

INCH-POUND

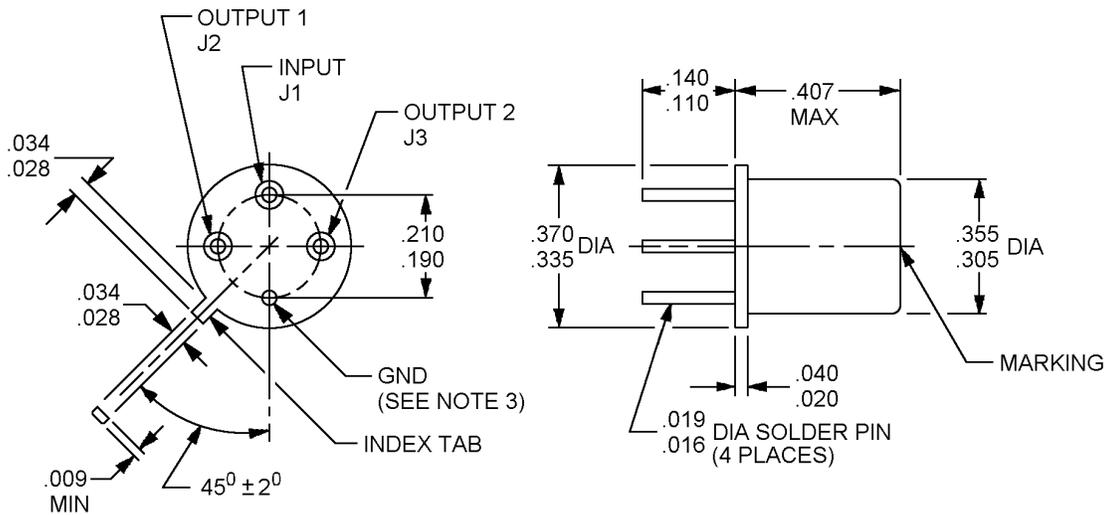
MIL-DTL-23971/6B
 21 April 2003
 SUPERSEDING
 MIL-P-23971/6A
 22 February 1980

DETAIL SPECIFICATION SHEET

POWER DIVIDER/COMBINERS, N-WAY, 0 DEGREES, TO-5

This specification 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-DTL-23971.

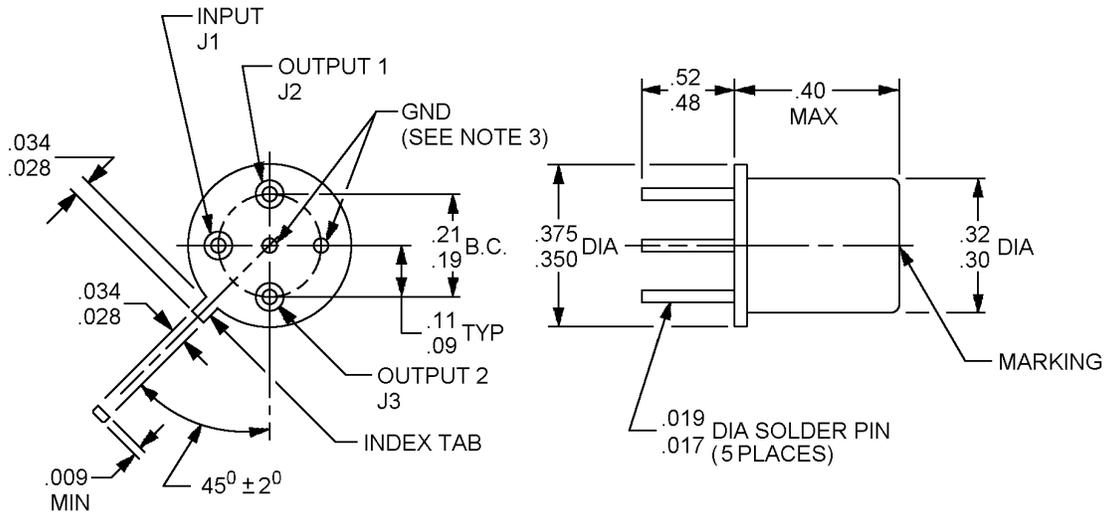


Inches	mm	Inches	mm	Inches	mm
.009	0.23	.040	1.02	.305	7.75
.016	0.41	.110	2.79	.335	8.51
.019	0.48	.140	3.56	.355	9.02
.020	0.51	.190	4.83	.370	9.40
.028	0.71	.210	5.33	.407	10.34
.034	0.86				

