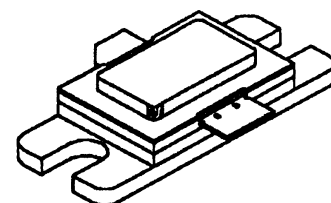


RF & MICROWAVE TRANSISTORS AVIONICS APPLICATION

Features

- HERMETIC METAL/CERAMIC PACKAGE
- LOW THERMAL RESISTANCE
- 10:1 LOAD VSWR CAPABILITY
- BALLASTED OVERLAY GEOMETRY
- COMMON EMITTER CONFIGURATION

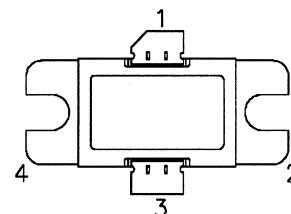


.400 x .600 2LFL (M198)
 hermetically sealed

DESCRIPTION:

THE MS2208 DEVICE IS A HIGH POWER CLASS C TRANSISTOR SPECIFICALLY DESIGNED FOR L-BAND AVIONIC APPLICATIONS INVOLVING HIGH PULSE BURST DUTY CYCLES. THE DEVICE IS CAPABLE OF OPERATION OVER A WIDE RANGE OF PULSE WIDTHS, DUTY CYCLES AND TEMPERATURES.

PIN CONNECTION



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

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

Symbol	Parameter	Value	Unit
P _{DISS}	Power Dissipation* (T _c ≤ 100°C)	1360	W
I _c	Device Current *	27	A
V _{CC}	Collector Supply Voltage*	55	V
T _j	Junction Temperature	250	°C
T _{STG}	Storage Temperature	-65 to +200	°C

Thermal Data

R _{TH(J-C)}	Junction - Case Thermal Resistance	0.11	°C/W
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*Applies only to rated RF amplifier operation

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
Bvebo	I _E = 30 mA	I _C =0 mA	3.0	---	---	V
Bvcbo	I _C = 50 mA	I _C =0 mA	70	---	---	V
Bvces	I _C = 50 mA	V _{BE} =0 V	70	---	---	V
Ices	V _{BE} = 50 mA	V _{CE} =50 V	---	---	40	mA
HFE	V _{CE} = 5.0 V	I _C =1 A	10	---	200	B

DYNAMIC

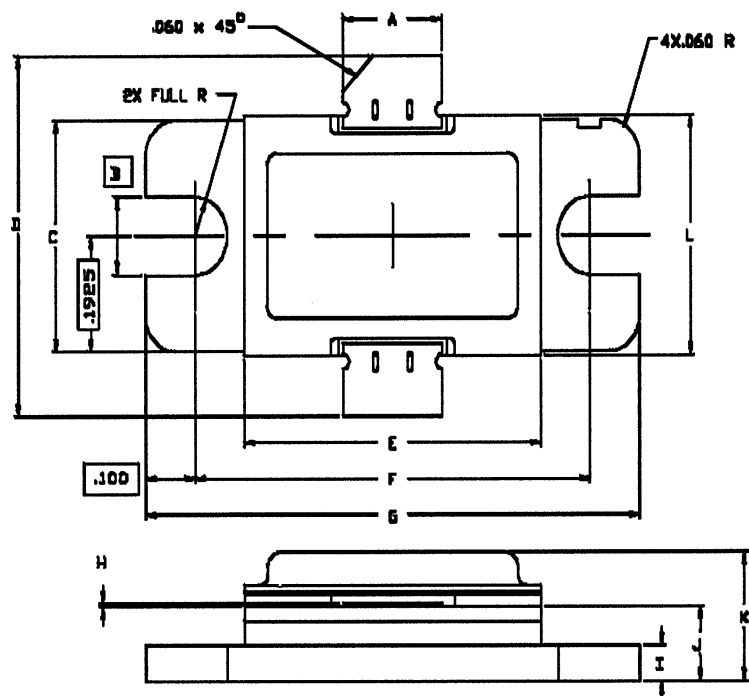
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{out}	P _{in} = 70W	f=1090 MHz	V _{CC} =50V	500	---	---	W
η _c	P _{out}	f=1090 MHz	V _{CC} =50V	40	---	---	%
G _p	P _{out}	f=1090 MHz	V _{CC} =50V	8.5	---	---	dB
Load Mismatch	P _{out} =500W Peak f=1090 MHz, V _{cc} =50V, VSWR=10:1, 10μsec, 1% Duty, VSWR=5:1, 32μsec, 2% Duty						
Conditions	Pulse width=32μsec, Duty Cycle= 2%						

IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
1030 MHz	4.35+ j 6.97	1.38- j 4.08
1090 MHz	4.38+ j 2.75	0.874- j 3.55
1120 MHz	4.69+ j 2.95	1.3- j 4.97

P_{IN}=70W V_{CC}=50V

PACKAGE MECHANICAL DATA



	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.195/4.95	.205/5.21	K		.230/5.84
B	.130/3.30		L	.393/9.98	.407/10.34
C	.380/9.65	.390/9.91			
D	.570/14.48				
E	.593/15.06	.607/15.42			
F	.790/20.07	.810/20.57			
G	.995/25.27	1.005/25.53			
H	.002/0.05	.006/0.15			
I	.055/1.40	.065/1.65			
J	.110/2.79	.130/3.30			