

INCH-POUND  
MIL-DTL-24215/9C  
W/AMENDMENT 1  
15 August 2007  
SUPERSEDING  
MIL-DTL-24215/9C  
7 June 2002

DETAIL SPECIFICATION SHEET

ATTENUATORS, VARIABLE (COAXIAL),  
CLASS 5 (SMA)

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

The requirements for acquiring the attenuators described herein shall consist of this specification and MIL-DTL-24215.

REQUIREMENTS

Dimensions and configuration: See figures 1, 2, 3, 4, 5, and 6.

Nominal impedance: 50 ohms.

Final finish: Flat black lacquer, color 37038 in accordance with FED-STD-595.

Electrical requirements: See table I.

Part or identifying number (PIN): See table I.

TABLE I. Electrical requirements.

PIN M24215/9-	Fig.	Freq. range (GHz)	Atten. range (dB) <u>3/</u>	VSWR (max)	Insertion loss (max. at min. atten. setting) (dB)	Calibration accuracy (dB)	Frequency sensitivity (dB)	Min. input (watts)		Nominal operating temp. range (°C)	Weight (max)		
								av.	pk.		lbs	(g)	oz
001	1	2 - 8	0-15 at 2 GHz 0 -20 at 4-8 GHz	1.50:1	0.5	N/A	---	2	---	-45 - +100 (See notes 1 and 2)	.18	(82)	(2.9)
002	2	2 - 8	0-15 at 2 GHz 0-20 at 4-8 GHz	1.50:1	0.5	N/A	---	2	---	-45 - +100 (See notes 1 and 2)	.16	(73)	(2.5)
003	3	7 - 11	0 - 20	1.50:1	0.5	N/A	± 1.5	2	---	-45 - +100 (See notes 1 and 2)	.16	(73)	(2.5)
004	4	9.0 - 9.2	0 - 30	1.50:1	0.7	± 0.5	± 0.3	2	200	-18 - +70	1	(454)	(16)
005	5	4.0 - 18	0 - 15	1.50:1	1.0	N/A	± 2	5	3000	-30 - +105	.5	(227)	(8)
006	6	11 - 17	0 - 20	1.50:1	0.5	N/A	± 2	5	3000	-30 - +105	.16	(73)	(2.5)

NOTES:

1. Non-operating ambient temperature range: -60°C to +110°C.
2. Temperature coefficient: 1.0 dB maximum change over the temperature range -45°C to +55 °C at any attenuation setting.
3. Continuously variable.

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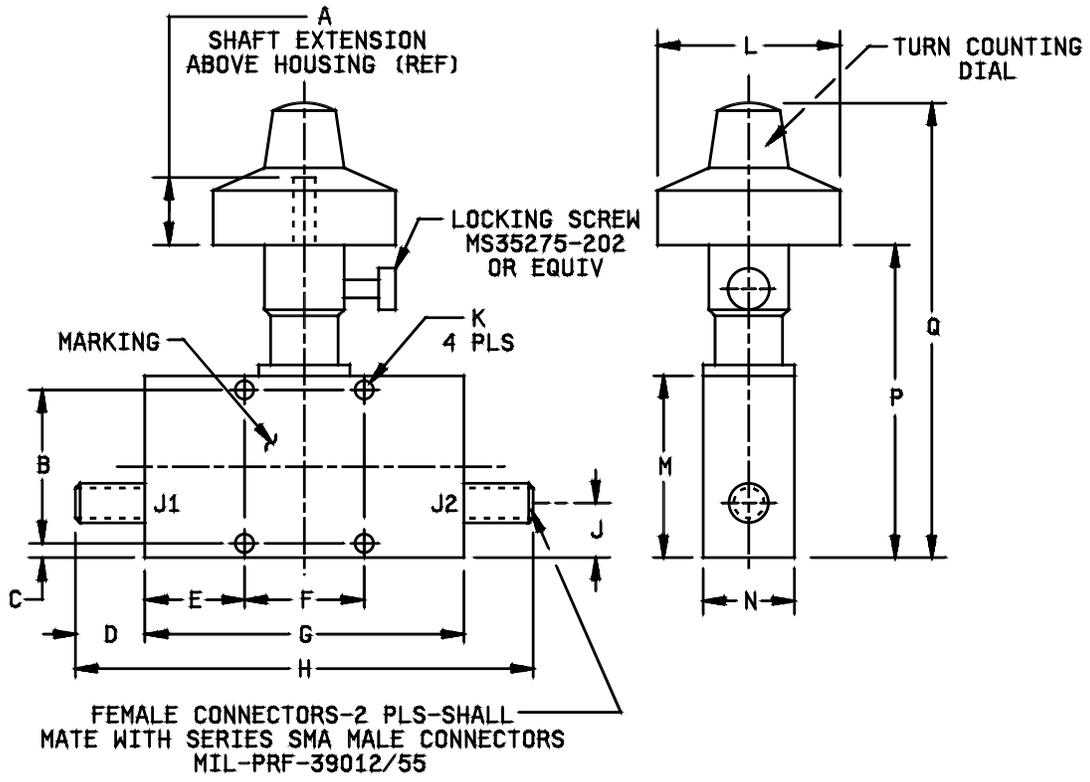


FIGURE 1. Dimensions and configuration for PIN M24215/9-001.

