



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!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

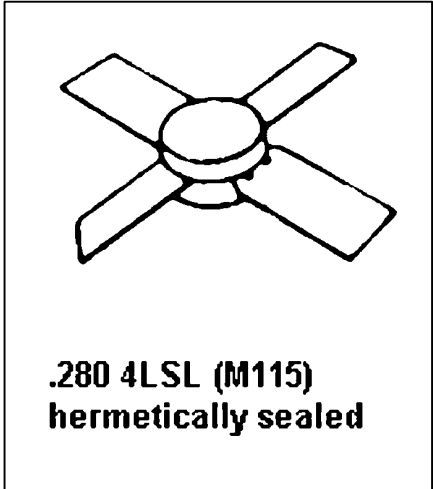


MS2204

**RF & MICROWAVE TRANSISTORS
AVIONICS APPLICATIONS**

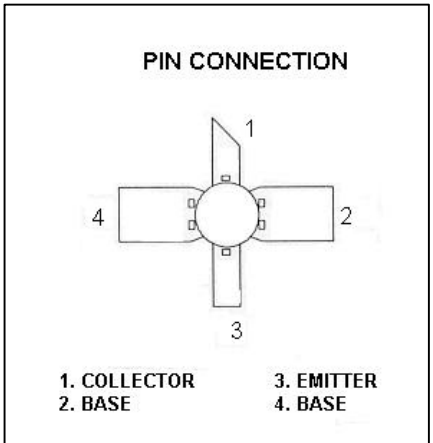
Features

- 1090 MHz
- 18 VOLTS
- P_{OUT} = 0.6 WATTS
- G_P = 10.8 dB MINIMUM
- CLASS A OPERATION
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- COMMON EMITTER CONFIGURATION



DESCRIPTION:

The MS2204 is a common emitter, silicon NPN, microwave transistor designed for Class A driver applications under DME or IFF pulse conditions. This device is capable of withstanding an infinite load VSWR at any phase angle under rated conditions.



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

Symbol	Parameter	Value	Unit
P _{DISS}	Total Power Dissipation* (see Safe Area)		W
I _C	Device Current*	300	mA
V _{CE}	Collector-Emitter Bias Voltage*	20	V
T _j	Junction Temperature (Pulsed RF Operation)	+200	°C
T _{stg}	Storage Temperature	-65 to +150	°C

Thermal Data

R _{TH(J-C)}	Junction-case Thermal Resistance	35	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CEO}	I_C = 5.0 mA I_B = 0 mA	20	---	---	V
BV_{CBO}	I_C = 1.0 mA I_E = 0 mA	50	---	---	V
BV_{EBO}	I_E = 1.0 mA I_C = 0 mA	3.5	---	---	V
I_{CES}	V_{CB} = 28 V I_E = 0 mA	---	---	1.0	mA
h_{FE}	V_{CE} = 5.0 V I_C = 100 mA	15	---	120	---

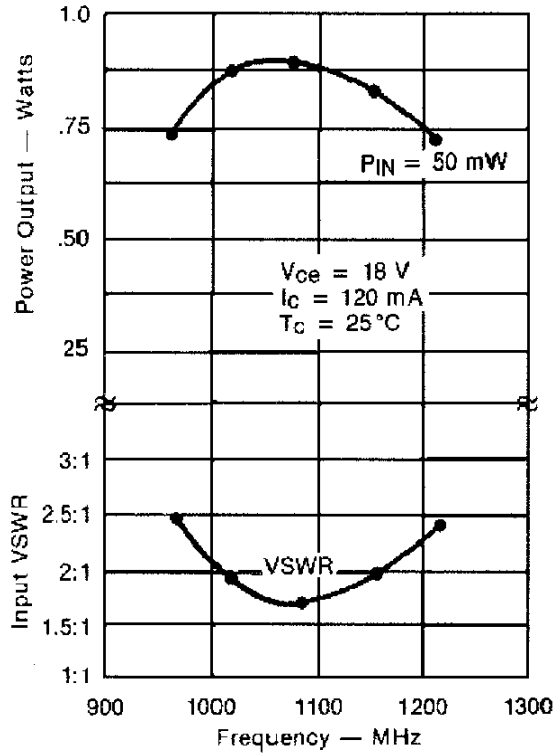
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 1025 – 1150 MHz P_{IN} = 50mW	0.6			W
G_{PE}	f = 1025 - 1150 MHz P_{IN} = 50 mW	10.8	---	---	dB

