



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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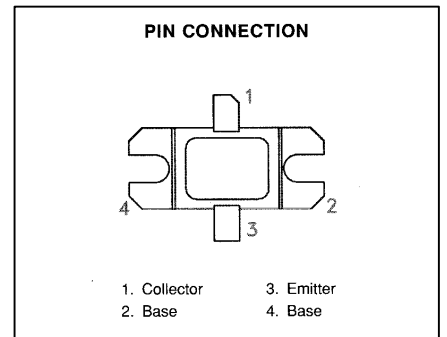
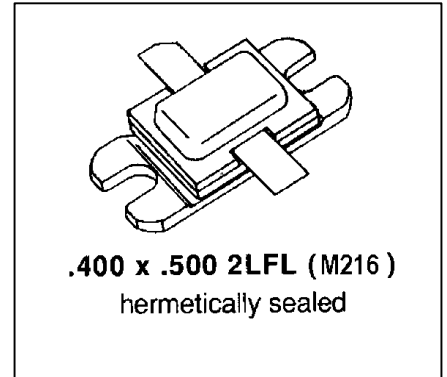


MS2207

**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	250	°C
T _{STG}	Storage Temperature	-65 to +200	°C

Thermal Data

R _{TH(J-C)}	Junction-case Thermal Resistance	0.17	°C/W
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ELECTRICAL SPECIFICATIONS (Tcase = 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
h_{FE}	V_{CE} = 5 V	I_C = 5 A	10	---	---	---

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

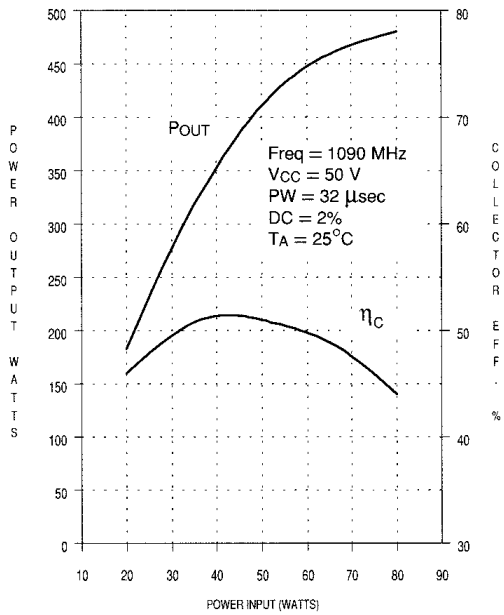
FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
1025 MHz	2.4 + j 3.2	1.4 - j 2.2
1090 MHz	3.8 + j 2.5	1.6 - j 1.6
1150 MHz	2.3 + j 1.3	1.2 - j 1.1

