

REQUIREMENTS:

Dimensions and configurations: See figures 1.

Electrical characteristics:

Operating frequency: DC to 18.0 GHz.

Voltage standing wave ratio (VSWR):

1.15:1, maximum (DC to 4.0 GHz)

1.20:1, maximum (4.0 to 8.0 GHz)

1.25:1, maximum (8.0 to 12.0 GHz)

1.40:1, maximum (12.0 to 18.0 GHz)

Power:

Average: 1 watt, maximum.

Peak: Peak power input is specified at 200 watts maximum at 10 microsecond pulse with a .1 percent duty cycle. Average power during peak power application shall not exceed maximum average power.

Note: Power input is specified at a heat sink temperature of +60°C.

Nominal characteristic impedance: 50 ohms.

Material:

Body: Aluminum alloy in accordance with ASTM B211 for dash numbers 01, 02, and 03.

Brass in accordance with ASTM B121/B121M, ASTM B36/B36M, ASTM B16/B16M, and ASTM B124/B124M for dash numbers 04, 05, and 06.

Finish: Chemical conversion coating in accordance with MIL-C-5541, class 1A for dash numbers 01, 02, and 03.

Nickel in accordance with SAE-AMS- QQ-N-290, class 1 for dash numbers 04, 05, and 06.

Bifurcated contact pin: Beryllium copper in accordance with ASTM B196/B196M, ASTM B197/B197M, and ASTM B194.

Finish: The male pin shall be a minimum gold thickness of 50 micro inches (1.27 μ m) in accordance with ASTM B488, type II, grade C, class 1.27, over 50 micro inches (1.27 μ m) minimum of nickel in accordance with SAE-AMS-QQ-N-290, class 1, measured anywhere along the mating surface, for all series. The socket contact shall be a minimum of 50 micro inches (1.27 μ m) of gold in accordance with ASTM B488, type II, grade C, class 1.27, over 50 micro inches (1.27 μ m) minimum of nickel in accordance with SAE-AMS-QQ-N-290, class 1, including the I.D., measured at a depth of .040 inch minimum. The plating on non-significant surfaces in the I.D. shall be of sufficient thickness to ensure plating continuity and uniform utility and protection. This plating may consist of an underplate only. A silver underplate shall not be permitted.

Weight: .25 ounce, maximum.

Ambient temperature range:

Operating: -55°C to +125°C.

Nonoperating (storage): -65°C to +125°C.

Solderability: Method 208 of MIL-STD-202, the following details and exception shall apply:

- a. Number of terminations of each part to be tested: One contact.
- b. Special preparation of terminations: No wiping, cleaning, scraping, or abrasive cleaning of the contact shall be performed.
- c. Depth of immersion: The entire surface of the contact shall be covered.
- d. Method of mounting: The dummy load shall be mounted onto a heat sink.
- e. Examination of terminations: There shall be no evidence of pinholes and blistering.

Note: This test shall be performed after the visual and mechanical inspection in qualification.

Part or Identifying Number (PIN): M39030/16-(dash number from figure 1).

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

Referenced documents. In addition to MIL-DTL-39030, this document references the following:

MIL-C-5541	ASTM B194
MIL-STD-202	ASTM B196/B196M
ASTM B16/B16M	ASTM B197/B197M
ASTM B36/B36M	ASTM B211
ASTM B121/B121M	ASTM B488
ASTM B124/B124M	SAE-AMS-QQ-N-290

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5985-2015-025)

Review activities:
Army - AV, MI
Navy - AS, MC, OS, SH
Air Force - 11, 19, 99

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 information above using the ASSIST Online database at <https://assist.dla.mil>.