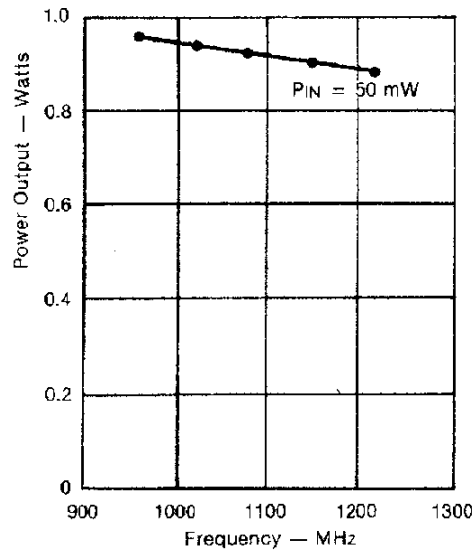
Conditions: **V_{CE} = 18V** **I_{CQ} = 120 mA**
 Pulse width = 10mS **Duty Cycle = 1%**

MS2204

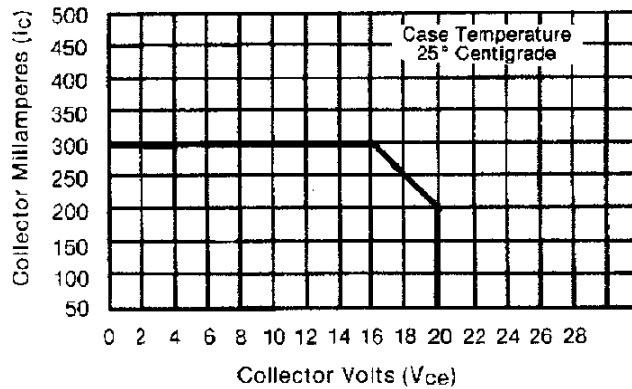
**TYPICAL PERFORMANCE
BROADBAND POWER AMPLIFIER**



**NARROWBAND POWER
OUTPUT vs FREQUENCY**



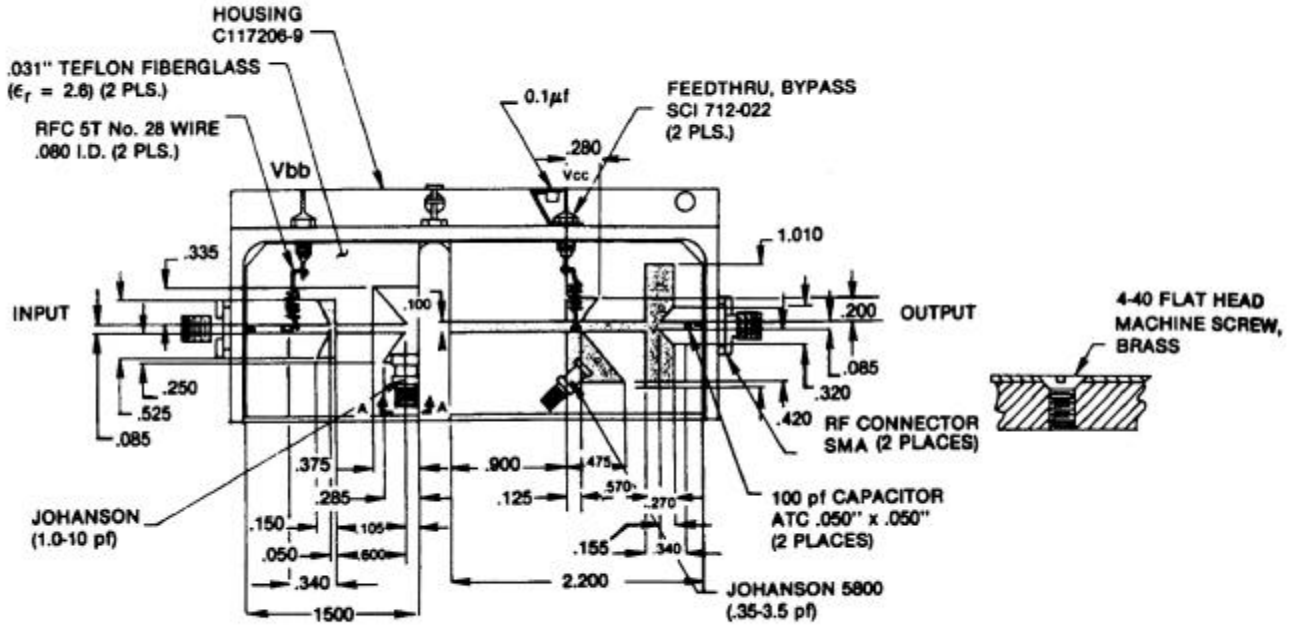
**MAXIMUM OPERATING AREA for
FORWARD BIAS OPERATION**