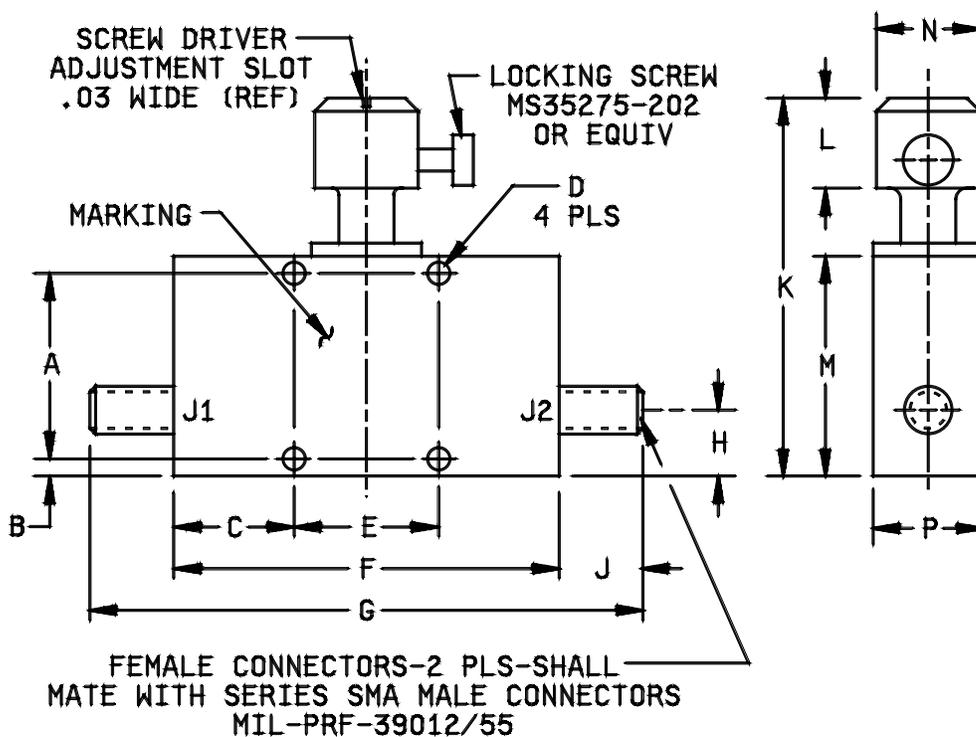
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Ltr	Inches		Millimeters	
	Max	Min	Max	Min
A	.58	.54	14.7	13.7
B	.849	.839	21.56	21.31
C	.11	.06	2.8	1.5
D	.40	.36	10.2	9.1
E	.58	.52	14.7	13.2
F	.661	.651	16.79	16.54
G	1.78	1.72	45.2	43.7
H	2.54	2.48	64.5	63.0
J	.33	.27	8.4	6.9
K	.107 dia	.101 dia	2.72 dia	2.57 dia
L	1.03 dia	.97 dia	26.2 dia	24.6 dia
M	1.03	.97	26.2	24.6
N	.53	.47	13.5	11.9
P	1.75	1.69	44.4	42.9
Q	2.53	2.47	64.3	62.7

NOTES:

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

FIGURE 1. Dimensions and configuration for PIN M24215/9-001 - Continued.



