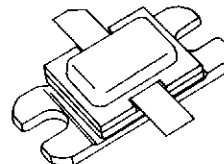


RF & MICROWAVE TRANSISTORS L-BAND RADAR APPLICATIONS

- REFRACTORY/GOLD METALLIZATION
- EMITTER SITE BALLASTED
- 5:1 VSWR CAPABILITY
- LOW THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- $P_{OUT} = 325 \text{ W MIN. WITH } 6.4 \text{ dB GAIN}$



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

ORDER CODE

AM1214-325

BRANDING

1214-325

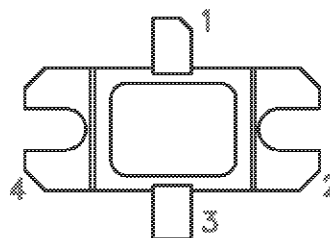
DESCRIPTION

The AM1214-325 device is a high power transistor specifically designed for L-Band radar pulsed output and driver applications.

This device is designed for operation under moderate pulse width and duty cycle pulse conditions and is capable of withstanding 5:1 VSWR at rated RF conditions. Low RF thermal resistance and computerized automatic wire bonding techniques ensure high reliability and product consistency.

The AM1214-325 is supplied in the BIGPAC™ Hermetic Metal/Ceramic package with internal Input/Output matching structures.

PIN CONNECTION



1. Collector

2. Base

3. Emitter

4. Base

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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C \leq 100^{\circ}\text{C}$)	1250	W
I_C	Device Current*	25	A
V_{CC}	Collector-Supply Voltage*	45	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*	0.10	$^{\circ}\text{C/W}$
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*Applies only to rated RF amplifier operation

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}	$I_E = 15mA$ $I_C = 0mA$	3.0	—	—	V
BV_{CES}	$I_C = 50mA$	65	—	—	V
I_{CES}	$V_{CE} = 50V$	—	—	30	mA
h_{FE}	$V_{CE} = 5V$ $I_C = 5A$	10	—	—	—

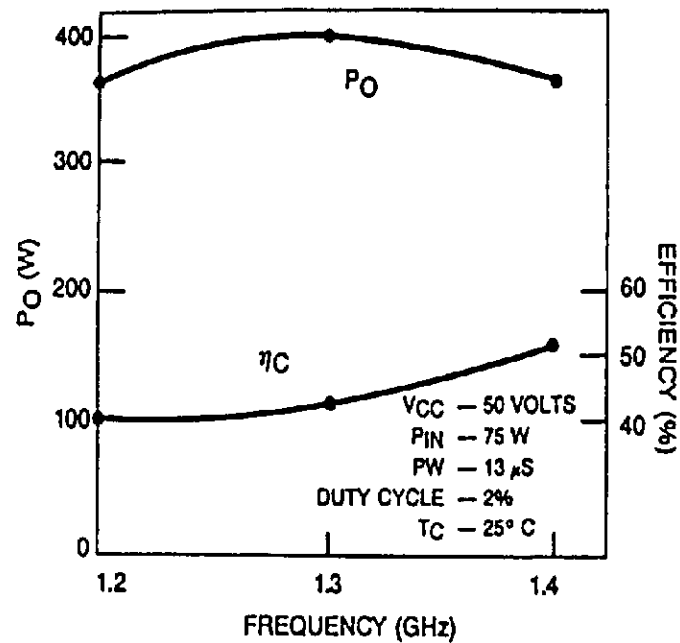
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	$f = 1200 - 1400MHz$ $P_{IN} = 75W$ $V_{CC} = 45V$	325	360	—	W
η_c	$f = 1200 - 1400MHz$ $P_{IN} = 75W$ $V_{CC} = 45V$	38	45	—	%
G_P	$f = 1200 - 1400MHz$ $P_{IN} = 75W$ $V_{CC} = 45V$	6.4	6.8	—	dB

