---	4	---
CQ72E1-N205K-	5,000	2	1,3	F2	J11	J11	J6	---	---	4	---
CQ72E1-N405K1	5,000	4	1	--	--	K4	K3	---	---	4	---
CQ72D1-P104K-	6,000	0.1	1,3	C1	--	E3	E2	---	4	---	---
CQ72D1-P254K-	6,000	0.25	1,3	C1	D2	E5	E4	---	4	---	---
CQ72D1-P504K-	6,000	0.5	1,3	C1	E6	J3	J2	---	4	---	---
CQ72D1-P105K-	6,000	1.0	1,3	E5	J6	J11	J9	---	4	---	---
CQ72D1-P205K-	6,000	2	1,3	G1	--	L1	K3	---	4	---	---
CQ72D1-R104K-	7,500	0.1	1,3	C1	C1	E5	E3	---	4	---	---
CQ72D1-R254K-	7,500	0.25	1,3	C2	G1	J2	J1	---	4	---	---
CQ72D1-R504K-	7,500	0.5	1,3	E4	J3	J6	J4	---	4	---	---
CQ72D1-R105K-	7,500	1.0	1,3	G3	--	K3	--	---	4	---	---
CQ72D1-R205K-	7,500	2	1,3	J10	--	L2	K4	---	4	---	---
CQ72D1-S104K-	10,000	0.1	1,3	C2	E2	--	--	---	4	---	---
CQ72D1-S254K-	10,000	0.25	1,3	E3	J3	--	--	---	4	---	---
CQ72-1-S504K-	10,000	0.5	1,3	F2	J9	K4	K3	---	4	---	5
CQ72-1-S105K-	10,000	1.0	1,3	J6	--	L2	K4	---	4	---	5
CQ72-1-S205K1	10,000	2	1	--	--	M1	L3	---	4	---	5
CQ72-1-T104K-	12,500	0.1	1,3	E2	J1	K1	--	---	4	---	5
CQ72-1-T254K-	12,500	0.25	1,3	E4	J5	K2	--	---	4	---	5
CQ72-1-T504K-	12,500	0.5	1,3	J4	--	L1	K4	---	4	---	5
CQ72-1-T105K-	12,500	1.0	1,3	J10	--	M1	L3	---	4	---	5
CQ72-1-T205K1	12,500	2	1	--	--	M2	M1	---	4	---	5

1/ Complete PIN shall include additional symbols to indicate terminal, characteristic, and vibration grade, as applicable.

MIL-PRF-19978/3L

TABLE III. Case dimensions and retainer part number.