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Pin is grounded to the internal circuit of the power divider by the manufacturer.

FIGURE 1. Dimensions and configuration, 2-way, dash number 01.

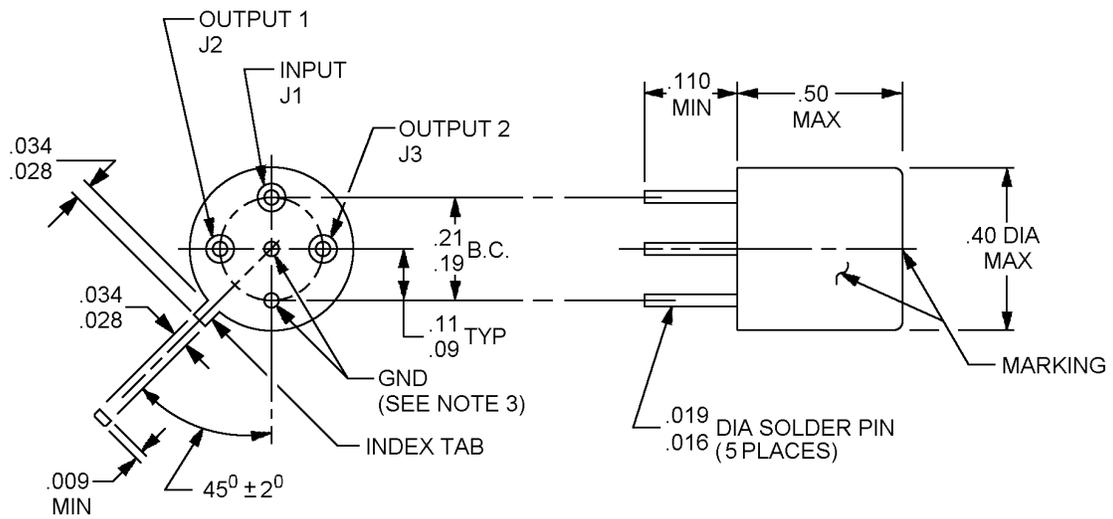


Inches	mm	Inches	mm
.009	0.20	.21	5.3
.017	0.43	.30	7.6
.019	0.48	.32	8.1
.028	0.71	.350	8.89
.034	0.86	.375	9.52
.09	2.3	.40	10.2
.11	2.8	.48	12.2
.19	4.8	.52	13.2

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Ground pins are grounded to the internal circuit of the power divider, by the manufacturer.

FIGURE 2. Dimensions and configuration, 2-way, dash number 03.



