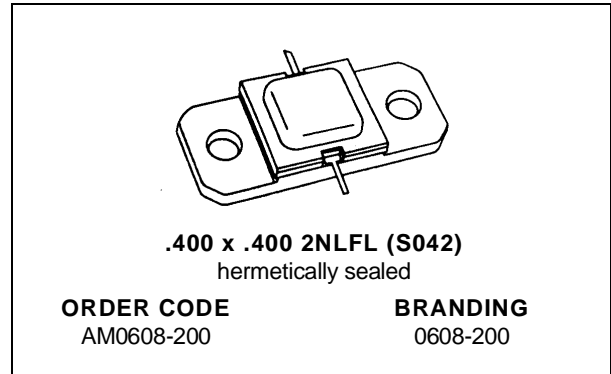


## RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

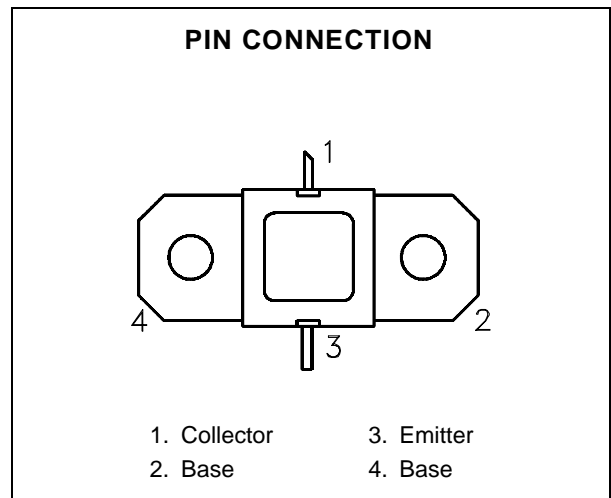
PRELIMINARY DATA

- REFRACTORY/GOLD METALLIZATION
- INTERNAL INPUT MATCHING
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 220 \text{ W MIN. WITH } 8.7 \text{ dB GAIN}$



### DESCRIPTION

The AM0608-200 is an internally-matched, common base silicon bipolar device optimized pulsed application in the 600 - 750 MHz frequency range. Housed in the industry-standard AMPAC™ 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* ( $T_C \leq 75^{\circ}\text{C}$ )	875	W
$I_C$	Device Current*	16.0	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*	0.20	$^{\circ}\text{C/W}$
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\*Applies only to rated RF amplifier operation

# AM0608-200

## ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)

### STATIC

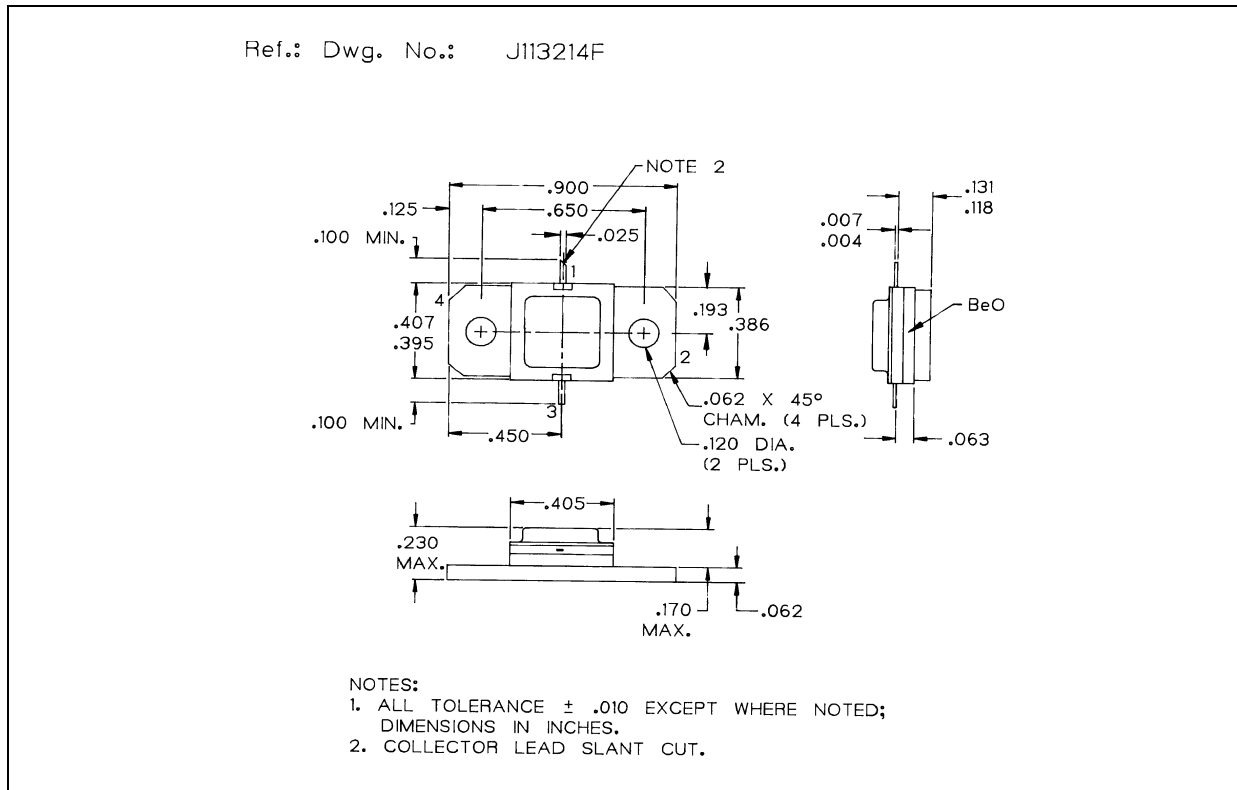
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV <sub>CBO</sub>	I <sub>C</sub> = 10mA	I <sub>E</sub> = 0mA	65	—	—	V
BV <sub>EBO</sub>	I <sub>E</sub> = 1mA	I <sub>C</sub> = 0mA	3.5	—	—	V
BV <sub>CER</sub>	I <sub>C</sub> = 25mA	R <sub>BE</sub> = 10Ω	65	—	—	V
I <sub>CES</sub>	V <sub>BE</sub> = 0V	V <sub>CE</sub> = 50V	—	—	25	mA
h <sub>FE</sub>	V <sub>CE</sub> = 5V	I <sub>C</sub> = 1mA	15	—	120	—

### DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P <sub>OUT</sub>	f = 600 — 750MHz	P <sub>IN</sub> = 30W	V <sub>CC</sub> = 50V	220	—	—	W
η <sub>c</sub>	f = 600 — 750MHz	P <sub>IN</sub> = 30W	V <sub>CC</sub> = 50V	40	—	—	%
G <sub>P</sub>	f = 600 — 750MHz	P <sub>IN</sub> = 30W	V <sub>CC</sub> = 50V	8.7	—	—	dB

Note: Pulse Width = 10μSec  
 Duty Cycle = 1%

## PACKAGE MECHANICAL DATA



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