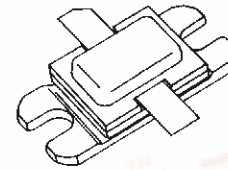




AM1214-325

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
- $P_{OUT} = 325$ W MIN. WITH 6.4 dB GAIN



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

ORDER CODE
AM1214-325

BRANDING
1214-325

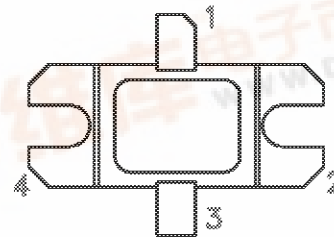
DESCRIPTION

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 | 3. Emitter |
| 2. Base | 4. Base |

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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_c \leq 100^{\circ}C$)	1250	W
I_c	Device Current*	25	A
V_{CC}	Collector-Supply Voltage*	45	V
T_J	Junction Temperature (Pulsed RF Operation)	250	$^{\circ}C$
T_{STG}	Storage Temperature	- 65 to +200	$^{\circ}C$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance*	0.10	$^{\circ}C/W$
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*Applies only to rated RF amplifier operation

AM1214-325

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

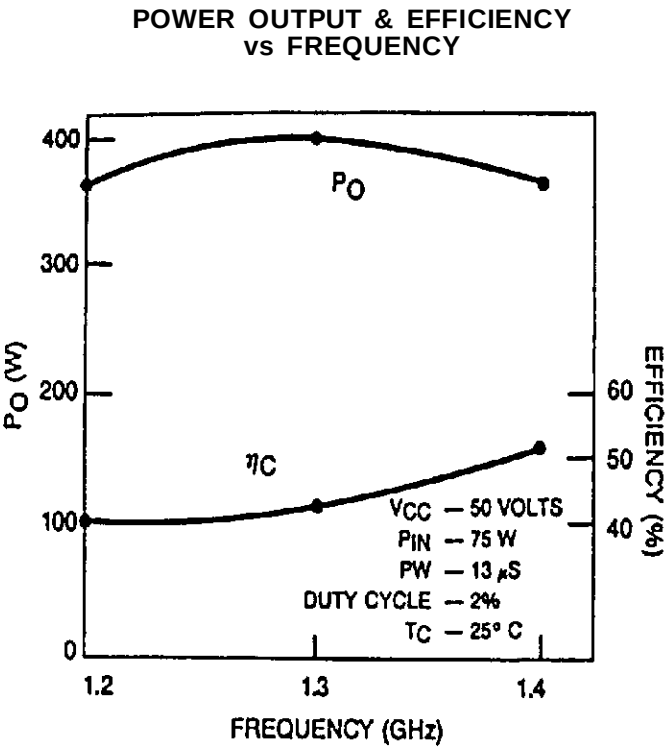
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV _{CBO}	I _C = 50mA I _E = 0mA	65	—	—	V
BV _{EBO}	I _E = 15mA I _C = 0mA	3.0	—	—	V
BV _{CES}	I _C = 50mA	65	—	—	V
I _{CES}	V _{CE} = 50V	—	—	30	mA
h _{FE}	V _{CE} = 5V I _C = 5A	10	—	—	—

DYNAMIC

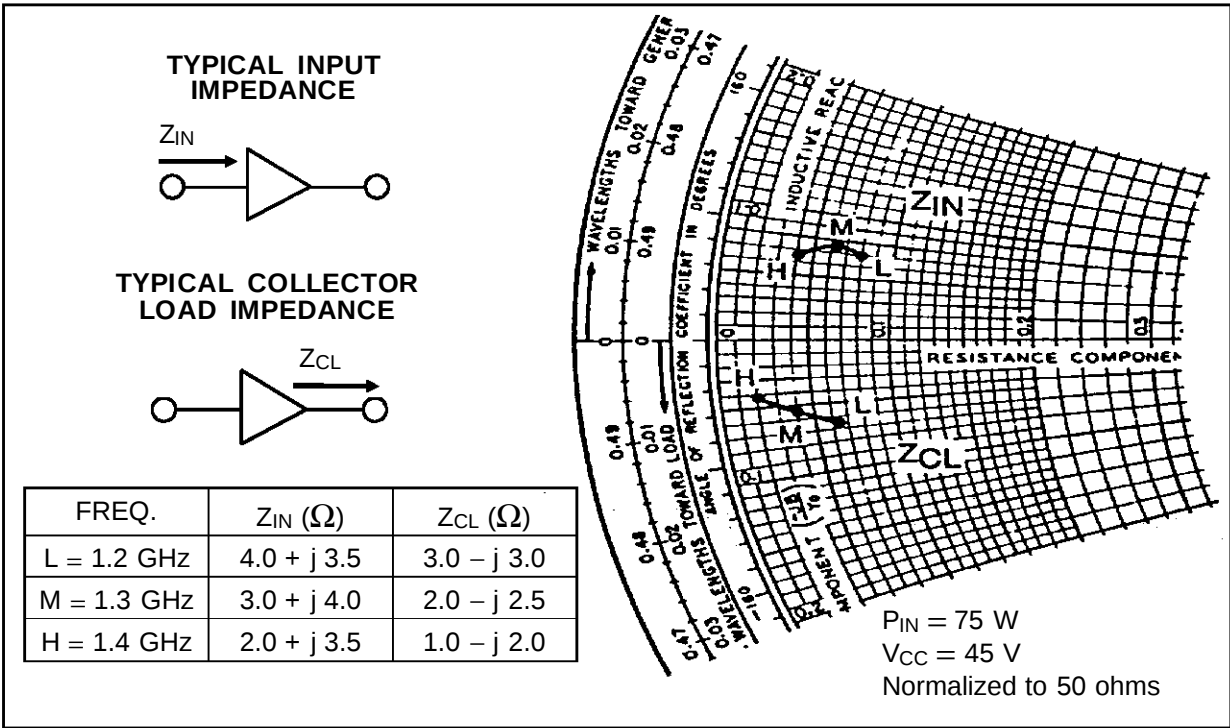
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P _{OUT}	f = 1200 — 1400MHz P _{IN} = 75W V _{CC} = 45V	325	360	—	W
η _c	f = 1200 — 1400MHz P _{IN} = 75W V _{CC} = 45V	38	45	—	%
G _P	f = 1200 — 1400MHz P _{IN} = 75W V _{CC} = 45V	6.4	6.8	—	dB

