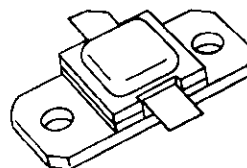


RF & MICROWAVE TRANSISTORS L-BAND RADAR APPLICATIONS

PRELIMINARY DATA

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 25 \text{ W MIN. WITH } 7.0 \text{ dB GAIN}$



.400 x .400 2LFL (S036)
hermetically sealed

ORDER CODE
AM80814-025

BRANDING
80814-25

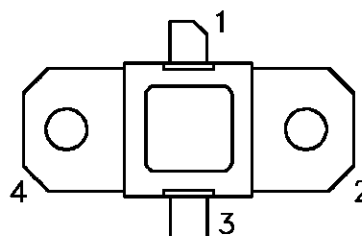
DESCRIPTION

AM80814-025 is a high power silicon Class C transistor designed for ultra-broadband L-Band radar applications.

This device is capable of operation over a broad range of pulse widths and duty cycles. Low RF thermal resistance and computerized automatic wire bonding techniques ensure high reliability and product consistency.

AM80814-025 is supplied in the industry-standard AMPAC™ hermetic Metal/Ceramic package incorporating Input/Output impedance matching.

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* ($T_C \leq 75^{\circ}\text{C}$)	75	W
I_C	Device Current*	3.5	A
V_{CC}	Collector-Supply Voltage*	38	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*	2.3	$^{\circ}\text{C/W}$
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*Applies only to rated RF amplifier operation

AM80814-025

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

STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	$I_C = 10mA$ $I_E = 0mA$	55	—	—	V
BV_{EBO}	$I_E = 1mA$ $I_C = 0mA$	3.5	—	—	V
BV_{CER}	$I_C = 20mA$ $R_{BE} = 10\Omega$	55	—	—	V
I_{CES}	$V_{BE} = 0V$ $V_{CE} = 28V$	—	—	5	mA
h_{FE}	$V_{CE} = 5V$ $I_C = 1A$	15	—	150	—

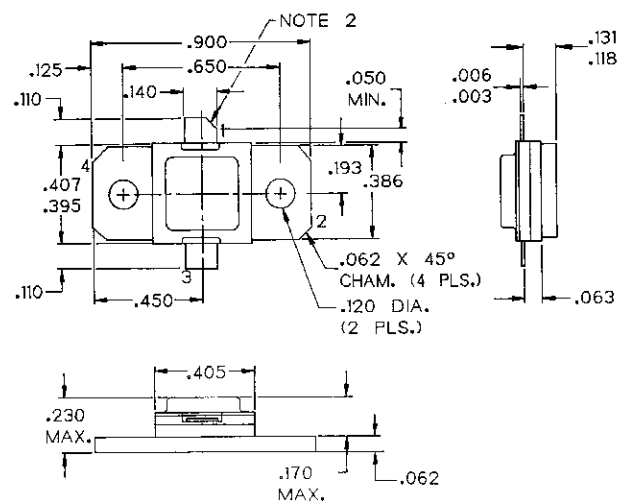
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	$f = 850 - 1400MHz$ $P_{IN} = 5.0W$ $V_{CC} = 35V$	25	—	—	W
η_c	$f = 850 - 1400MHz$ $P_{IN} = 5.0W$ $V_{CC} = 35V$	38	—	—	%
G_P	$f = 850 - 1400MHz$ $P_{IN} = 5.0W$ $V_{CC} = 35V$	7.0	—	—	dB

Note: Pulse Width = 120 μ S
Duty Cycle = 4%

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.: J133102E



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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