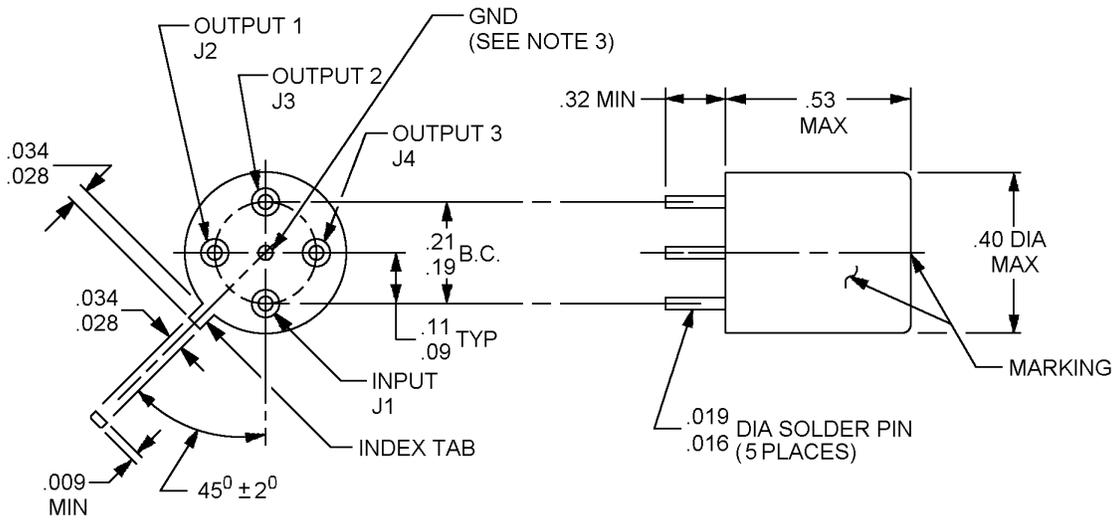
Inches	mm	Inches	mm
.009	0.23	.11	2.8
.016	0.41	.110	2.80
.019	0.48	.19	4.8
.028	0.71	.21	5.3
.034	0.86	.40	10.2
.09	2.3	.40	12.7

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Ground pins are grounded to the internal circuit of the power divider, by the manufacturer.

FIGURE 3. Dimensions and configuration, 2-way, dash numbers 02, 04, 05, 06, and 07.

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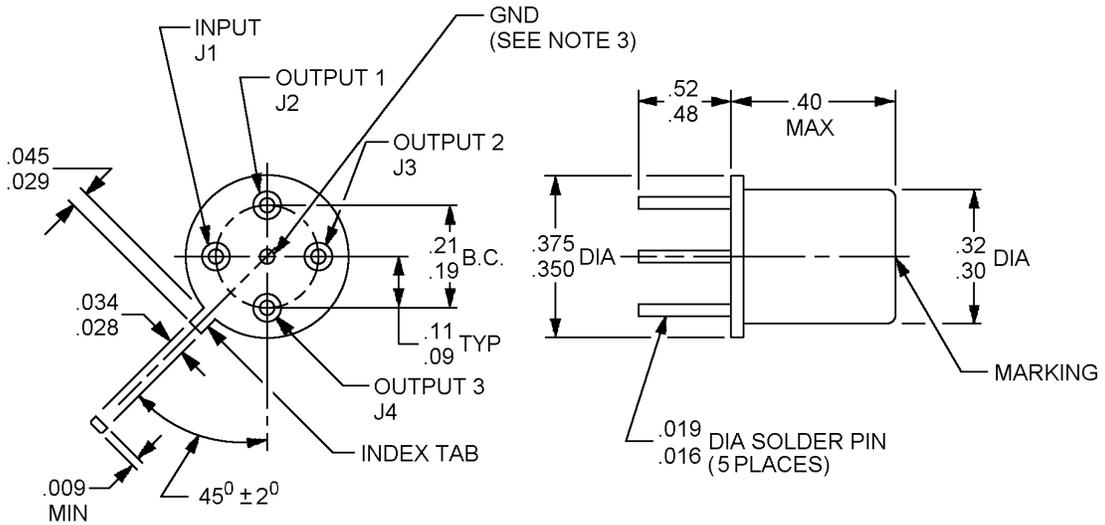


Inches	mm	Inches	mm
.009	0.23	.11	2.8
.016	0.41	.19	4.8
.019	0.48	.21	5.3
.028	0.71	.32	8.1
.034	0.86	.40	10.2
.09	2.3	.53	13.5

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Ground pins are grounded to the internal circuit of the power divider, by the manufacturer.

FIGURE 4. Dimensions and configuration, 3-way, dash number 08.



