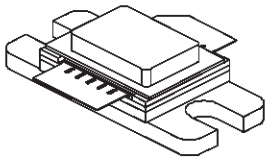
AM1214-130

RF POWER TRANSISTORS
L-BAND RADAR APPLICATIONS

TARGET DATA

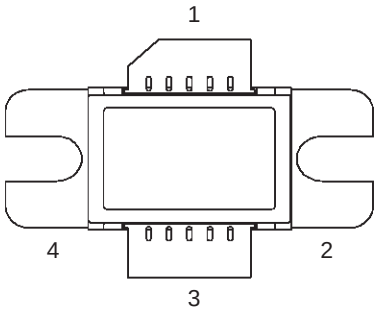
- REFRACTORY /GOLD METALLIZATION
- EMITTER SITE BALLASTING
- LOW RF THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- P_{OUT} = 130 W MIN. WITH 8.0 dB GAIN
- 1215-1400 MHz OPERATION



M259
hermetically sealed

ORDER CODE	BRANDING
AM1214-130	XAM1214-130

PIN CONNECTION



1. Collector
2. Base
3. Emitter
4. Base

DESCRIPTION

The AM1214-130 is a rugged, Class C common base device designed as driver of AM1214-250 for new L - Band medium & long pulse radar applications.

Minimal amplitude droop over a long pulse of 500 microsec. is guaranteed by a thermal design incorporating an overlay site-ballasted die geometry.

ABSOLUTE MAXIMUM RATINGS (T_{CASE} = 25°C)

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation ($T_C \leq 85°C$)*	TBD	W
I_C	Device Current*	12	A
V_{CBO}	Collector-Base Voltage	70	V
T_j	Operating Junction Temperature	+250	°C
T_{STG}	Storage Temperature	-65 to +200	°C

THERMAL DATA

$R_{th(j-c)}$	Junction -Case Thermal Resistance*	TBD	°C/W

* Applies only to rated RF amplifier operation: 150 microsec / 10%

ELECTRICAL SPECIFICATION (T_{CASE} = 25°C)

STATIC

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
BV_{CBO}	I_C = 20 mA	I_E = 0 mA	70			V
BV_{CES}	I_C = 20 mA	V_{BE} = 0 V	70			V
BV_{EBO}	I_E = 10 mA	I_C = 0 mA	3.5			V
I_{CES}	V_{CE} = 40 V	V_{BE} = 0 V			5	mA
h_{FE}	V_{CE} = 5 V	I_C = 0.25 A	10			

DYNAMIC @ 150 MICROSEC / 10 %

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
P_{OUT}	f = 1215 - 1400 MHz	P_{IN} = 20 W	V_{CC} = 50 V	130	160		W
η_C	f = 1215 - 1400 MHz	P_{IN} = 20 W	V_{CC} = 50 V	40	45		%
G_P	f = 1215 - 1400 MHz	P_{IN} = 20 W	V_{CC} = 50 V	8.1	9.0		dB

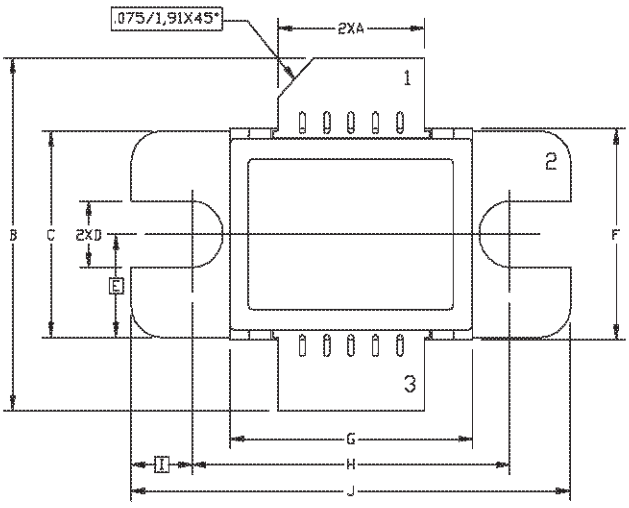
DYNAMIC @ 500 MICROSEC / 10 %

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
P_{OUT}	f = 1215 - 1400 MHz	P_{IN} = 20 W	V_{CC} = 50 V	110	140		W
η_C	f = 1215 - 1400 MHz	P_{IN} = 20 W	V_{CC} = 50 V	40	45		%
G_P	f = 1215 - 1400 MHz	P_{IN} = 20 W	V_{CC} = 50 V	7.4	8.45		dB

M259 (.400 x .500 SUPER WIDE 2/L HERM. W/FLG) MECHANICAL DATA

DIM.	mm			Inch		
	MIN.	TYP.	MAX	MIN.	TYP.	MAX
A	7.49		7.75	.295		.305
B	19.56		21.08	.770		.830
C	9.65		9.91	.380		.390
D	3.18		3.43	.125		.135
E		4.90			.193	
F	10.03		10.34	.395		.407
G	12.45		12.95	.490		.510
H	16.38		16.64	.645		.655
I		3.18			.125	
J	22.61		23.11	.890		.910
K	0.05		0.15	.002		.006
L	1.40		1.65	.055		.065
M	2.79		3.30	.110		.130
N			5.84			.230

M259, Package Outline



Ref. 1019147D