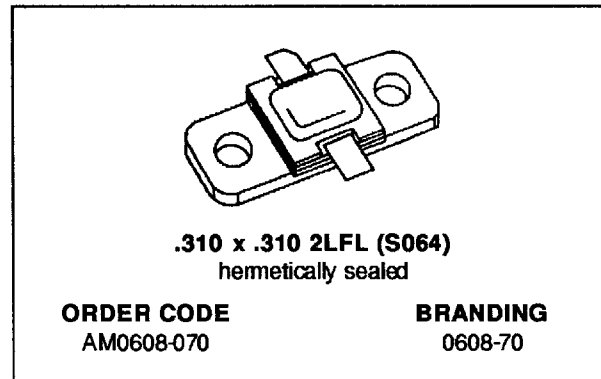


RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

PRELIMINARY DATA

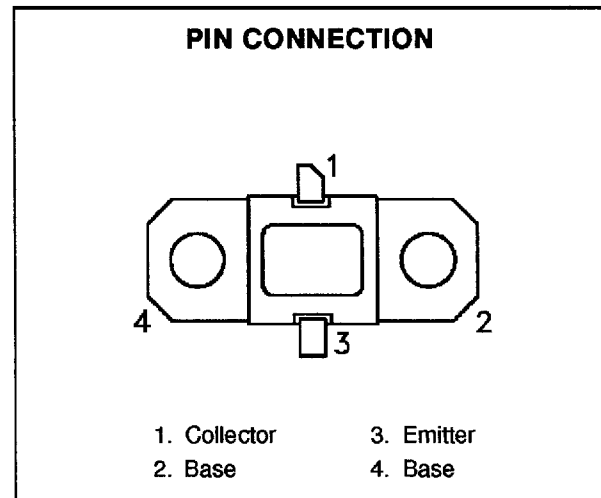
- REFRACTORY/GOLD METALLIZATION
- INTERNAL INPUT MATCHING
- METAL/CERAMIC HERMETIC PACKAGE
- P_{OUT} = 70 W MIN. WITH 7.3 dB GAIN



DESCRIPTION

The AM0608-070 is an internally-matched, common base silicon bipolar device optimized for pulsed applications in the 600 - 750 MHz frequency range.

Housed in the popular IMPAC™ hermetic metal/ceramic package, this device uses a refractory/gold overlay die geometry for ruggedness and long-term reliability.



ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

| Symbol | Parameter | Value | Unit |
|-------------------|--|--------------|------|
| P _{DISS} | Power Dissipation* (T _C ≤ 50°C) | 250 | W |
| I _C | Device Current* | 6.5 | A |
| V _{CC} | Collector-Supply Voltage* | 55 | V |
| T _J | Junction Temperature (Pulsed RF Operation) | 250 | °C |
| T _{STG} | Storage Temperature | - 65 to +200 | °C |

THERMAL DATA

| | | | |
|----------------------|-----------------------------------|------|------|
| R _{TH(j-c)} | Junction-Case Thermal Resistance* | 0.60 | °C/W |
|----------------------|-----------------------------------|------|------|

*Applies only to rated RF amplifier operation

ELECTRICAL SPECIFICATIONS ($T_{case} = 25^{\circ}C$)

