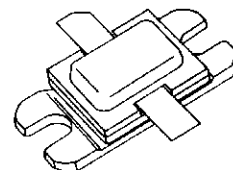


## RF & MICROWAVE TRANSISTORS L-BAND RADAR APPLICATIONS

PRELIMINARY DATA

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 100$  W MIN. WITH 6.0 dB GAIN



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

**ORDER CODE**

AM1214-100

**BRANDING**

1214-100

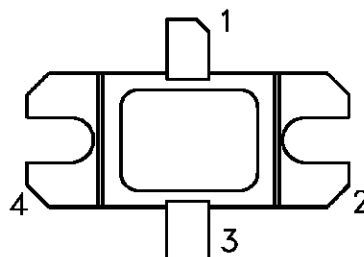
### DESCRIPTION

The AM1214-100 device is a high power Class C transistor specifically designed for L-Band Radar pulsed driver applications.

This device is capable of operation over a wide range of pulse widths, duty cycles, and temperatures and is capable of withstanding 3:1 output VSWR at rated RF conditions. Low RF thermal resistance and computerized automatic wire bonding techniques ensure high reliability and product consistency.

AM1214-100 is supplied in the grounded IMPAC™ hermetic metal/ceramic package with internal input/output matching structures.

### PIN CONNECTION



1. Collector

2. Base

3. Emitter

4. Base

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

Symbol	Parameter	Value	Unit
$P_{DISS}$	Power Dissipation* ( $T_C \leq 100^{\circ}C$ )	270	W
$I_C$	Device Current*	13.5	A
$V_{CC}$	Collector-Supply Voltage*	32	V
$T_J$	Junction Temperature (Pulsed RF Operation)	250	$^{\circ}C$
$T_{STG}$	Storage Temperature	- 65 to +200	$^{\circ}C$

### THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance*	0.55	$^{\circ}C/W$
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\*Applies only to rated RF amplifier operation

## AM1214-100

### 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
$BV_{EBO}$	$I_E = 10mA$ $I_C = 0mA$	3.5	—	—	V
$BV_{CES}$	$I_C = 100mA$	65	—	—	V
$I_{CES}$	$V_{BE} = 0V$ $V_{CE} = 32V$	—	—	20	mA
$h_{FE}$	$V_{CE} = 5V$ $I_C = 5A$	15	—	—	—

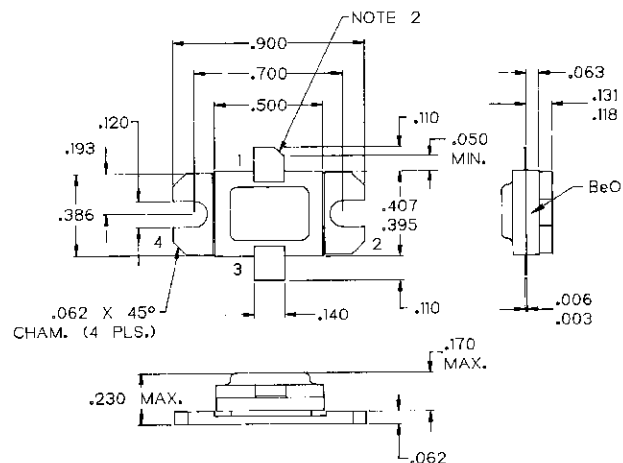
#### DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
$P_{OUT}$	$f = 1215 - 1400MHz$ $P_{IN} = 25W$ $V_{CC} = 28V$	100	—	—	W
$\eta_c$	$f = 1215 - 1400MHz$ $P_{IN} = 25W$ $V_{CC} = 28V$	50	—	—	%
$G_P$	$f = 1215 - 1400MHz$ $P_{IN} = 25W$ $V_{CC} = 28V$	6.0	—	—	dB

Note: Pulse Width = 100 $\mu$ Sec  
Duty Cycle = 10%

### 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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