

INCH POUND

MIL-PRF-14409/16E  
W/Amendment 1  
28 September 2007  
SUPERSEDING  
MIL-PRF-14409/16E  
25 July 2001

PERFORMANCE SPECIFICATION SHEET

CAPACITORS, VARIABLE (PISTON TYPE,  
TUBULAR TRIMMER), STYLES PC21, PC22, PC23, PC24

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

The requirements for acquiring the capacitors described herein shall consist  
of this document and the latest issue of specification [MIL-PRF-14409](#).

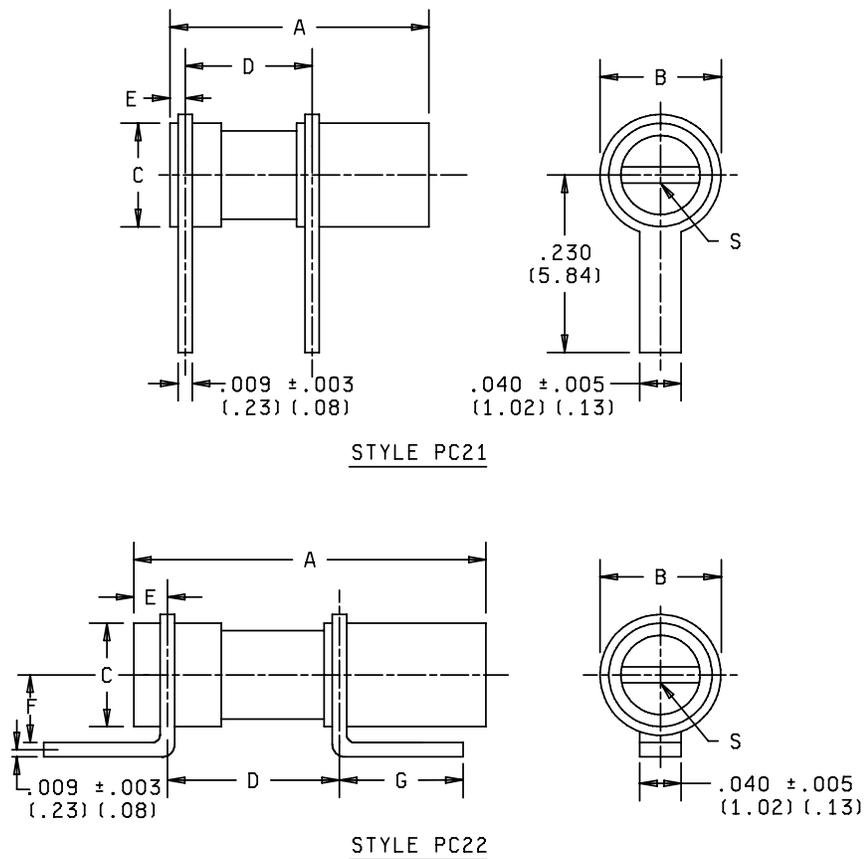
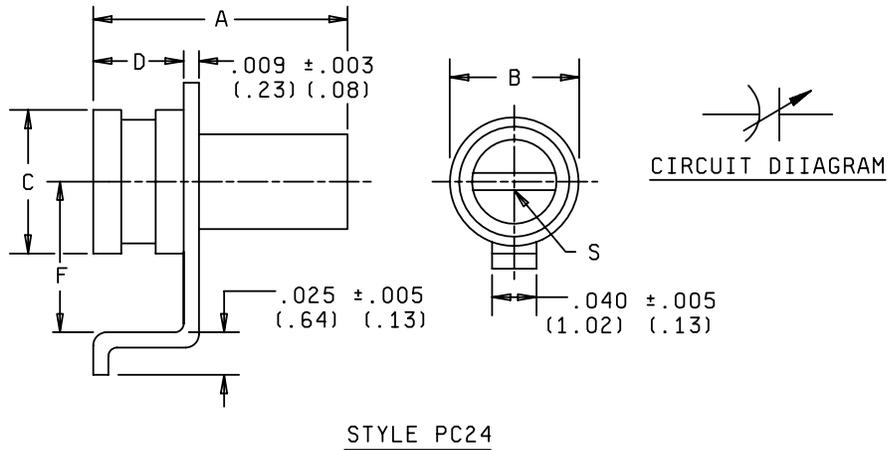
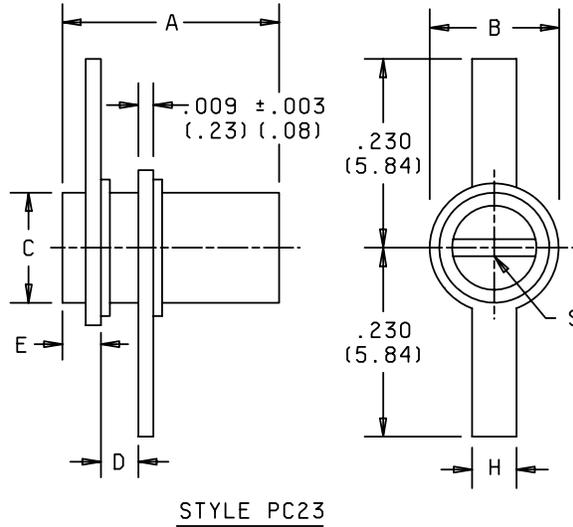


FIGURE 1. Dimensions and configuration.

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NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Metric equivalents are in parentheses.
4. Unless otherwise specified, tolerance is  $\pm .016$  (0.41 mm).

FIGURE 1. Dimensions and configurations - Continued.

TABLE I. Type designation and characteristics.