Case size <u>1/</u>	Case dimensions (in inches)				Retainer part number <u>2/</u>
	W $\pm$.094	T $\pm$.094	L $\pm$.094	A + .0625, - .187	
A1	1.812	1.062	1.625	0.812	CQ072-A1
A2	1.812	1.062	2.250	0.812	CQ072-A2
A3	1.812	1.062	2.875	0.812	CQ072-A3
A4	1.812	1.062	3.250	0.812	CQ072-A4
A5	1.812	1.062	3.875	0.812	CQ072-A5
A6	1.812	1.062	4.750	0.812	CQ072-A6
B1	2.500	1.188	2.500	1.125	CQ072-B1
B2	2.500	1.188	2.875	1.125	CQ072-B2
B3	2.500	1.188	3.500	1.125	CQ072-B3
B4	2.500	1.188	3.875	1.125	CQ072-B4
B5	2.500	1.188	4.250	1.125	CQ072-B5
B6	2.500	1.188	4.750	1.125	CQ072-B6
C1	3.750	1.250	3.250	2.000	CQ072-C1
C2	3.750	1.250	3.875	2.000	CQ072-C2
C3	3.750	1.250	4.250	2.000	CQ072-C3
C4	3.750	1.250	4.750	2.000	CQ072-C4
D1	3.750	1.750	3.250	2.000	CQ072-D1
D2	3.750	1.750	3.875	2.000	CQ072-D2
D3	3.750	1.750	4.000	2.000	CQ072-D3
D4	3.750	1.750	4.250	2.000	CQ072-D4
D5	3.750	1.750	4.750	2.000	CQ072-D5
E1	3.750	2.500	2.750	2.000	CQ072-E1
E2	3.750	2.500	3.375	2.000	CQ072-E2
E3	3.750	2.500	3.875	2.000	CQ072-E3
E4	3.750	2.500	4.500	2.000	CQ072-E4
E5	3.750	2.500	4.750	2.000	CQ072-E5
E6	3.750	2.500	5.125	2.000	CQ072-E6
F1	3.750	2.500	4.750	2.000	CQ072-F1
F2	3.750	2.500	5.750	2.000	CQ072-F2
G1	3.750	3.188	4.500	2.000	CQ072-G1
G2	3.750	3.188	4.750	2.000	CQ072-G2
G3	3.750	3.188	5.125	2.000	CQ072-G3
G4	3.750	3.188	5.500	2.000	CQ072-G4
J1	4.562	3.750	3.875	2.000	CQ072-J1
J2	4.562	3.750	4.375	2.000	CQ072-J2
J3	4.562	3.750	4.750	2.000	CQ072-J3
J4	4.562	3.750	5.125	2.000	CQ072-J4
J5	4.562	3.750	5.500	2.000	CQ072-J5
J6	4.562	3.750	6.000	2.000	CQ072-J6
J7	4.562	3.750	6.500	2.000	CQ072-J7
J8	4.562	3.750	7.000	2.000	CQ072-J8
J9	4.562	3.750	7.500	2.000	CQ072-J9
J10	4.562	3.750	8.500	2.000	CQ072-J10
J11	4.562	3.750	9.625	2.000	CQ072-J11
K1	8.000	4.000	5.500	4.500	CQ072-K1
K2	8.000	4.000	7.000	4.500	CQ072-K2
K3	8.000	4.000	9.250	4.500	CQ072-K3
K4	8.000	4.000	11.000	4.500	CQ072-K4
L1	13.500	4.125	7.000	6.750	CQ072-L1
L2	13.500	4.125	9.250	6.750	CQ072-L2
L3	13.500	4.125	13.125	6.750	CQ072-L3
M1	13.500	5.125	12.875	6.750	CQ072-M1
M2	13.500	5.125	13.750	6.750	CQ072-M2

1/ For case size J, the retainers are attached to the sides of the case which are parallel to the centerline of the terminals.

2/ Complete retainer part number will include the symbol "F" for footed or "S" for the spaded design.