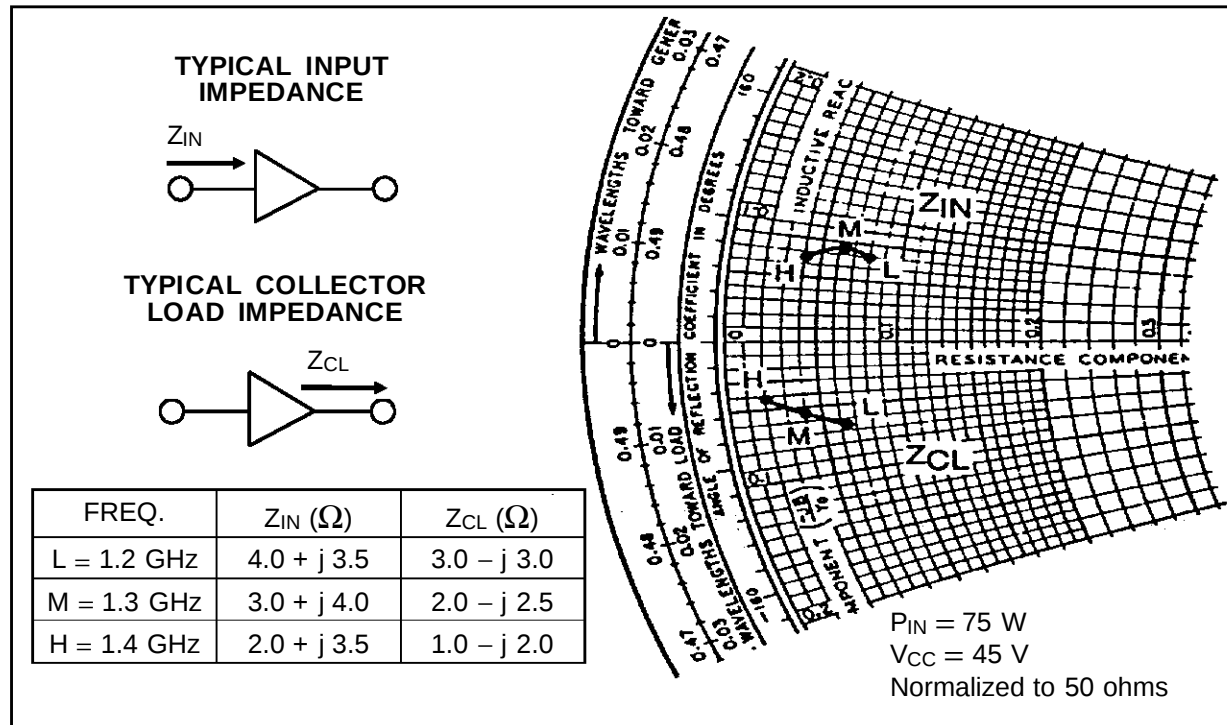
Note: Pulse Width = $13\mu Sec$
Duty Cycle = 2%