P_{IN} = 63 W

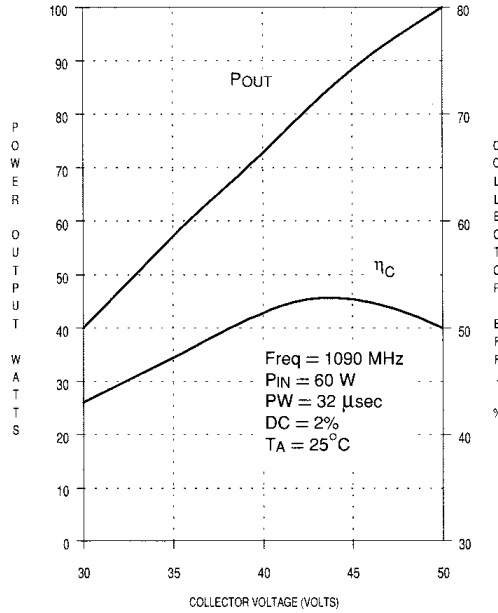
V_{CC} = 50 V

TYPICAL PERFORMANCE

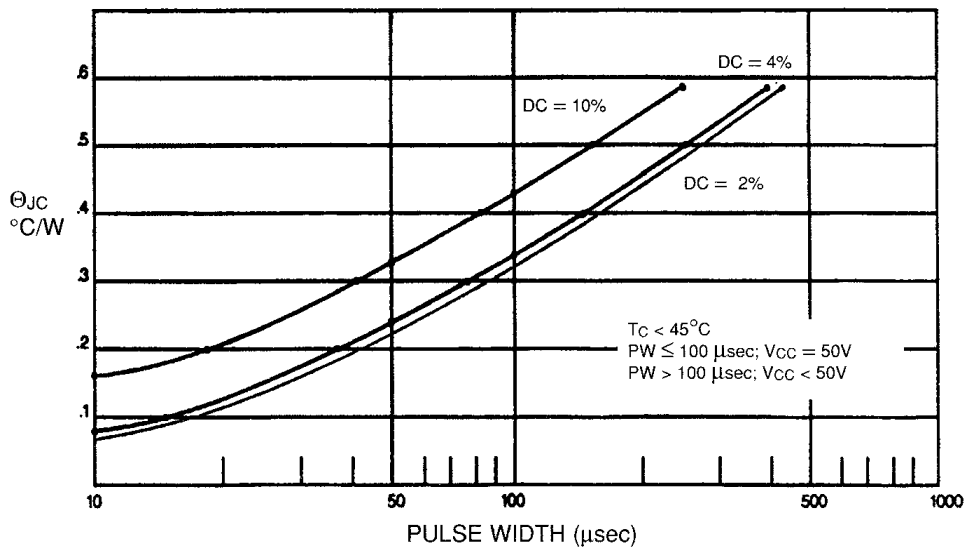
**TYPICAL NARROWBAND
POWER AMPLIFIER**



**TYPICAL RELATIVE OUTPUT
POWER & COLLECTOR EFFICIENCY
vs COLLECTOR VOLTAGE**

