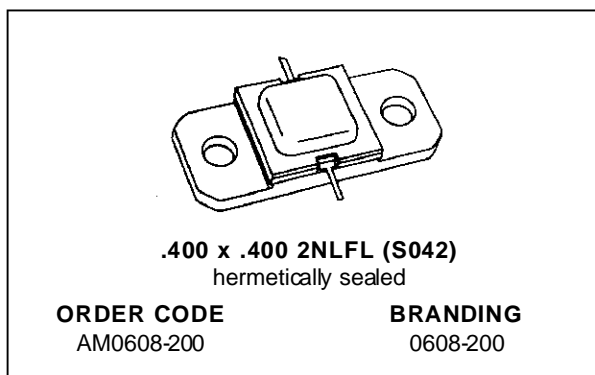


## RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

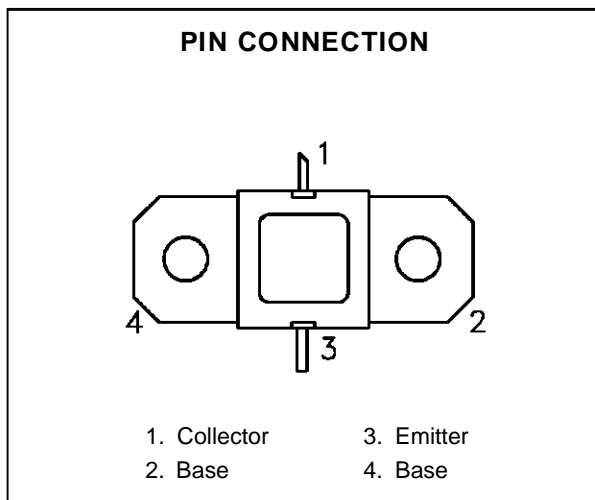
PRELIMINARY DATA

- REFRACTORY/GOLD METALLIZATION
- INTERNAL INPUT MATCHING
- METAL/CERAMIC HERMETIC PACKAGE
- P<sub>OUT</sub> = 220 W MIN. WITH 8.7 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<sub>case</sub> = 25°C)

Symbol	Parameter	Value	Unit
P <sub>DISS</sub>	Power Dissipation* (T <sub>C</sub> ≤ 75°C)	875	W
I <sub>C</sub>	Device Current*	16.0	A
V <sub>CC</sub>	Collector-Supply Voltage*	55	V
T <sub>J</sub>	Junction Temperature (Pulsed RF Operation)	250	°C
T <sub>STG</sub>	Storage Temperature	- 65 to +200	°C

### THERMAL DATA

R <sub>TH(j-c)</sub>	Junction-Case Thermal Resistance*	0.20	°C/W
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\*Applies only to rated RF amplifier operation

## AM0608-200

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

#### STATIC

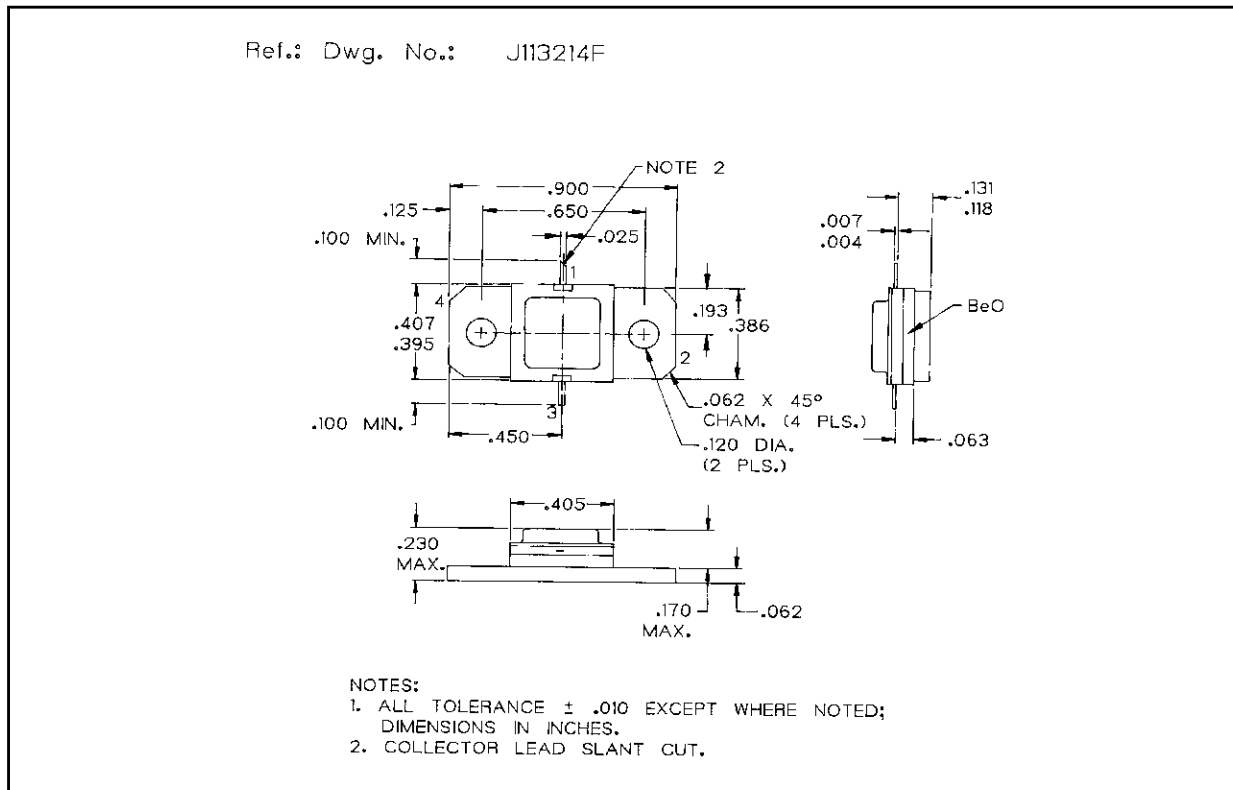
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$BV_{CBO}$	$I_C = 10mA$	$I_E = 0mA$	65	—	—	V
$BV_{EBO}$	$I_E = 1mA$	$I_C = 0mA$	3.5	—	—	V
$BV_{CER}$	$I_C = 25mA$	$R_{BE} = 10\Omega$	65	—	—	V
$I_{CES}$	$V_{BE} = 0V$	$V_{CE} = 50V$	—	—	25	mA
$h_{FE}$	$V_{CE} = 5V$	$I_C = 1mA$	15	—	120	—

#### DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
$P_{OUT}$	$f = 600 - 750MHz$	$P_{IN} = 30W$	$V_{CC} = 50V$	220	—	—	W
$\eta_c$	$f = 600 - 750MHz$	$P_{IN} = 30W$	$V_{CC} = 50V$	40	—	—	%
$G_P$	$f = 600 - 750MHz$	$P_{IN} = 30W$	$V_{CC} = 50V$	8.7	—	—	dB

Note: Pulse Width =  $10\mu Sec$   
Duty Cycle = 1%

### PACKAGE MECHANICAL DATA



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