

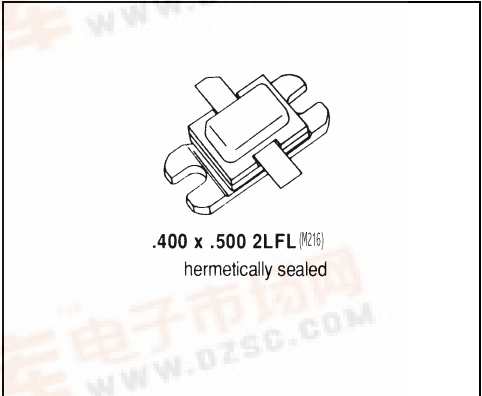


MS2207

RF & MICROWAVE TRANSISTORS L-BAND AVIONICS APPLICATIONS

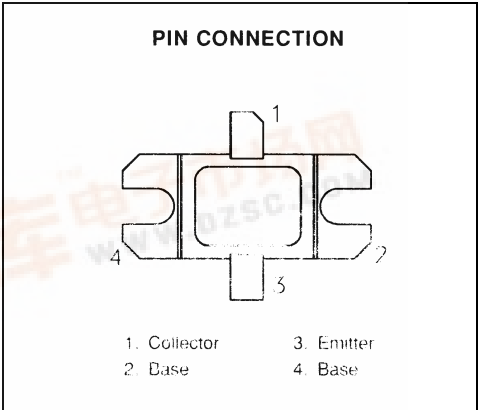
Features

- 1090 MHz
- 50 VOLTS
- 15:1 VSWR CAPABILITY
- INPUT / OUTPUT MATCHING
- $P_{OUT} = 400$ WATTS
- $G_p = 8.0$ dB MINIMUM
- COMMON BASE CONFIGURATION



DESCRIPTION:

The MS2207 is a high power NPN bipolar transistor specifically designed for TCAS and Mode-S driver applications. This device is designed for operation under moderate pulse width and duty cycle pulse conditions and is capable of withstanding 15:1 output VSWR at rated conditions.



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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation	880	W
I_C	Device Current	24	A
V_{CC}	Collector Supply Voltage	55	V
T_J	Junction Temperature	200	°C
T_{STG}	Storage Temperature	-65 to +200	°C

Thermal Data

$R_{TH(J-C)}$	Junction-case Thermal Resistance	0.17	°C/W
---------------	----------------------------------	------	------



ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{CBO}	I _C = 50 mA	I _E = 0 mA	65	---	---	V
BV _{EBO}	I _E = 15 mA	I _C = 0 mA	3.5	---	---	V
BV _{CER}	I _C = 50 mA	R _{BE} = 10Ω	65	---	---	V
I _{ces}	V _{BE} = 50 V	V _{CE} = 0 V	---	---	30	mA
HFE	V _{CE} = 5 V	I _C = 5 A	10	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 1090 MHz	P _{IN} = 63W	V _{CC} = 50V	400	---	---	W
η _c	f = 1090 MHz	P _{IN} = 63W	V _{CC} = 50V	45	---	---	%
G _p	f = 1090 MHz	P _{IN} = 63W	V _{CC} = 50V	8.0	---	---	dB
Conditions	Pulse Width = 32μS Duty Cycle = 2%						

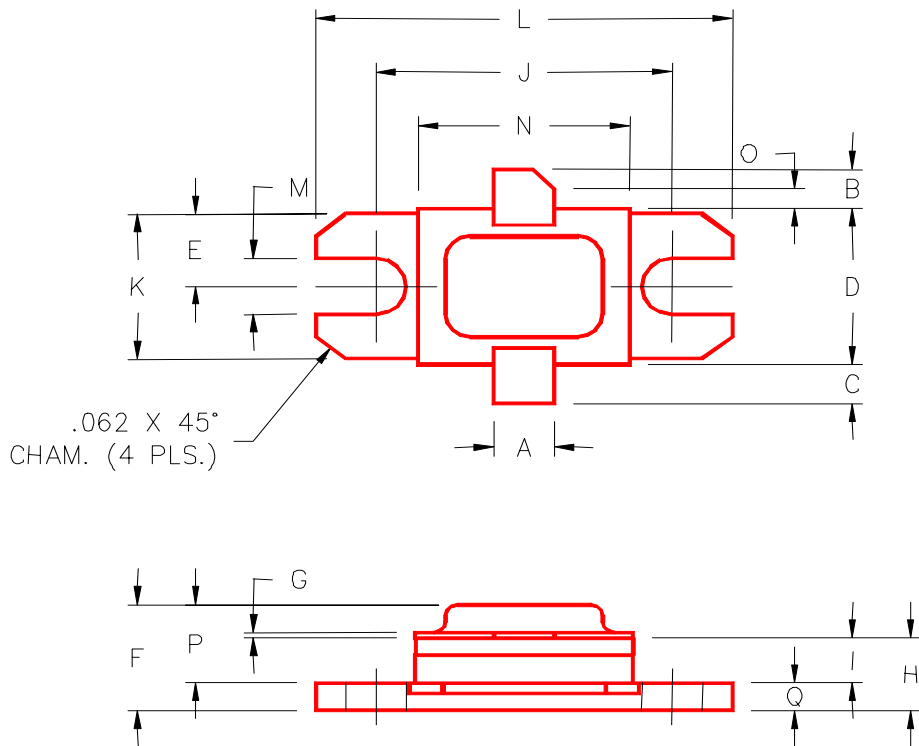
IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
1025 MHz	2.4 + j 3.2	1.4 - j 2.2
1090 MHz	3.8 + j 2.5	1.6 - j 1.6
1150 MHz	2.3 + j 1.3	1.2 - j 1.1

P_{IN} = 63 W
V_{CC} = 50 V

PACKAGE MECHANICAL DATA

PACKAGE STYLE M216



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.140/3,56		J	.700/17,78	
B	.110/2,80		K	.386/9,80	
C	.110/2,80		L	.900/22,86	
D	.395/10,03	.407/10,34	M	.120/3,05	
E	.193/4,90		N	.500/12,70	
F		.230/5,84	O	.050/1,27	
G	.003/0,08	.006/0,15	P		.170/4,32
H	.118/3,00	.131/3,33	Q	.062/1,58	
I	.063/1,60				