INCH-POUND

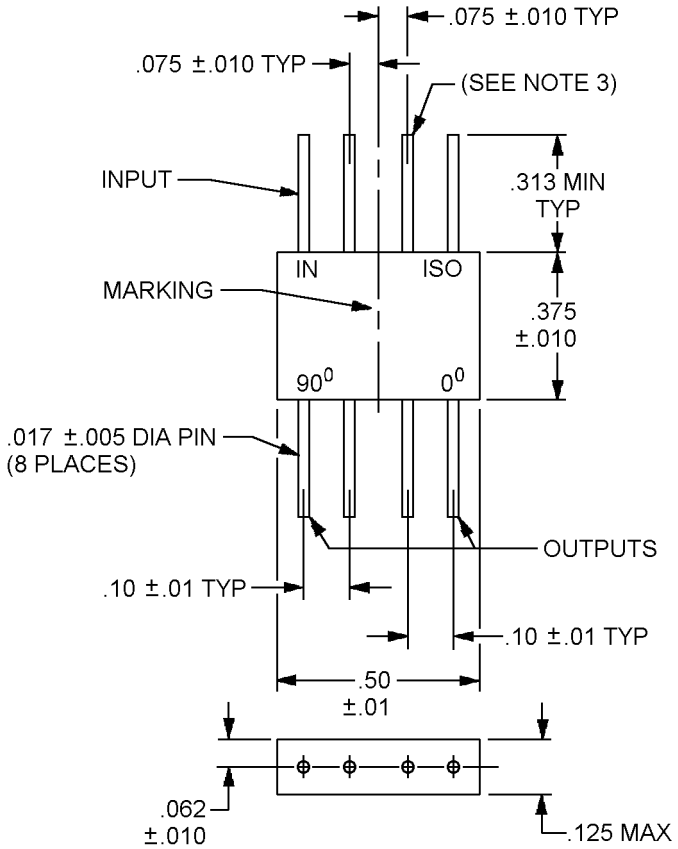
MIL-DTL-23971/8A
21 April 2003
SUPERSEDING
MIL-P-23971/8A
22 February 1980

DETAIL SPECIFICATION SHEET

POWER DIVIDERS, QUADRATURE, FLAT PACK

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

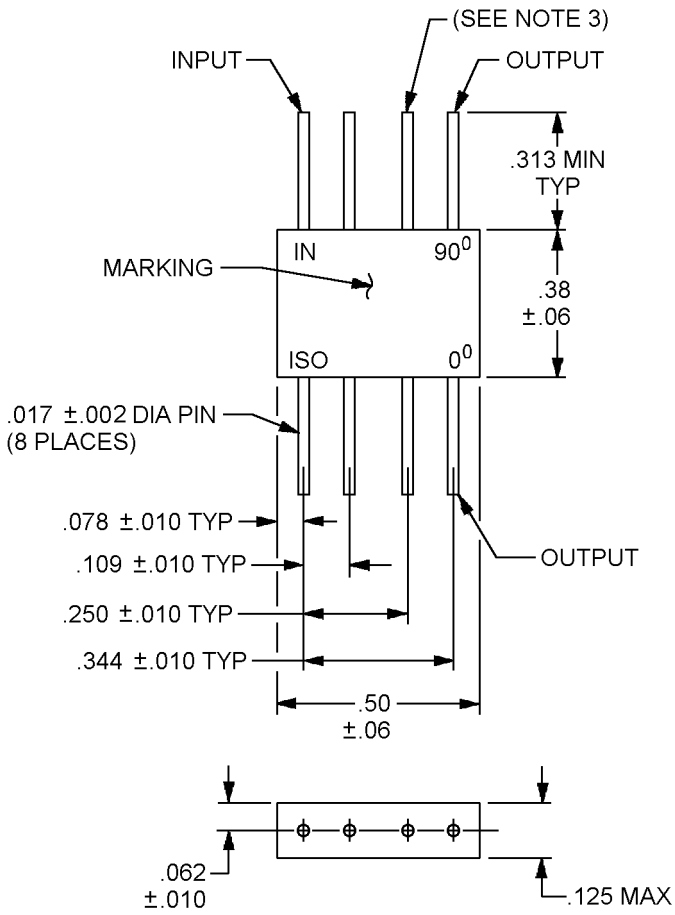
The requirements for acquiring the power divider described herein shall consist of this specification sheet and MIL-DTL-23971.



Inches	mm
.005	0.13
.01	0.3
.017	0.43
.062	1.57
.075	1.90
.10	2.5
.125	3.18
.313	7.95
.375	9.52
.50	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. Pins that are not marked, are grounded to the internal circuit of the power divider, by the manufacturer.

FIGURE 1. Dimensions and configuration, dash number 01.



Inches	mm
.002	.05
.010	.25
.017	.43
.06	1.5
.062	1.57
.078	1.98
.109	2.77
.125	3.18
.250	6.35
.313	7.95
.344	8.74
.38	9.7
.50	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. Pins not marked are grounded to the internal circuit of the power divider, by the manufacturer.

FIGURE 2. Dimensions and configuration, dash number 02.

TABLE I. Electrical performance characteristics and physical requirements.

M23971/8-	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 pk (W)	Weight pounds (grams)	Ambient temperature		Figure
											Operating	Storage	
01	50	7-14	3.0 + 0.2 -0.0	1.2:1	0.5	25	±2.0	±0.75	1/	---	-54°C to +125°C	-54°C to +125°C	1
02	50	40-80	3.0 + 0.2 -0.0	1.2:1	0.5	20	±3.0	±0.75	2/	.062 (28.1)	-55°C to +85°C	-55°C to +85°C	2

1/ Power level: 5 watts to +100°C, derated linearly to 1 watt at +125°C.
2/ Power level: 5 watts at +25°C, derated linearly to 1 watt at +85°C.

REQUIREMENTS:

Design and construction: See figures 1 and 2.

Case: Hermetically sealed.

Material: Cold rolled steel 1010.

Finish: Gold plated in accordance with ASTM B488, type I, code A, class 0.76.

Cover:

Material: Cold rolled steel 1010.

Finish:

Dash number 01: Gold plated in accordance with ASTM B488, type I, code A, class 0.76.

Dash number 02: Plated electroless nickel in accordance with MIL-C-26074, class 1, .00012 inch thick.

Terminals:

Dash number 01: Dumet or Kovar, gold plated in accordance with AMS 2422.

Dash number 02: Input and output leads: Dumet, type D, in accordance with MIL-STD-1276.

Dash number 02: Ground leads: No. 52 alloy, type F, in accordance with MIL-STD-1276.

Electrical characteristics: See table I.

Weight: See table I.

Ambient temperature: See table I.

Environmental tests: In accordance with MIL-DTL-23971 except:

Dash number 01:

Seal: In accordance with method 112 of MIL-STD-202, test condition C, procedure IIIa, followed by gross leak in accordance with test condition B.

Thermal shock: In accordance with method 107 of MIL-STD-202, test condition B for 10 cycles.

Shock: In accordance with method 213 of MIL-STD-202, test condition I.

Part or Identifying Number (PIN): M23971/8- (dash number from table I).

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

Review activities:
Navy - AS, MC, OS

Preparing activity:
DLA CC

(Project 5985-1259-02)