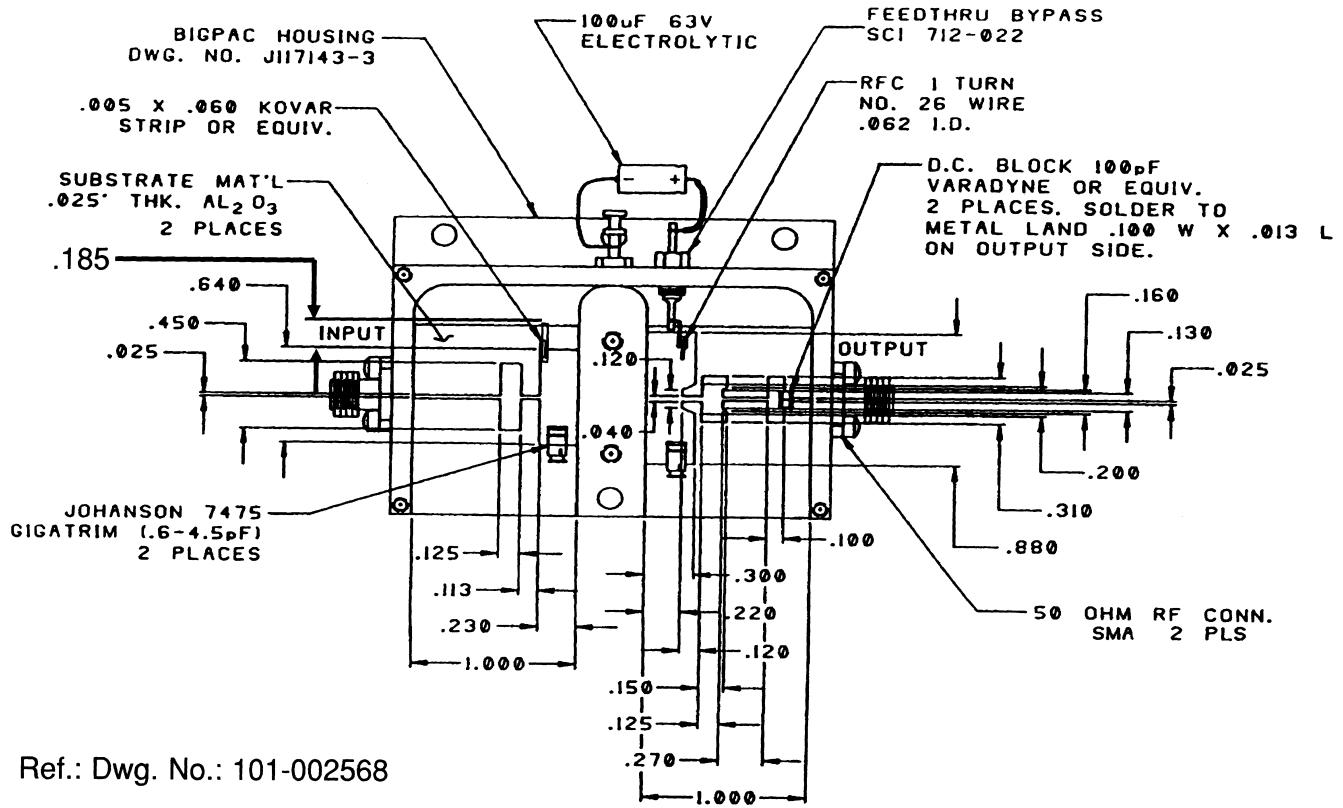


MAXIMUM THERMAL RESISTANCE vs PULSE WIDTH & DUTY CYCLE



MS2207

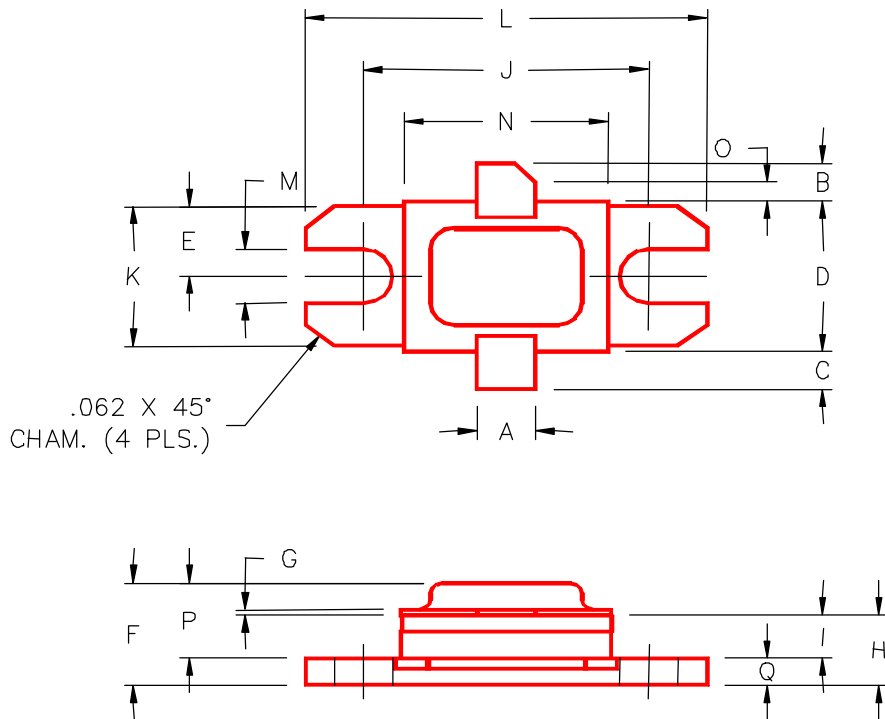
TEST CIRCUIT



Ref.: Dwg. No.: 101-002568

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				