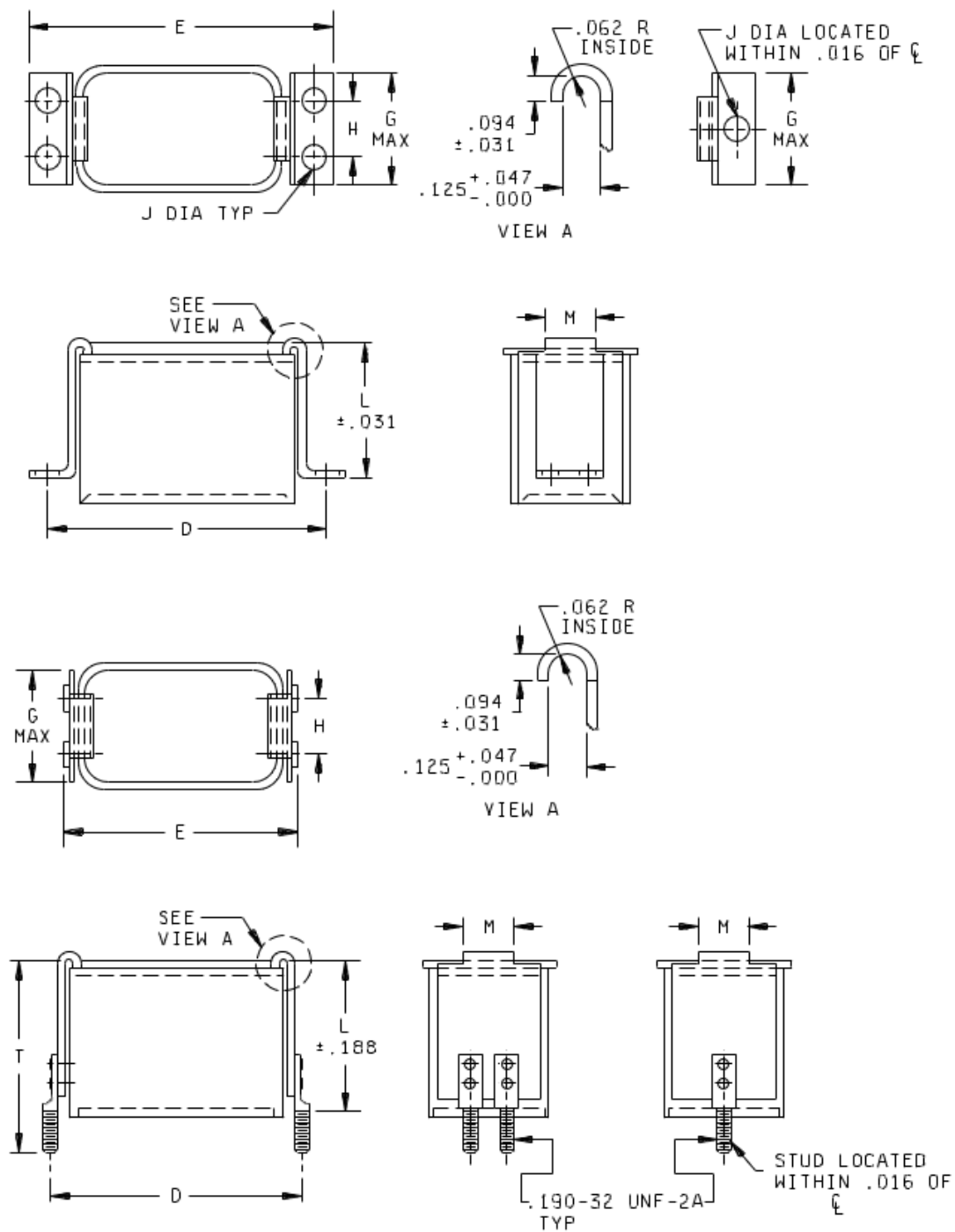
MIL-PRF-19978/3L

TABLE IV. CQ072 retainer dimensions.

