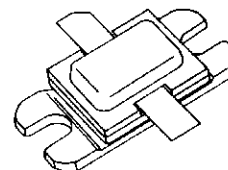


## RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

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

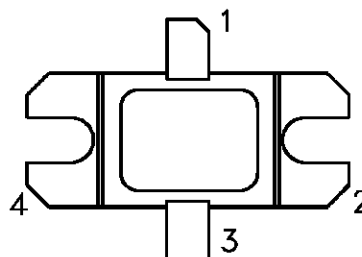
**BRANDING**

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

#### STATIC

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

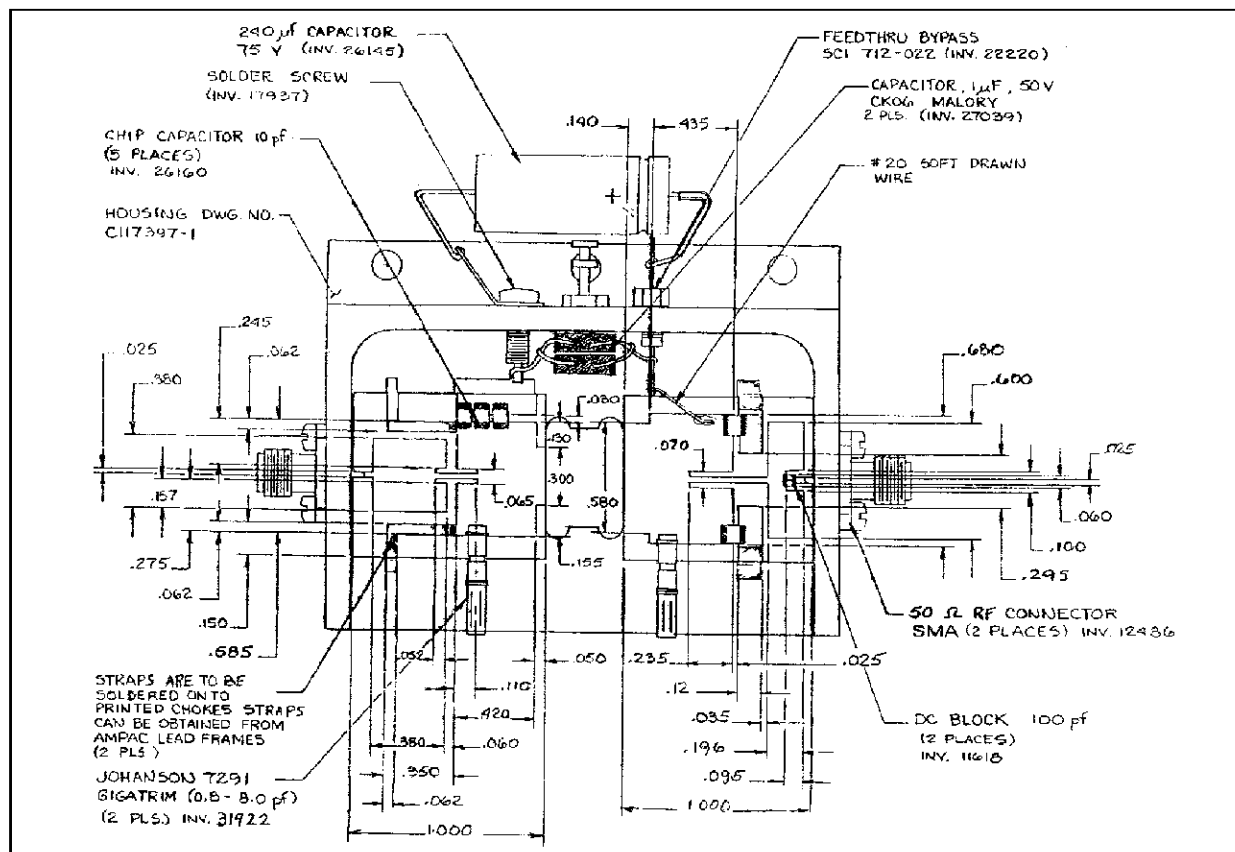
#### DYNAMIC

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

Note: Pulse Width =  $10\mu\text{s}$

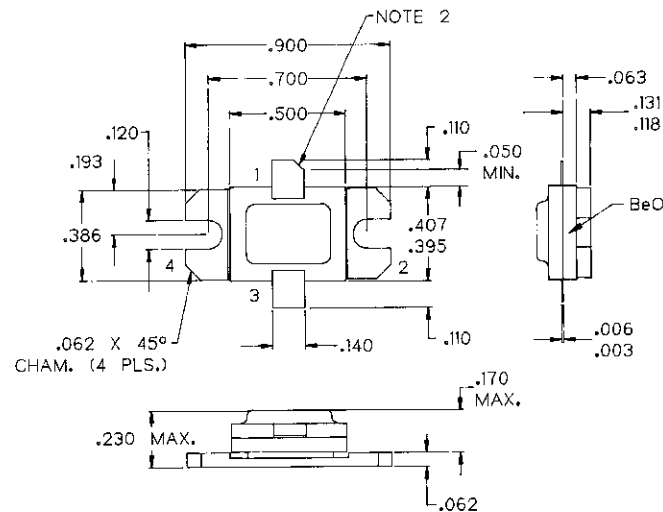
Duty Cycle = 1%

#### 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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