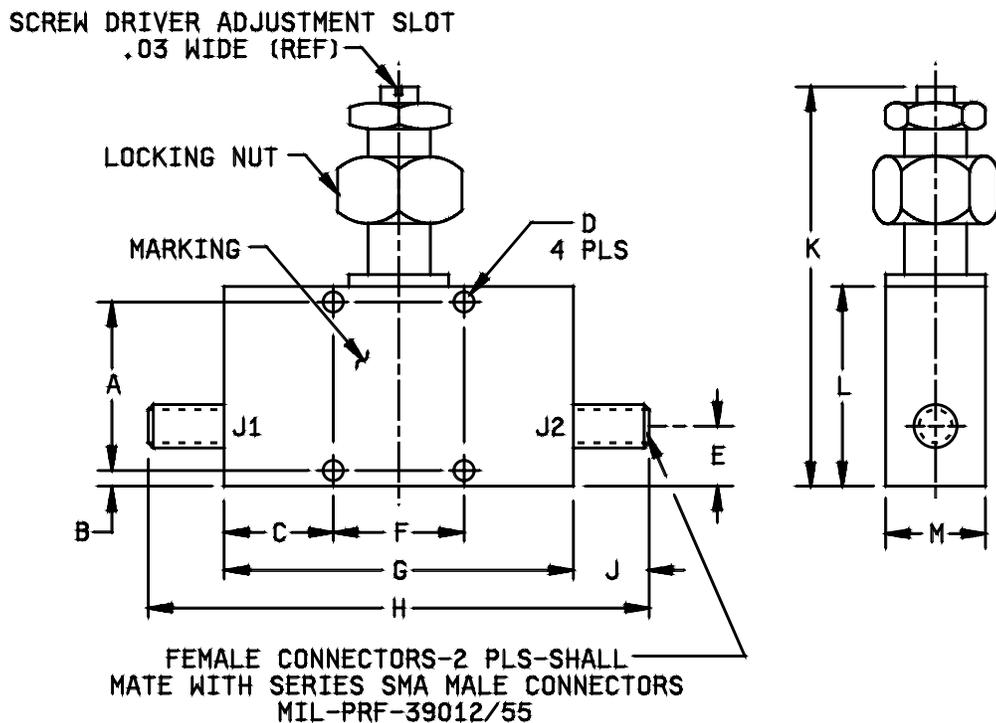
Ltr	Inches		Millimeters	
	Max	Min	Max	Min
A	.849	.839	21.56	21.31
B	.11	.06	2.8	1.5
C	.58	.52	14.7	13.2
D	.107 dia	.101 dia	2.72 dia	2.57 dia
E	.661	.651	16.79	16.54
F	1.78	1.72	45.2	43.7
G	2.54	2.48	64.5	63.0
H	.303	.297	7.70	7.54
J	.41	.35	10.4	8.9
K	1.75	1.69	44.4	42.9
L	.46	.36	11.7	9.1
M	1.03	.97	26.2	24.6
N	.52	.42	13.2	10.7
P	.53	.47	13.5	11.9

NOTES:

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2. Metric equivalents are given for general information only.

FIGURE 2. Dimensions and configuration for PIN M24215/9-002.

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Ltr	Inches		Millimeters	
	Max	Min	Max	Min
A	.849	.839	21.56	21.31
B	.11	.06	2.8	1.5
C	.58	.52	14.7	13.2
D	.107 dia	.101 dia	2.72 dia	2.57 dia
E	.303	.297	7.70	7.54
F	.661	.651	16.79	16.54
G	1.78	1.72	45.2	43.7
H	2.54	2.48	64.5	63.0
J	.40	.36	10.2	9.1
K	2.03	1.97	51.6	50.0
L	1.03	.97	26.2	24.6
M	.53	.47	13.5	11.9

NOTES:

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FIGURE 3. Dimensions and configuration for PIN M24215/9-003.