Retainer part number 1/	D ± .031		E max	G max	H ± .016 2/	J	L		M ± .016	T ± .062	Case size
	Footed retainer	Spade-lug retainer					Footed retainer	Spade-lug retainer			
CQ072-A1	2.250	2.062	2.719	.625	N/A	.187	1.125	1.375	.391	2.375	A1
CQ072-A2	2.250	2.062	2.719	.625	N/A	.187	2.125	2.000	.391	3.000	A2
CQ072-A3	2.250	2.062	2.719	.625	N/A	.187	2.750	2.625	.391	3.625	A3
CQ072-A4	2.250	2.062	3.062	.906	N/A	.187	3.125	3.000	.391	4.000	A4
CQ072-A5	2.250	2.062	2.719	.625	N/A	.187	3.750	3.625	.391	4.625	A5
CQ072-A6	2.250	2.062	2.719	.625	N/A	.187	4.625	4.500	.391	5.500	A6
CQ072-B1	3.000	2.750	3.812	.906	N/A	.187	2.375	2.250	.391	3.250	B1
CQ072-B2	3.000	2.750	3.938	.625	N/A	.187	2.750	2.625	.391	3.625	B2
CQ072-B3	3.000	2.750	3.938	.625	N/A	.187	3.375	3.250	.391	4.250	B3
CQ072-B4	3.000	2.750	3.938	.625	N/A	.187	3.750	3.625	.391	4.625	B4
CQ072-B5	3.000	2.750	3.938	.625	N/A	.187	4.125	4.000	.391	5.000	B5
CQ072-B6	3.000	2.750	3.938	.625	N/A	.187	4.625	4.500	.391	5.500	B6
CQ072-C1	4.375	4.000	4.844	.625	N/A	.187	3.125	3.000	.391	4.000	C1
CQ072-C2	4.375	4.000	4.844	.625	N/A	.187	3.750	3.625	.391	4.625	C2
CQ072-C3	4.375	4.000	4.844	.625	N/A	.187	4.125	4.000	.391	5.000	C3
CQ072-C4	4.375	4.000	4.844	.625	N/A	.187	4.625	4.500	.391	5.500	C4
CQ072-D1	4.375	4.000	4.969	1.375	.625	.213	3.125	3.000	.844	4.000	D1
CQ072-D2	4.375	4.000	4.969	1.375	.625	.213	3.750	3.625	.844	4.625	D2
CQ072-D3	4.375	4.000	5.000	1.469	.625	.213	3.875	3.750	.844	4.750	D3
CQ072-D4	4.375	4.000	4.969	1.375	.625	.213	4.125	4.000	.844	5.000	D4
CQ072-D5	4.375	4.000	4.969	1.375	.625	.213	4.625	4.500	.844	5.500	D5
CQ072-E1	4.375	4.000	5.250	1.967	1.250	.213	2.625	2.500	1.344	3.500	E1
CQ072-E2	4.375	4.000	4.969	1.875	1.250	.213	3.250	3.125	1.344	4.125	E2
CQ072-E3	4.375	4.000	4.969	1.875	1.250	.213	3.750	3.625	1.344	4.625	E3
CQ072-E4	4.375	4.000	4.969	1.875	1.250	.213	4.375	4.250	1.344	5.250	E4
CQ072-E5	4.375	4.000	4.969	1.875	1.250	.213	4.625	4.500	1.344	5.500	E5
CQ072-E6	4.375	4.000	4.969	1.875	1.250	.213	5.000	4.875	1.344	5.875	E6
CQ072-F1	4.375	4.000	4.969	1.875	1.250	.213	4.625	4.500	1.344	5.500	F1
CQ072-F2	4.375	4.000	4.969	1.875	1.250	.213	5.625	5.500	1.344	6.500	F2
CQ072-G1	4.375	4.000	4.969	2.812	1.938	.213	4.375	4.250	2.281	5.250	G1
CQ072-G2	4.375	4.000	4.969	2.812	1.938	.213	4.625	4.500	2.281	5.500	G2
CQ072-G3	4.375	4.000	4.969	2.812	1.938	.213	5.000	4.875	2.281	5.875	G3
CQ072-G4	4.375	4.000	4.969	2.812	1.938	.213	5.375	5.250	2.281	6.250	G4
CQ072-J1	4.375	4.000	4.969	4.000	3.375	.281	3.750	3.625	3.656	4.625	J1
CQ072-J2	4.375	4.000	4.969	4.000	3.375	.281	4.250	4.125	3.656	5.125	J2
CQ072-J3	4.375	4.000	4.969	4.000	3.375	.281	4.625	4.500	3.656	5.500	J3
CQ072-J4	4.375	4.000	4.969	4.000	3.375	.281	5.000	4.875	3.656	5.875	J4
CQ072-J5	4.375	4.000	4.969	4.000	3.375	.281	5.375	5.250	3.656	6.250	J5
CQ072-J6	4.375	4.000	4.969	4.000	3.375	.281	5.875	5.750	3.656	6.750	J6
CQ072-J7	4.500	4.000	5.094	4.000	3.375	.281	6.375	6.250	3.656	7.250	J7
CQ072-J8	4.500	4.000	5.094	4.000	3.375	.281	6.875	6.750	3.656	7.750	J8
CQ072-J9	4.500	4.000	5.094	4.000	3.375	.281	7.375	7.250	3.656	8.250	J9
CQ072-J10	4.500	4.000	5.094	4.000	3.375	.281	8.375	8.250	3.656	9.250	J10
CQ072-J11	4.500	4.000	5.094	4.000	3.375	.281	9.500	9.375	3.656	10.375	J11
CQ072-K1	10.125	N/A	11.250	4.375	2.125	.438	5.250	N/A	3.656	N/A	K1
CQ072-K2	10.125	N/A	11.250	4.375	2.125	.438	6.750	N/A	3.656	N/A	K2
CQ072-K3	10.125	N/A	11.250	4.375	2.125	.438	9.000	N/A	3.656	N/A	K3
CQ072-K4	10.125	N/A	11.250	4.375	2.125	.438	10.750	N/A	3.656	N/A	K4
CQ072-L1	15.625	N/A	16.750	4.500	2.125	.438	6.750	N/A	3.656	N/A	L1
CQ072-L2	15.625	N/A	16.750	4.500	2.125	.438	9.000	N/A	3.656	N/A	L2
CQ072-L3	15.625	N/A	16.750	4.500	2.125	.438	12.875	N/A	3.656	N/A	L3
CQ072-M1	15.625	N/A	16.750	5.500	3.125	.438	12.625	N/A	3.656	N/A	M1
CQ072-M2	15.625	N/A	16.750	5.500	3.125	.438	13.500	N/A	3.656	N/A	M2

1/ Complete retainer part number shall include additional symbol to indicate design of retainer ("S" spaded, "F" footed).

2/ Single hole or spade bolt located within .016 inch of center of retainer.



CQ072 SPADE-LUG RETAINERS
(For use with style CQ72 Case sizes A1 through M2)

FIGURE 2. CQ072 retainers.