Type designation	Capacitance range		Q Min	Capacitance drift	Dimensions 1/										S		
	Min	Max			A (Max)	B (Max)	C ±.005 (0.13)	D ±.010 (0.25)	E ±.010 (0.25)	F ±.020 (0.51)	G ±.020 (0.51)	H ±.005 (0.13)	Depth (Min)	Width ±.005 .005 (0.13)	Length (Min)		
PC21J1R2	PF	PF	5,000	.02	.240 (6.10)	.114 (2.90)	.075 (1.90)	.082 (2.08)	.014 (0.36)	---	---	---	.010 (0.25)	.010 (0.25)	.040 (1.02)		
PC21J2R5	.4	2.5	4,000	.02	.280 (7.11)	.158 (4.01)	.118 (3.00)	.082 (2.08)	.014 (0.36)	---	---	---	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC21J4R5	.6	4.5	3,000	.02	.369 (9.37)	.158 (4.01)	.118 (3.00)	.130 (3.30)	.034 (0.86)	---	---	---	.010 (0.25)	.015 (0.25)	.070 (1.78)		
PC21K080	.8	8.0	1,500	.04	.566 (14.38)	.158 (4.01)	.118 (3.00)	.250 (6.35)	.036 (0.91)	---	---	---	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC22J1R2	.3	1.2	5,000	.02	.240 (6.10)	.114 (2.90)	.075 (1.90)	.082 (2.08)	.014 (0.36)	.047 (1.19)	.183 (4.65)	---	.010 (0.25)	.010 (0.25)	.040 (1.02)		
PC22J2R5	.4	2.5	4,000	.02	.280 (7.11)	.158 (4.01)	.118 (3.00)	.082 (2.08)	.014 (0.36)	.070 (1.78)	.160 (4.06)	---	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC22J4R5	.6	4.5	3,000	.02	.369 (9.37)	.158 (4.01)	.118 (3.00)	.130 (3.30)	.034 (0.86)	.070 (1.78)	.160 (4.06)	---	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC22K080	.8	8.0	1,500	.04	.566 (14.38)	.158 (4.01)	.118 (3.00)	.250 (6.35)	.036 (0.91)	.070 (1.78)	.160 (4.06)	---	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC23J1R2	.3	1.2	5,000	.02	.240 (6.10)	.114 (2.90)	.075 (1.90)	.056 (1.42)	.018 (0.46)	---	---	.040 (1.02)	.010 (0.25)	.010 (0.25)	.040 (1.02)		
PC23J2R5	.4	2.5	4,000	.02	.280 (7.11)	.158 (4.01)	.118 (3.00)	.056 (1.42)	.018 (0.46)	---	---	.093 (2.36)	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC23J4R5	.6	4.5	3,000	.02	.369 (9.37)	.158 (4.01)	.118 (3.00)	.060 (1.52)	.060 (1.52)	---	---	.093 (2.36)	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC23K080	.8	8.0	1,500	.04	.566 (14.38)	.158 (4.01)	.118 (3.00)	.05 (1.3)	.148 (3.76)	---	---	.093 (2.36)	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC24J1R2	.3	1.2	5,000	.02	.240 (6.10)	.114 (2.90)	.075 (1.90)	.09 (2.3)	---	.075 (1.90)	---	---	.010 (0.25)	.010 (0.25)	.040 (1.02)		
PC24J2R5	.4	2.5	4,000	.02	.280 (7.11)	.158 (4.01)	.118 (3.00)	.09 (2.3)	---	.110 (2.79)	---	---	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC24J4R5	.6	4.5	3,000	.02	.369 (9.37)	.158 (4.01)	.118 (3.00)	.16 (4.1)	---	.110 (2.79)	---	---	.010 (0.25)	.015 (0.38)	.070 (1.78)		
PC24K080	.8	8.0	1,500	.04	.566 (14.38)	.158 (4.01)	.118 (3.00)	.25 (6.4)	---	.110 (2.79)	---	---	.010 (0.25)	.015 (0.38)	.070 (1.78)		

1/ Metric equivalents are given for general information only.

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REQUIREMENTS:

Dimensions and configuration: See figure 1 and table I.

DC voltage rating: 500 volts.

Dielectric: Alumina or sapphire.

Capacitance range: See table I.

Insulation resistance: Not less than  $10^6$  megohms at room ambient temperature and not less than  $10^5$  megohms at +125°C.

Test condition B (500 volts  $\pm 10$  percent).

Quality factor (Q): See table I (measured at frequency of  $250 \pm 10$  MHz).

Driving torque: Greater than or equal to 0.1 and less than or equal to 1.0 ounce-inch from -55°C through +125°C for capacitors with a range of .3 to 1.2 pF. Greater than or equal to 0.2 and less than or equal to 2.0 ounce-inches from -55°C through +125°C for all others.

Temperature coefficient and capacitance drift: J,  $0 \pm 50$  ppm/°C or K,  $0 \pm 75$  ppm/°C (see table I).

\* Thermal shock: [Method 107 of MIL-STD-202](#), test condition A, except step 3 temperature shall be  $125^\circ\text{C} \pm 5^\circ\text{C}$ .

Immersion: Not applicable.

Marking: Not applicable; package shall be marked with the complete type designation and manufacturer's name or supply code.

\* Referenced documents. In addition to MIL-PRF-14409, this specification sheet references the following document:

MIL-STD-202

\* Amendment notations. The margins of this specification sheet are marked with asterisks 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.

Custodians:  
Air Force - 11  
DLA - CC

Preparing Activity:  
DLA - CC

(Project 5910-2007-044)

\* NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at <http://assist.daps.dla.mil>.