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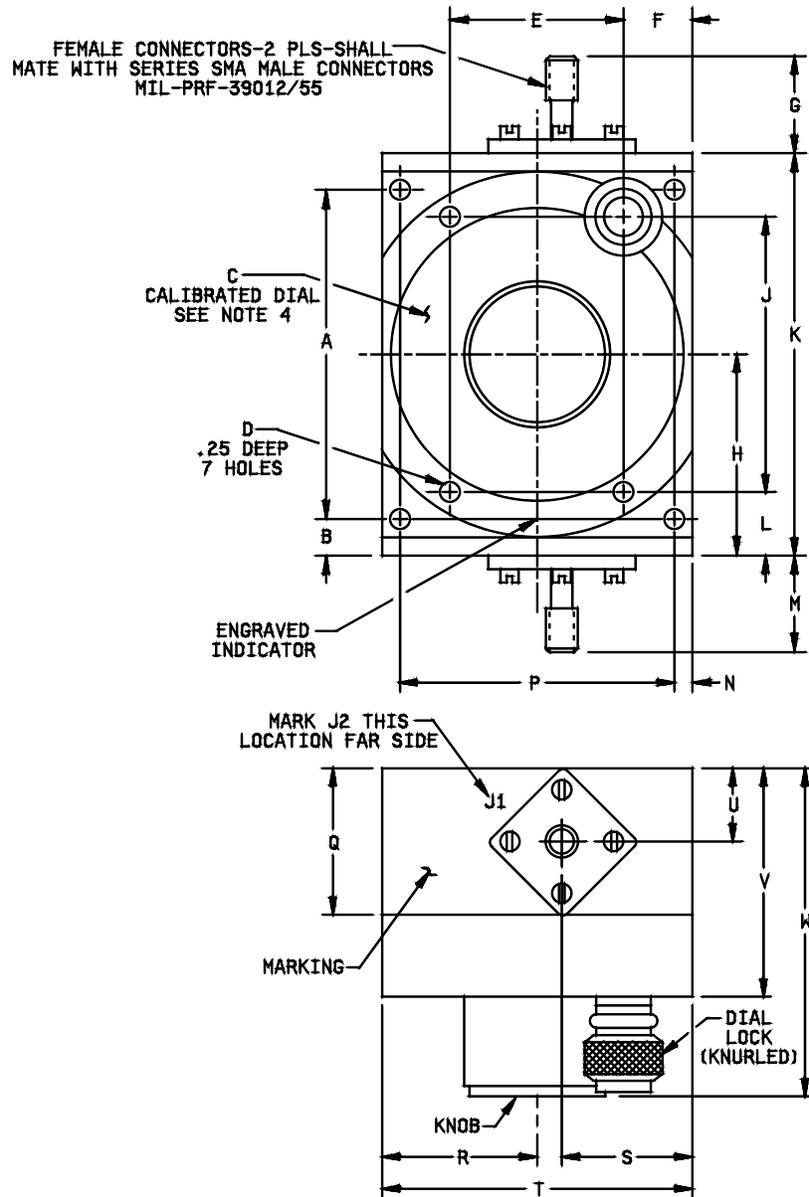


FIGURE 4. Dimensions and configuration for PIN M24215/9-004.

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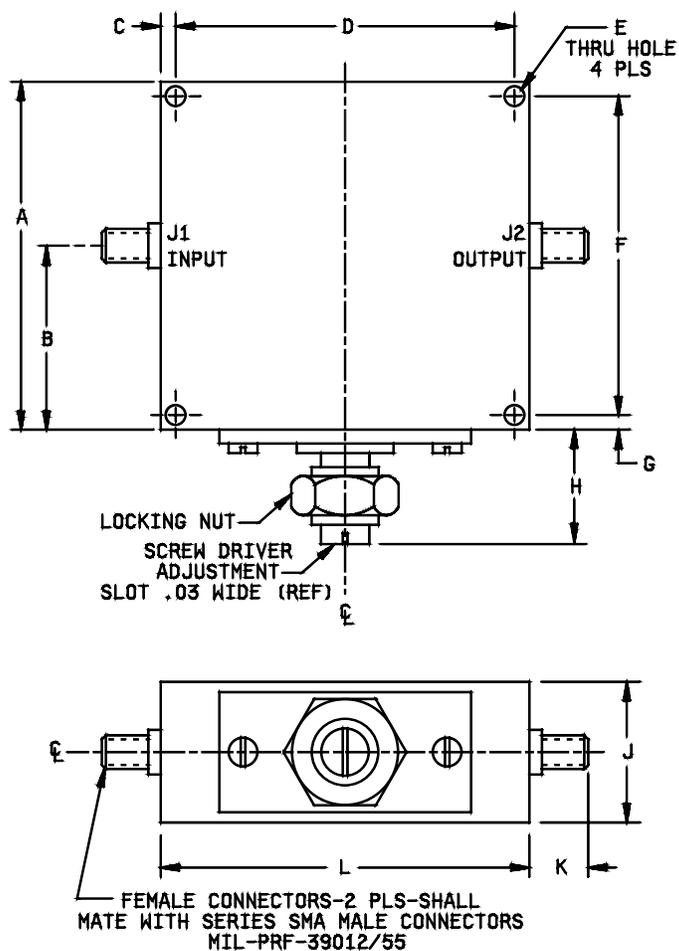
	Inches		Millimeters	
	Max	Min	Max	Min
A	2.260	2.240	57.4	56.9
B	.27	.23	6.9	5.8
C	2.02 dia	1.98 dia	51.3 dia	50.3 dia
D	.27	.23	6.9	5.8
E	1.197	1.177	30.40	29.90
F	.49	.45	12.4	11.4
G	.68	.64	17.3	16.3
H	1.40	1.36	35.6	34.5
J	1.885	1.865	47.88	47.37
K	2.77	2.73	70.4	69.34
L	.46	.42	11.7	10.7
M	.68	.64	17.3	16.3
N	.14	.10	3.6	2.5
P	1.885	1.865	47.9	47.4
Q	1.03	.97	26.2	24.6
R	1.08	1.04	27.4	26.4
S	.90	.86	22.9	21.8
T	2.14	2.10	54.4	53.3

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm 0.02$  (.5 mm).
4. Dial shall be marked in one dB steps to the 10 dB level, and in two dB steps through the 30 dB level.