TABLE V. Millimeter equivalent of decimal inches.

Inches	mm	Inches	mm	Inches	mm	Inches	mm
.015	0.38	1.625	41.28	3.875	98.43	7.000	177.80
.016	0.41	1.750	44.45	3.938	100.03	7.250	184.15
.025	0.64	1.812	46.02	4.000	101.60	7.375	187.33
.031	0.79	1.938	49.23	4.125	104.78	7.500	190.50
.045	1.14	1.967	49.96	4.250	107.95	7.750	196.85
.047	1.19	2.000	50.80	4.375	111.13	8.000	203.20
.062	1.57	2.062	52.37	4.500	114.30	8.250	209.55
.063	1.59	2.125	53.98	4.562	115.87	8.375	212.73
.094	2.39	2.250	57.15	4.625	117.48	8.500	215.90
.125	3.18	2.281	57.94	4.750	120.65	9.000	228.60
.187	4.75	2.375	60.33	4.844	123.04	9.250	234.95
.188	4.78	2.500	63.50	4.875	123.83	9.375	238.13
.213	5.41	2.625	66.68	4.969	126.21	9.500	241.30
.281	7.14	2.719	69.06	5.000	127.00	9.625	244.48
.391	9.93	2.750	69.85	5.094	129.39	10.125	257.18
.438	11.13	2.875	73.03	5.125	130.18	10.375	263.53
.625	15.88	3.000	76.20	5.250	133.35	10.750	273.05
.812	20.62	3.062	77.77	5.375	136.53	11.000	279.40
.844	21.44	3.125	79.38	5.500	139.70	11.250	285.75
.906	23.01	3.188	80.98	5.750	146.05	12.625	320.68
1.062	26.97	3.250	82.55	5.875	149.23	12.875	327.03
1.125	28.58	3.375	85.73	6.000	152.40	13.125	333.38
1.188	30.18	3.500	88.90	6.250	158.75	13.500	342.90
1.250	31.75	3.625	92.08	6.375	161.93	13.750	349.25
1.344	34.14	3.656	92.86	6.500	165.10	15.625	396.88
1.375	34.93	3.750	95.25	6.750	171.45	16.750	425.45
1.469	37.31	3.812	96.82	6.875	174.63		

NOTES:

1. Dimensions are in inches.
2. Shape of retainer optional provided specified dimensions are met. Spade lugs shall be rigid and double welded, double riveted, single riveted and soldered, or welded and single riveted to the retainer.
3. Minimum thickness of retainers shall be .045 inch (1.14 mm).
4. When two-part numbers are applicable to the same retainer, both part numbers shall be marked on the retainer. Retainers shall be marked on the outer surface.
5. When used, rivets shall curl-over .020 inch (0.51 mm) $\pm$.015 inch (0.38 mm) beyond the inside of the retainer.

FIGURE 2. CQ072 retainers - continued.

MIL-PRF-19978/3L

Substitutability data: Style CQ72 capacitors, characteristics F and G, are substitutable for styles CP70 and CP72 capacitors, characteristics E and F, respectively, formerly covered in [MIL-C-25/7E](#) as shown in table VI.

TABLE VI. Substitutability data.