TYPICAL PERFORMANCE

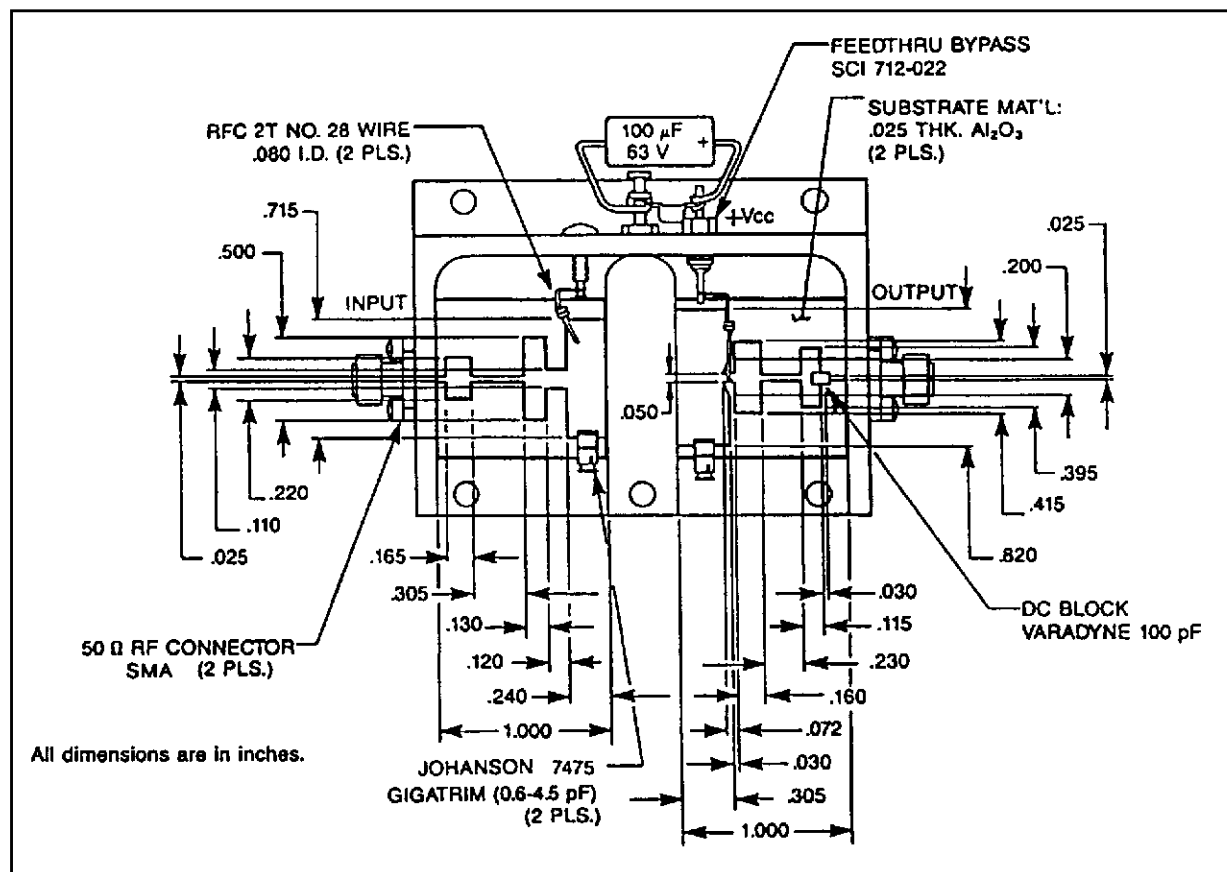
**POWER OUTPUT & EFFICIENCY
vs FREQUENCY**



IMPEDANCE DATA

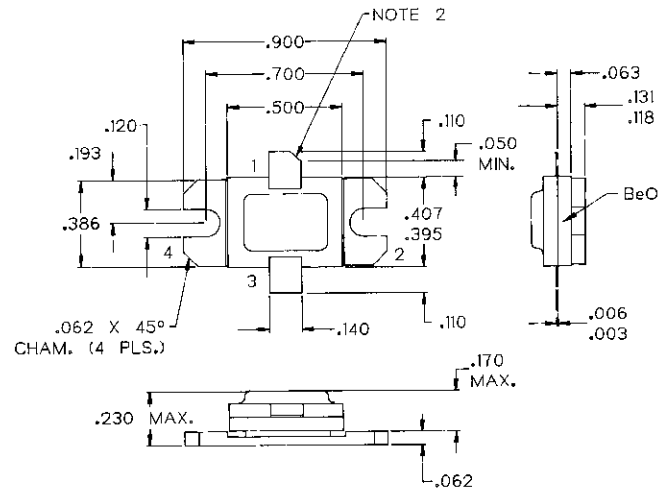


TEST CIRCUIT



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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