FIGURE 4. Dimensions and configuration for PIN M24215/9-004 - Continued.

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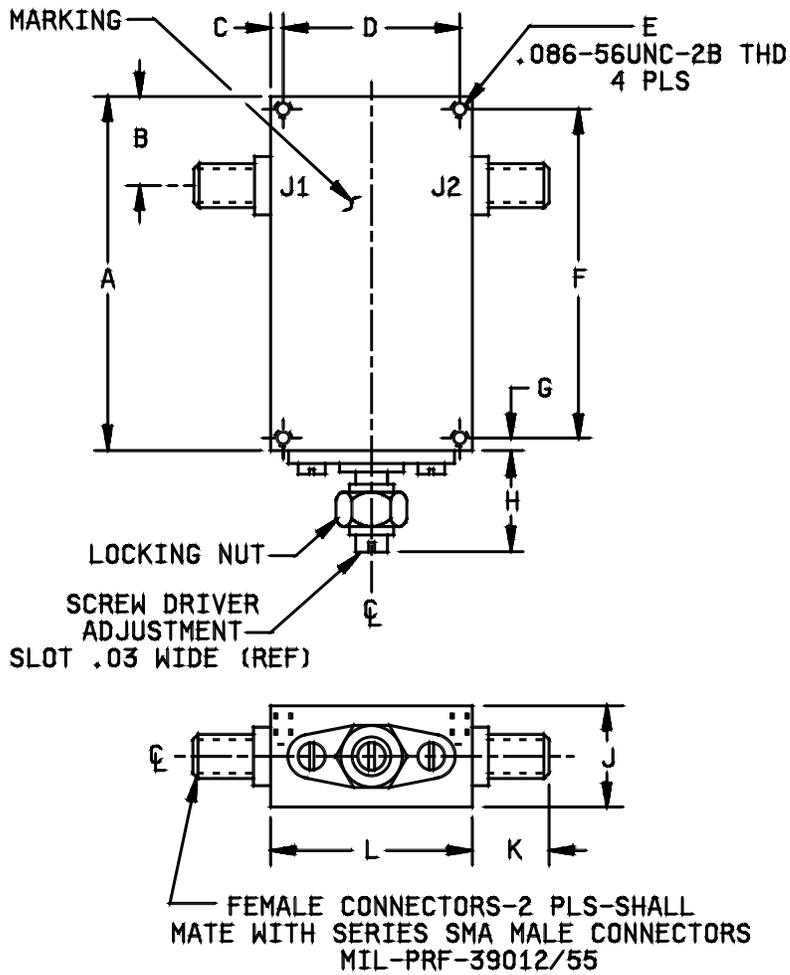
NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm .03$  (.8 mm).

	Inches		Millimeters	
	Max	Min	Max	Min
A	2.28	2.22	57.9	56.4
B	1.22	1.16	31.0	29.5
C	.12	.06	3.0	1.5
D	2.192	2.182	55.7	55.4
E	.133 dia	.127 dia	3.38 dia	3.23 dia
F	2.067	2.057	52.5	52.2
G	.12	.07	3.0	1.8
H	.65	.59	16.5	15.0
J	.94	.88	23.9	22.4
K	.41	.35	10.4	8.9
L	2.41	2.35	61.2	59.7

FIGURE 5. Dimensions and configuration for PIN M24215/9-005

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NOTES:

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2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm .03$  (.8 mm).

	Inches		Millimeters	
	Max	Min	Max	Min
A	1.78	1.72	45.2	43.7
B	.47	.41	11.9	10.4
C	.09	.03	2.3	.8
D	.905	.845	22.99	21.46
E	---	.190 deep	---	4.83 deep
F	1.655	1.595	42.04	40.51
G	.09	.03	2.3	.8
H	.53	.47	13.5	11.9
J	.53	.47	13.5	11.9
K	.41	.35	10.4	8.9
L	1.03	.97	26.2	24.6

FIGURE 6. Dimensions and configuration for PIN M24215/9-006.

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Referenced documents: In addition to MIL-DTL-24215, this document references MIL-PRF-39012/55 and FED-STD-595/37038.

Changes from previous issue. The margins of this specification sheet are marked with vertical lines 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.

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Air Force - 11  
DLA - CC

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(Project 5985-2007-019)

Review activities:

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Air Force - 99

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