



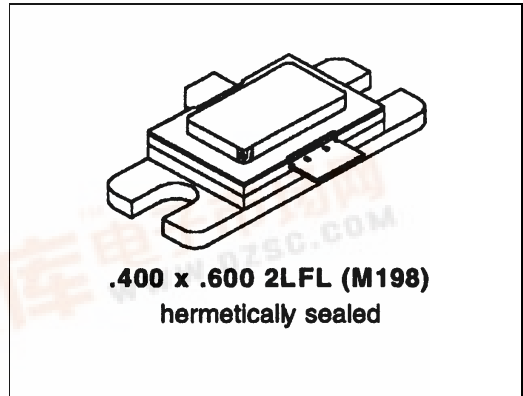
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MS2208

**RF & MICROWAVE TRANSISTORS
AVIONICS APPLICATION**

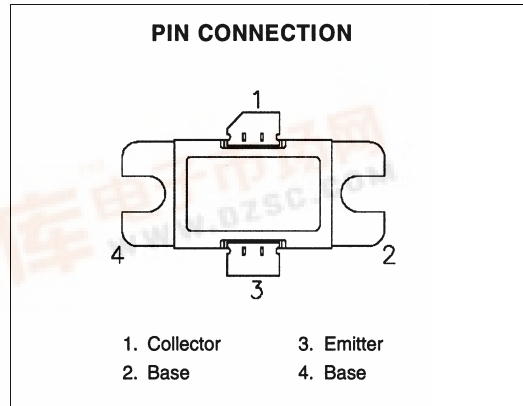
Features

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



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.



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

