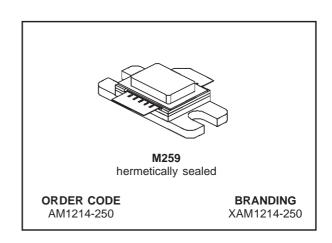


AM1214-250

RF POWER TRANSISTORS L-BAND RADAR APPLICATIONS

TARGET DATA

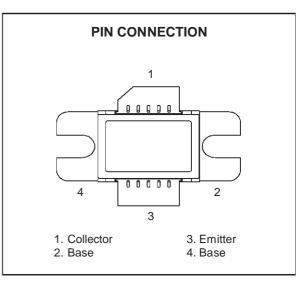
- REFRACTORY /GOLD METALLIZATION
- EMITTER SITE BALLASTING
- LOW RF THERMAL RESISTANCE
- INPUT/OUTPUT MATCHING
- OVERLAY GEOMETRY
- METAL/CERAMIC HERMETIC PACKAGE
- POUT = 300 W MIN. WITH 8.0 dB GAIN
- 1215-1400 MHz OPERATION



DESCRIPTION

The AM1214-250 is a rugged, Class C common base device designed 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 ≤ 85°C)*	786	W
Ic	Device Current*	21	А
V _{CBO}	Collector-Base Voltage	70	V
Tj	Operating Junction Temperature	+250	°C
T _{STG}	Storage Temperature	-65 to +200	°C

THERMAL DATA

R _{th(j-c)} Junction -Case Thermal Resistance*	0.21	°C/W
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^{*} Applies only to rated RF amplifier operation: 150 microsec / 10%

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

STATIC

Symbol		Test Conditions	Min.	Тур.	Max.	Unit
BV _{CBO}	I _C = 50 mA	$I_E = 0 \text{ mA}$	70			V
BV _{CES}	I _C = 50 mA	V _{BE} = 0 V	70			V
BV _{EBO}	I _E = 20 mA	$I_C = 0 \text{ mA}$	3.5			V
I _{CES}	V _{CE} = 40 V	$V_{BE} = 0 V$			10	mA
h _{FE}	V _{CE} = 5 V	$I_C = 0.5 A$	10			

DYNAMIC @ 150 MICROSEC / 10 %

Symbol	Test Conditions			Min.	Тур.	Max.	Unit
Pout	f = 1215 - 1400 MHz	P _{IN} = 40 W	V _{CC} = 50 V	300	350		W
ης	f = 1215 - 1400 MHz	P _{IN} = 40 W	V _{CC} = 50 V	40	45		%
G _P	f = 1215 - 1400 MHz	P _{IN} = 40 W	V _{CC} = 50 V	8.75	9.4		dB

DYNAMIC @ 500 MICROSEC / 10 %

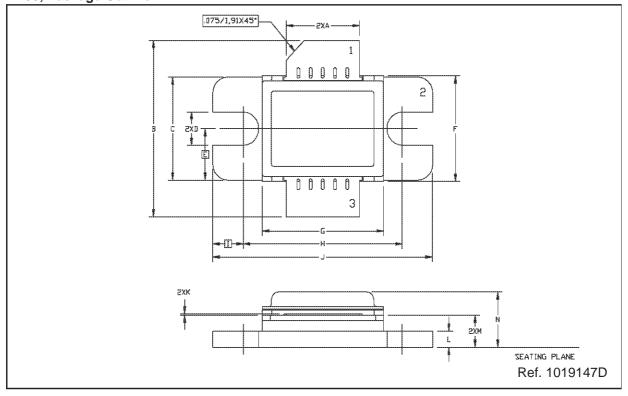
Symbol	Test Conditions			Min.	Тур.	Max.	Unit
Pout	f = 1215 - 1400 MHz	$P_{IN} = 40 \text{ W}$	$V_{CC} = 42 \text{ V}$	225	250		W
η _C	f = 1215 - 1400 MHz	$P_{IN} = 40 \text{ W}$	$V_{CC} = 42 \text{ V}$	40	45		%
G _P	f = 1215 - 1400 MHz	$P_{IN} = 40 \text{ W}$	$V_{CC} = 42 \text{ V}$	7.5	8.0		dB

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

DIM.	mm			Inch			
	MIN.	TYP.	MAX	MIN.	TYP.	MAX	
А	7.49		7.75	.295		.305	
В	19.56		21.08	.770		.830	
С	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	
Н	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	
М	2.79		3.30	.110		.130	
N			5.84			.230	

M259, Package Outline



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