STATIC

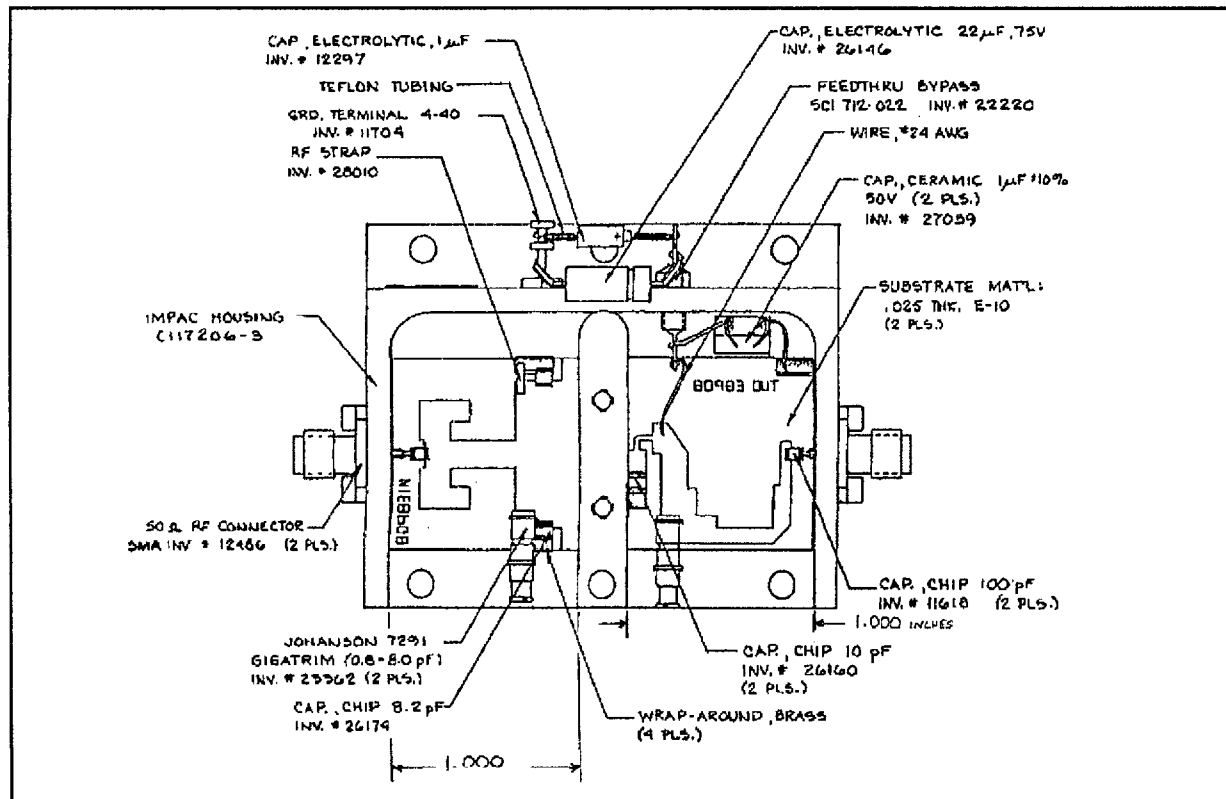
| Symbol | Test Conditions | | Value | | | Unit |
|------------|-----------------|---------------------|-------|------|------|------|
| | | | Min. | Typ. | Max. | |
| BV_{CBO} | $I_C = 10mA$ | $I_E = 0mA$ | 65 | — | — | V |
| BV_{EBO} | $I_E = 1mA$ | $I_C = 0mA$ | 3.5 | — | — | V |
| BV_{CER} | $I_C = 10mA$ | $R_{BE} = 10\Omega$ | 65 | — | — | V |
| I_{CES} | $V_{BE} = 0V$ | $V_{CE} = 50V$ | — | — | 6.25 | mA |
| h_{FE} | $V_{CE} = 5V$ | $I_C = 500mA$ | 15 | — | 120 | — |

DYNAMIC

| Symbol | Test Conditions | | | Value | | | Unit |
|-----------|---------------------|----------------|----------------|-------|------|------|------|
| | | | | Min. | Typ. | Max. | |
| P_{OUT} | $f = 600 - 750 MHz$ | $P_{IN} = 13W$ | $V_{CC} = 50V$ | 70 | — | — | W |
| η_c | $f = 600 - 750 MHz$ | $P_{IN} = 13W$ | $V_{CC} = 50V$ | 35 | — | — | % |
| G_P | $f = 600 - 750 MHz$ | $P_{IN} = 13W$ | $V_{CC} = 50V$ | 7.3 | — | — | dB |

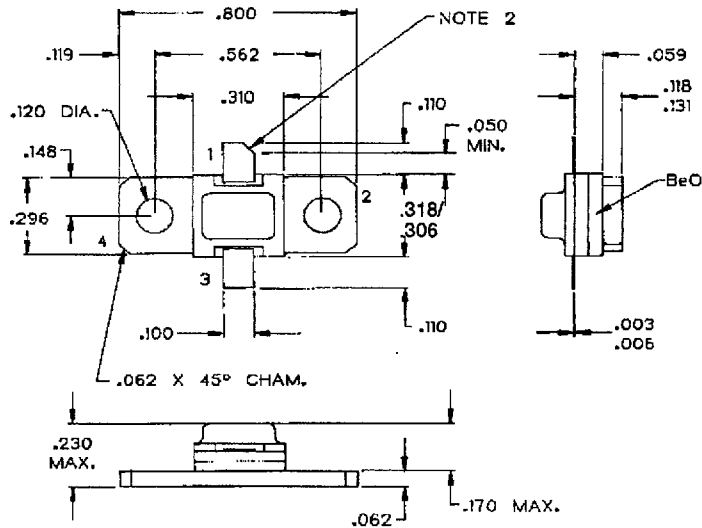
Note: Pulse Width = 10 μ Sec
 Duty Cycle = 1%

TEST CIRCUIT



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.: J133100D



NOTES:

1. ALL TOLERANCE $\pm .010$ EXCEPT WHERE NOTED; DIMENSIONS IN INCHES.
2. COLLECTOR LEAD CHAMFER 45° NOM. X $.040$ NOM.

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