MS2204

TEST CIRCUIT

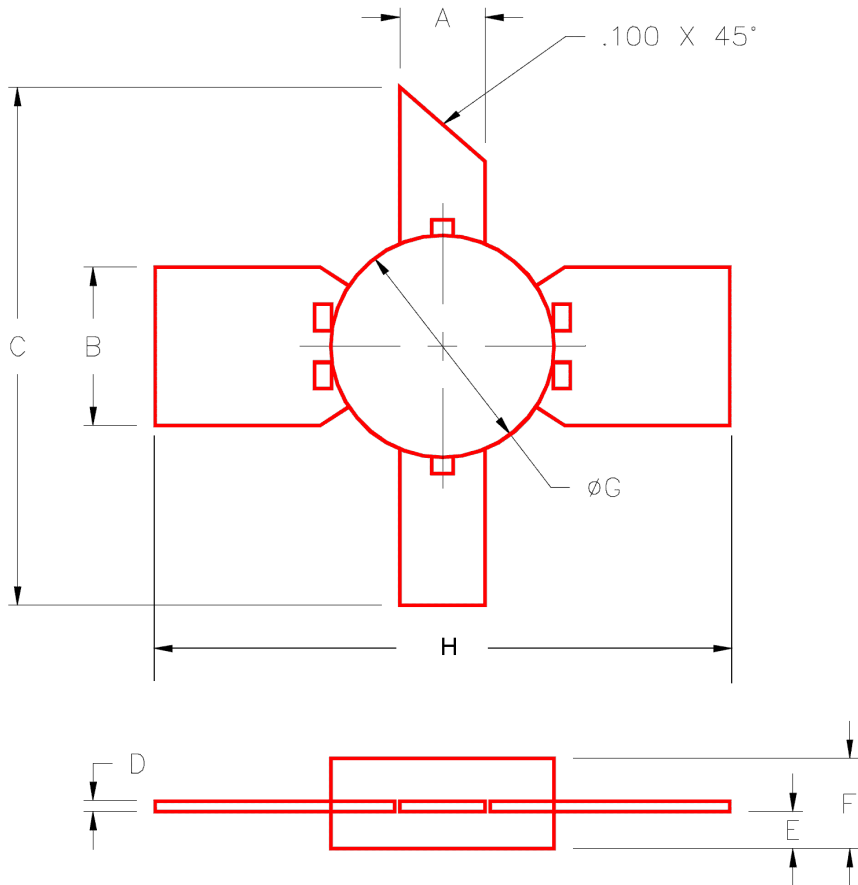
Ref.: Dwg. No. C127297



All dimensions are in inches.

PACKAGE MECHANICAL DATA

PACKAGE STYLE M115



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.095/2,41	.105/2,67			
B	.195/4,95	.205/5,21			
C	1.000/25,40				
D	.004/0,10	.007/0,18			
E	.050/1,27	.065/1,65			
F	.120/3,05	.135/3,43			
G	.275/6,99	.285/7,21			
H	1.000/25,40				