FROM	TO	FROM	TO
MIL-C-25/7E (CP70 and CP72)	MIL-PRF-19978/3L (CQ72)	MIL-C-25/7E (CP70 and CP72)	MIL-PRF-19978/3L (CQ72)
CP7--1EF254K1	CQ72-1FF254K1	CP7-E1-K205K1	CQ72E1-K205K-
CP7--1EF105K1	CQ72-1-F105K-	CP7-E1EK405K1	CQ72E1-K405K-
CP7--1-F205K1	CQ72-1-F205K-	CP7-E1-K605K1	CQ72E1-K605K-
CP7--1-F405K1	CQ72-1-F405K-	CP7-E1-K805K1	CQ72E1-K805K-
CP7--1-F605K1	CQ72-1-F605K-	CP7-E1-K106K1	CQ72E1-K106K-
CP7--1-F805K1	CQ72-1-F805K-	CP70E1-K126K1	CQ72E1-K126K-
CP7--1-F106K1	CQ72-1-F106K-	CP7-E1-L104K1	CQ72E1-L104K1
CP7--1EG104K1	CQ72-1FG104K1	CP7-E1-L254K1	CQ72E1-L254K1
CP7--1EG254K1	CQ72-1-G254K-	CP7-E1-L504K1	CQ72E1-L504K1
CP7--1EG504K1	CQ72-1-G504K-	CP7-E1-L105K1	CQ72E1-L105K-
CP7--1-G105K1	CQ72-1-G105K-	CP7-E1-L205K1	CQ72E1-L205K-
CP7--1-G205K1	CQ72-1-G205K-	CP7-E1-L405K1	CQ72E1-L405K-
CP7--1-G405K1	CQ72-1-G405K-	CP7-E1-L605K1	CQ72E1-L605K-
CP7--1-G605K1	CQ72-1-G605K-	CP7-E1EM104K1	CQ72E1FM104K1
CP7--1-G805K1	CQ72-1-G805K-	CP7-E1-M254K1	CQ72E1-M254K-
CP7--1-G106K1	CQ72-1-G106K-	CP7-E1-M504K1	CQ72E1-M504K-
CP7--1-G126K1	CQ72-1-G126K-	CP7-E1-M105K1	CQ72E1-M105K-
CP7--1-G156K1	CQ72-1-G156K-	CP7-E1-M205K1	CQ72E1-M205K-
CP7--1EH104K1	CQ72-1-H104K-	CP7-E1-M405K1	CQ72E1-M405K-
CP7--1-H254K1	CQ72-1-H254K-	CP7-E1EN104K1	CQ72E1-N104K-
CP7--1EH504K1	CQ72-1-H504K-	CP7-E1EN254K1	CQ72E1-N254K-
CP7--1-H105K1	CQ72-1-H105K1	CP7-E1-N504K1	CQ72E1-N504K-
CP7--1-H205K1	CQ72-1-H205K1	CP7-E1-N105K1	CQ72E1-N105K-
CP7--1-H405K1	CQ72-1-H405K1	CP7-E1-N205K1	CQ72E1-N205K-
CP7--1-H605K1	CQ72-1-H605K1	CP70E1-N405K1	CQ72E1-N405K1
CP7--1-H805K1	CQ72-1-H805K1	CP7-D1-P104K1	CQ72D1-P104K-
CP7--1-H106K1	CQ72-1-H106K1	CP7-D1-P254K1	CQ72D1-P254K-
CP7--1-H126K1	CQ72-1-H126K1	CP7-D1-P504K1	CQ72D1-P504K-
CP7--1-H156K1	CQ72-1-H156K1	CP7-D1-P105K1	CQ72D1-P105K-
CP7-E1EJ254K1	CQ72E1FJ254K1	CP70D1-P205K1	CQ72D1-P205K-
CP7-E1EJ504K1	CQ72E1FJ504K1	CP7-D1-R104K1	CQ72D1-R104K-
CP7-E1-J105K1	CQ72E1-J105K-	CP7-D1-R254K1	CQ72D1-R254K-
CP7-E1-J205K1	CQ72E1-J205K-	CP7-D1-R504K1	CQ72D1-R504K-
CP7-E1-J405K1	CQ72E1-J405K-	CP70D1ER105K1	CQ72-1-R105K-
CP7-E1-J605K1	CQ72E1-J605K-	CP70D1-R205K1	CQ72-1-R205K-
CP7-E1-J805K1	CQ72E1-J805K-	CP70D1-S504K1	CQ72-1-S504K-
CP7-E1-J106K1	CQ72E1-J106K-	CP70D1-S105K1	CQ72-1-S105K-
CP7-E1-J126K1	CQ72E1-J126K-	CP70D1-S205K1	CQ72-1-S205K1
CP7-E1-J156K1	CQ72E1-J156K-	CP70D1ET104K1	CQ72-1-T104K-
CP7-E1EK104K1	CQ72E1FK104K1	CP70D1ET254K1	CQ72-1-T254K-
CP7-E1-K254K1	CQ72E1-K254K1	CP70D1-T504K1	CQ72-1-T504K-
CP7-E1-K504K1	CQ72E1-K504K-	CP70D1-T105K1	CQ72-1-T105K-
CP7-E1-K105K1	CQ72E1-K105K-	CP70D1-T205K1	CQ72-1-T205K1

Referenced documents. In addition to [MIL-PRF-19978](#), this specification sheet references the following documents:

[MIL-STD-202-112](#)
[MIL-STD-202-201](#)
[MIL-STD-202-204](#)
[MIL-STD-202-211](#)

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Preparing activity:
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(Project 5910-2025-035)

Review activities:
Navy - MC
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