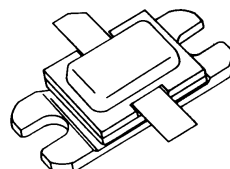


RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

PRELIMINARY DATA

- REFRACTORY/GOLD METALLIZATION
- INPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 445 \text{ W MIN. WITH } 6.9 \text{ dB GAIN}$



.400 x .500 2LFL (S038)
hermetically sealed

ORDER CODE
AM0608-450

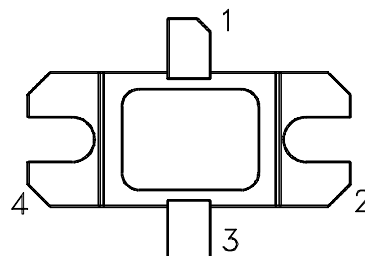
BRANDING
0608-450

DESCRIPTION

The AM0608-450 is an internally-matched, common base silicon bipolar device optimized pulsed application in the 600 - 750 MHz frequency range.

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

PIN CONNECTION



- | | |
|--------------|------------|
| 1. Collector | 3. Emitter |
| 2. Base | 4. Base |

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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C \leq 50^{\circ}\text{C}$)	1500	W
I_C	Device Current*	32	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*	0.13	$^{\circ}\text{C/W}$
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*Applies only to rated RF amplifier operation

AM0608-450

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

STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	$I_C = 50mA$ $I_E = 0mA$	65	—	—	V
BV_{EBO}	$I_E = 5mA$ $I_C = 0mA$	3.5	—	—	V
BV_{CER}	$I_C = 50mA$ $R_{BE} = 10\Omega$	65	—	—	V
I_{CES}	$V_{CE} = 50V$	—	—	35	mA
I_{CBO}	$V_{CB} = 50V$	—	—	25	mA
h_{FE}	$V_{CE} = 5V$ $I_C = 1A$	15	—	300	—

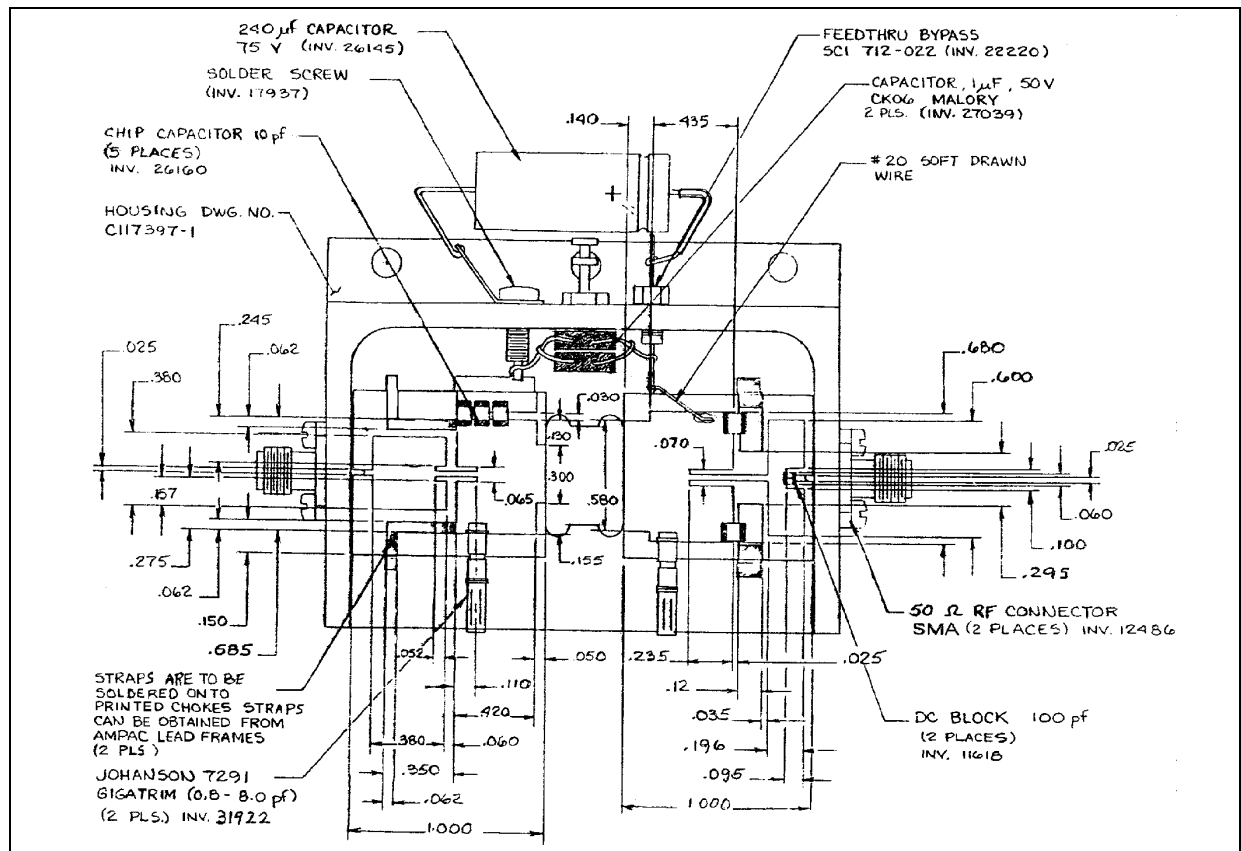
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	$f = 600 - 750MHz$ $P_{IN} = 90W$ $V_{CC} = 50V$	445	—	—	W
η_C	$f = 600 - 750MHz$ $P_{IN} = 90W$ $V_{CC} = 50V$	35	—	—	%
G_P	$f = 600 - 750MHz$ $P_{IN} = 90W$ $V_{CC} = 50V$	6.9	—	—	dB

Note: Pulse Width = $10\mu s$

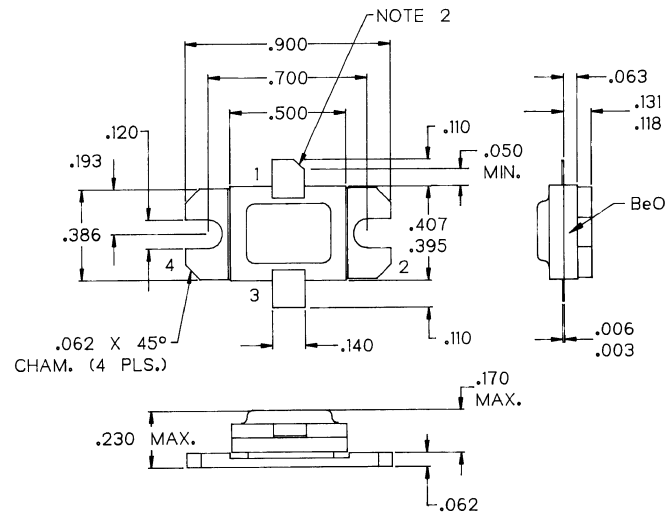
Duty Cycle = 1%

TEST CIRCUIT



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.: J135066F



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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