Inches	mm	Inches	mm
.016	0.41	.21	5.3
.019	0.48	.30	7.6
.028	0.71	.32	8.1
.029	0.74	.350	8.89
.034	0.86	.375	9.52
.045	1.14	.40	10.2
.09	2.3	.48	12.2
.11	2.8	.52	13.2
.19	4.8		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Ground pins are grounded to the internal circuit of the power divider, by the manufacturer.

FIGURE 5. Dimensions and configuration, 3-way, dash number 09.

TABLE I. Electrical performance characteristics and physical requirements.

M23971/6-	Impedance (ohms)	Frequency range (MHz)	Average coupling (dB)	VSWR max	Insertion loss max (dB)	Isolation min (dB)	Phase balance max (degree)	Amplitude balance (dB) max	Power level		Weight pounds (grams)	Ambient temperature		Fig.
									avg (W)	pk (W)		Operating	Storage	
01	50	1-100	3.0 +.5 -.0	1.3:1	0.6	30	±1.0	± 0.1		1/	.003 (1.36)	-54°C to +100°C	-75°C to +150°C	1
02	50	2-32	3.0 +.2 -.0	1.3:1	0.5	30	±1.0	± 0.2	---	.1	.005 (2.27)	-45°C to +85°C	-57°C to +85°C	3
03	50	2-100	3.0 +.2 -.0	1.3:1	0.25	40	±1.0	± 0.1	---	3.	.062 (28.0)	-18°C to +85°C	-57°C to +71°C	2
04	50	10-100	3.0 +.2 -.0	1.3:1	0.5	30	±1.0	± 0.2	---	0.1	.005 (2.27)	-45°C to +85°C	-57°C to +85°C	3
05	50	20-200	3.0 +.2 -.0	1.3:1	0.5	30	±1.0	± 0.2	---	0.1	.005 (2.27)	-45°C to +85°C	-57°C to +85°C	3
06	50	100-300	3.0 +.2 -.0	1.3:1	0.5	30	±1.0	± 0.2	---	0.1	.005 (2.27)	-45°C to +85°C	-57°C to +85°C	3
07	50	200-400	3.0 +.2 -.0	1.3:1	0.5	30	±1.0	± 0.2	---	0.1	.005 (2.27)	-45°C to +85°C	-57°C to +85°C	3
08	50	10-100	4.8 +.3 -.0	1.3:1	0.5	30	±1.0	± 0.3	1.0	---	.060 (27.2)	not applicable	not applicable	4
09	50	10-200	4.8 +.3 -.0	1.3:1	0.5	30	±2.0	± 0.2	---	3.0	.006 (2.72)	-46°C to +52°C	-57°C to +71°C	5

- 1/ Power level: The network shall not be damaged by the following: Input powers at 100°C ambient.
- (a) 0.50 watt to input port with ports 1 and 2 seeing a load VSWR of 1.5 maximum; 0.05 watts with one output shorted and one open.
 - (b) 0.10 watt input to each of ports 1 and 2 with input port seeing a load of 1.5 VSWR maximum; 0.05 watt with input port shorted.

REQUIREMENTS:

Design and construction: See figures 1 through 5.

Housing: Metal can, hermetically sealed.

Terminals: Male, plug-in.

Material: Copper.

Electrical characteristics: See table I.

Weight: See table I.

Ambient temperature: See table I.

Environmental tests: See table II.

Part or Identifying Number (PIN): M23971/6- (dash number from table I).

TABLE II. Environmental tests: In accordance with MIL-DTL-23971, except:

M23971/6	Barometric pressure	Thermal shock	Resistance to soldering heat	Vibration, high frequency	Shock	Salt spray
01	2/	Test condition B	1/	Test condition D	Test condition C	2/
02, 04	2/	2/	2/	Test condition B	Test condition D	Test condition A
05, 06, 07, 08	2/	2/	2/	Test condition B	Test condition D	2/

1/ Immersions shall be 0.03 inch maximum from level of header.

2/ Not applicable.

Custodians:

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

Preparing activity:

DLA - CC
 (Project 5985-1259-01)

Review activities:

Navy - AS, MC, OS