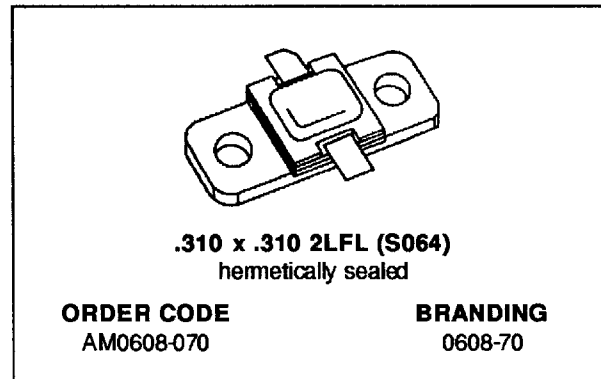


RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

PRELIMINARY DATA

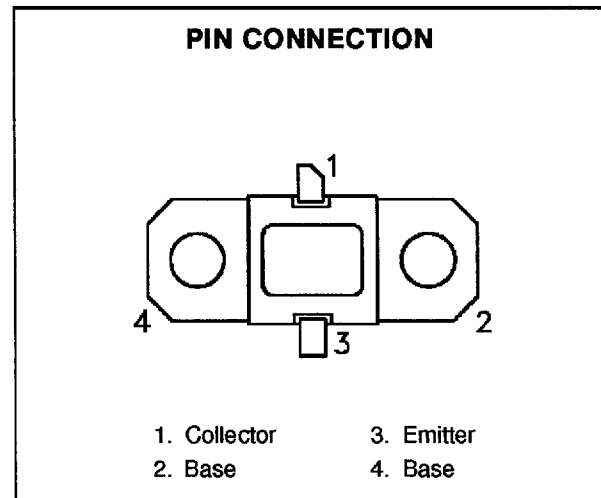
- REFRACTORY/GOLD METALLIZATION
- INTERNAL INPUT MATCHING
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 70 \text{ W MIN. WITH } 7.3 \text{ dB GAIN}$



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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C \leq 50^{\circ}\text{C}$)	250	W
I_C	Device Current*	6.5	A
V_{CC}	Collector-Supply Voltage*	55	V
T_J	Junction Temperature (Pulsed RF Operation)	250	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	- 65 to +200	$^{\circ}\text{C}$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance*	0.60	$^{\circ}\text{C/W}$
---------------	-----------------------------------	------	----------------------

*Applies only to rated RF amplifier operation

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

STATIC

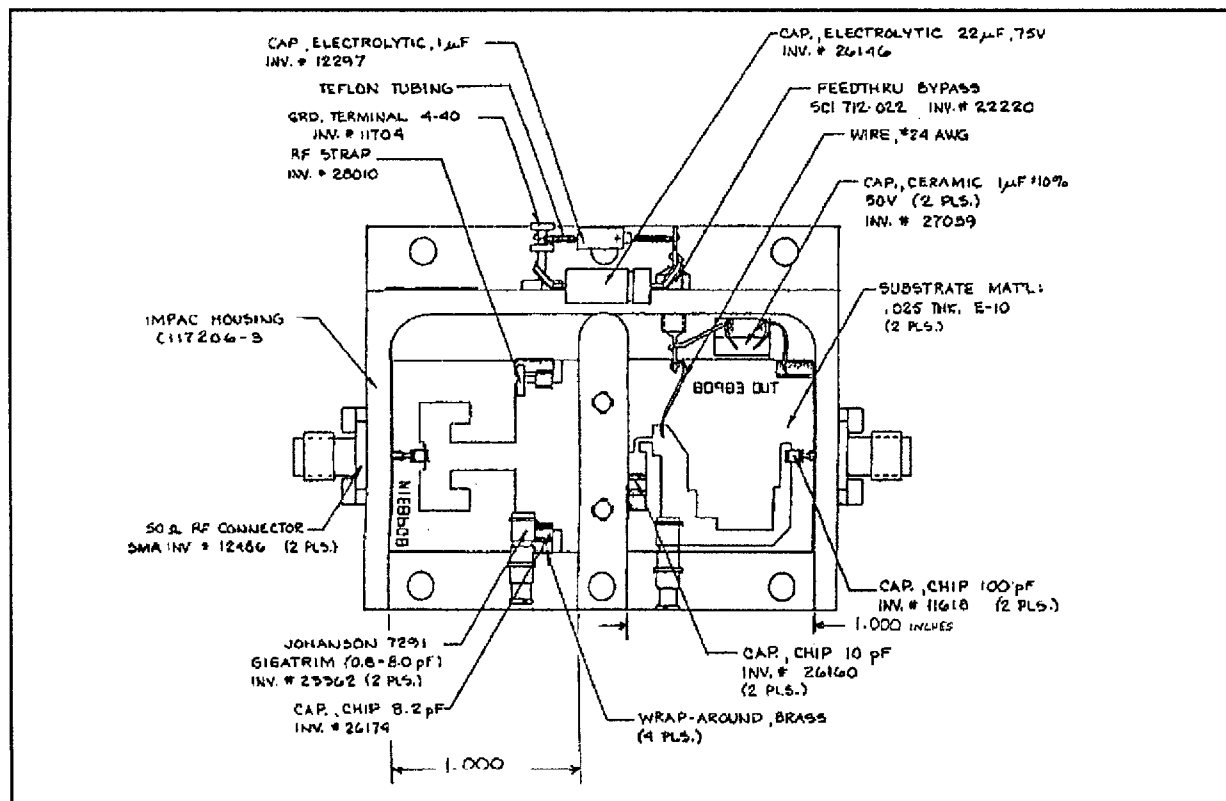
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 10mA$	$I_E = 0mA$	65	—	—	V
BV_{EBO}	$I_E = 1mA$	$I_C = 0mA$	3.5	—	—	V
BV_{CER}	$I_C = 10mA$	$R_{BE} = 10\Omega$	65	—	—	V
I_{CES}	$V_{BE} = 0V$	$V_{CE} = 50V$	—	—	6.25	mA
h_{FE}	$V_{CE} = 5V$	$I_C = 500mA$	15	—	120	—

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

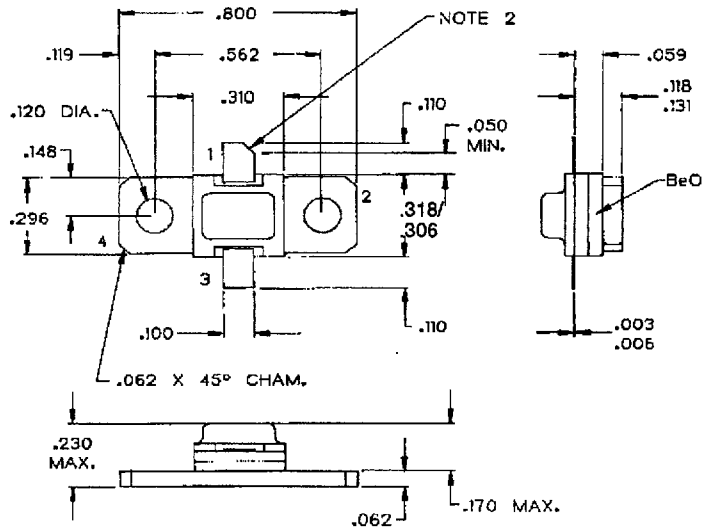
Note: Pulse Width = 10 μ Sec
 Duty Cycle = 1%

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.

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A