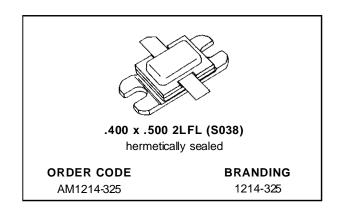


AM1214-325

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

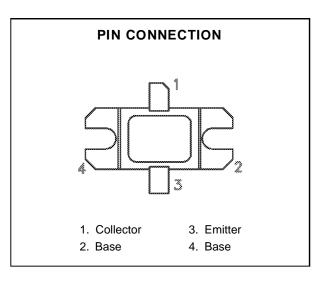


DESCRIPTION

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.



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

Symbol	Parameter	Value	Unit		
Poiss	Power Dissipation* (T _C ≤ 100°C)	1250	W		
Ic	Device Current*	25	Α		
Vcc	Collector-Supply Voltage*	45	V		
TJ	Junction Temperature (Pulsed RF Operation)	250	°C		
Тѕтс	Storage Temperature	- 65 to +200	°C		

THERMAL DATA

^{*}Applies only to rated RF amplifier operation

September 1992

ELECTRICAL SPECIFICATIONS (Tcase = 25° C)

STATIC

Symbol	Took Conditions	Value			Unit	
	Test Conditions		Min.	Тур.	Max.	Onit
BV _{CBO}	$I_C = 50mA$	$I_E = 0mA$	65	_		V
BVEBO	I _E = 15mA	$I_C = 0mA$	3.0	_	_	V
BVces	IC = 50mA		65	_	_	V
ICES	$V_{CE} = 50V$		_	_	30	mA
h _{FE}	V _{CE} = 5V	I _C = 5A	10	_	_	_

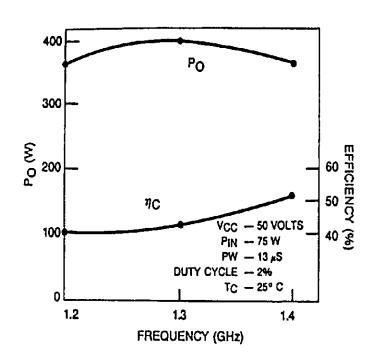
DYNAMIC

Symbol	Test Conditions		Value			Unit	
Symbol			Min.	Тур.	Max.	Unit	
Pout	f = 1200 — 1400MHz	$P_{IN} = 75W$	$V_{CC} = 45V$	325	360		W
ης	f = 1200 — 1400MHz	P _{IN} = 75W	$V_{CC} = 45V$	38	45	_	%
G _P	f = 1200 — 1400MHz	P _{IN} = 75W	Vcc = 45V	6.4	6.8	_	dB

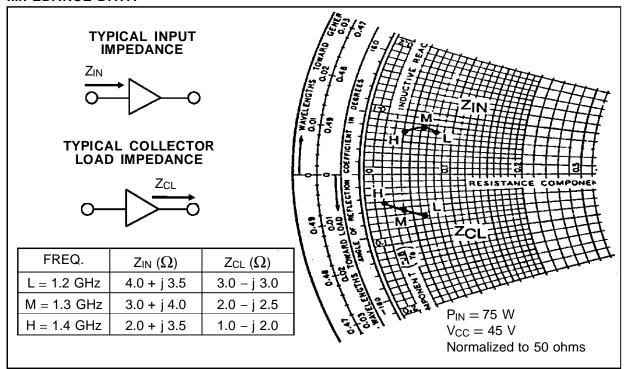
Note: Pulse Width = $13\mu Sec$ Duty Cycle = 2%

TYPICAL PERFORMANCE

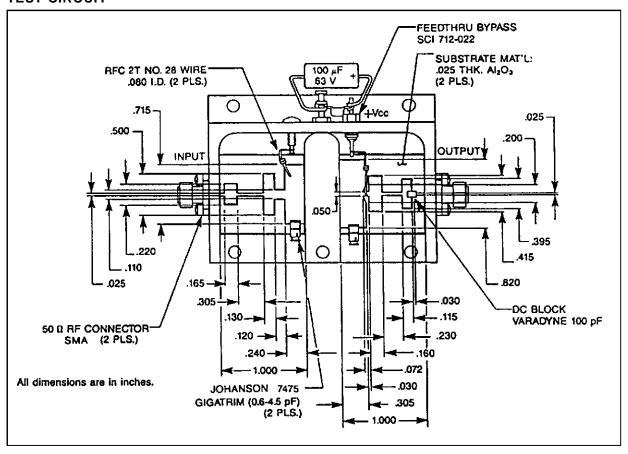
POWER OUTPUT & EFFICIENCY vs FREQUENCY



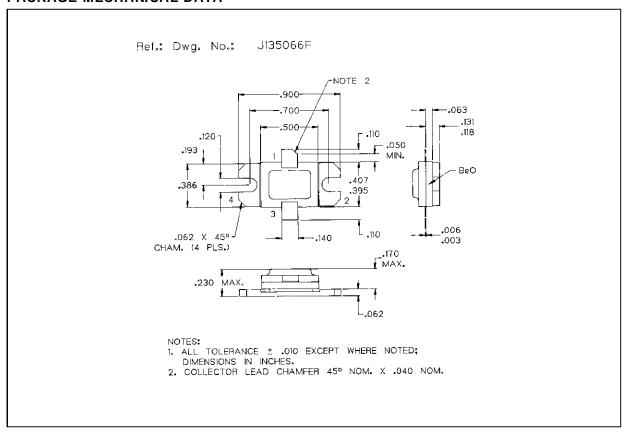
IMPEDANCE DATA



TEST CIRCUIT



PACKAGE MECHANICAL DATA



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