Note: Pulse Width = 13μSec
Duty Cycle = 2%

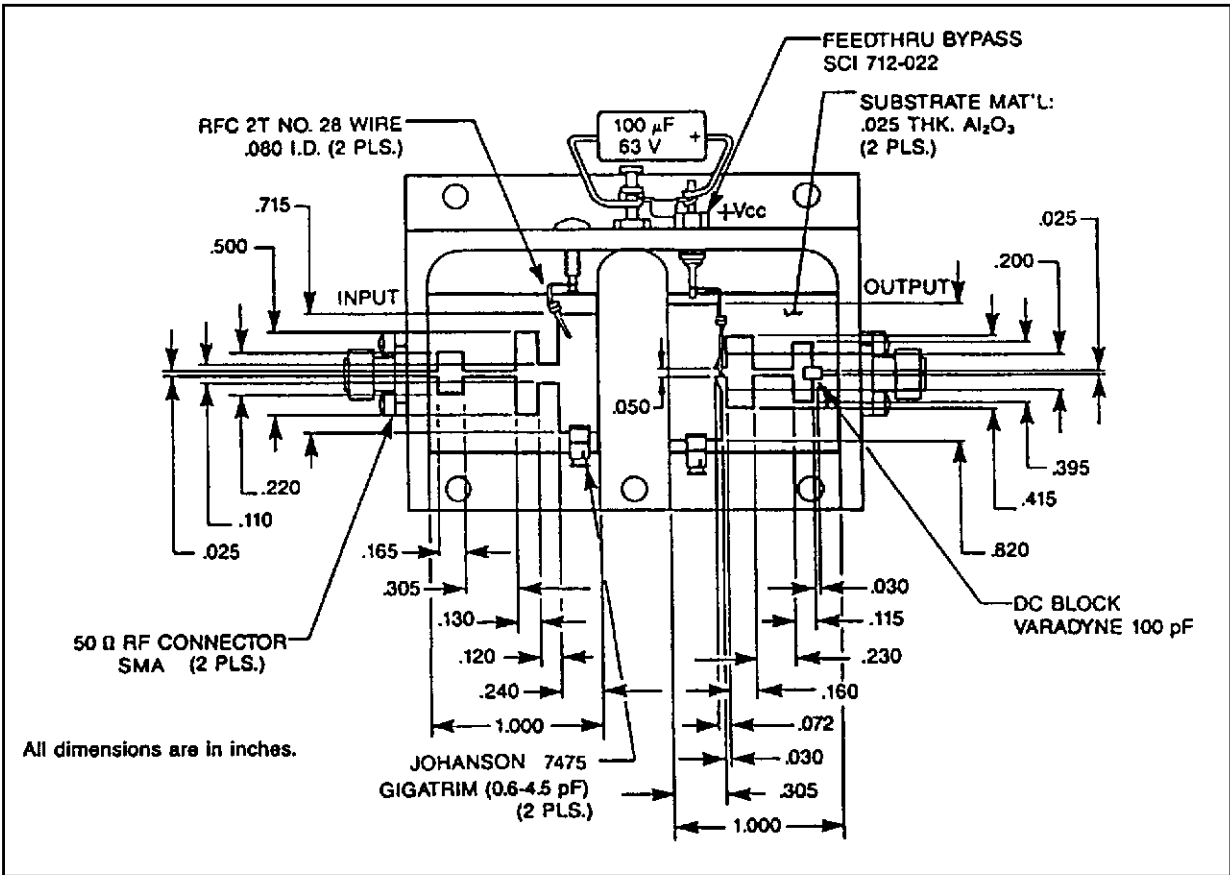
TYPICAL PERFORMANCE



IMPEDANCE DATA

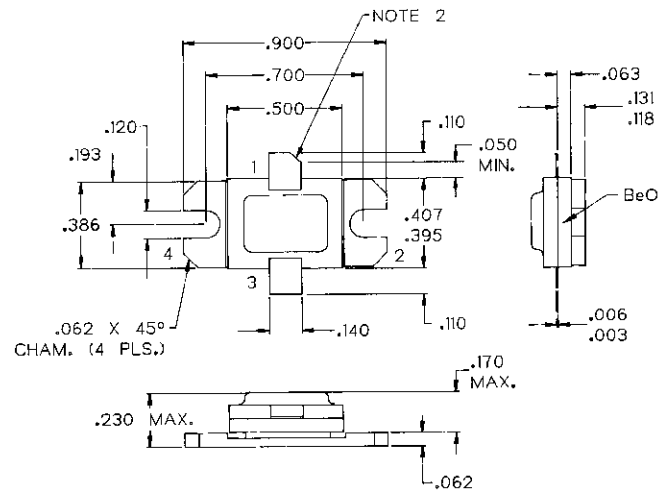


TEST CIRCUIT



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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