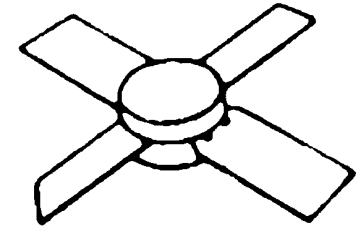


MS2204

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

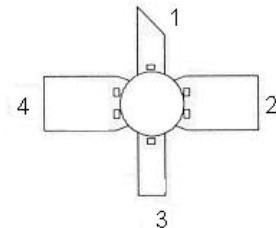


**.280 4LSL (M115)
hermetically sealed**

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.

PIN CONNECTION



1. COLLECTOR 3. EMITTER
2. BASE 4. BASE

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

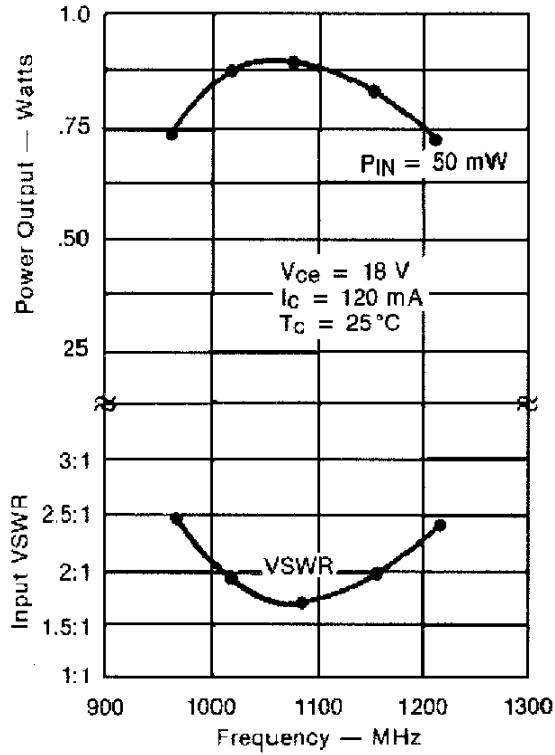
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CEO}	I_C = 5.0 mA I_B = 0 mA	20	---	---	V
BV_{CBO}	I_C = 1.0 mA I_E = 0 mA	50	---	---	V
BV_{EBO}	I_E = 1.0 mA I_C = 0 mA	3.5	---	---	V
I_{CES}	V_{CB} = 28 V I_E = 0 mA	---	---	1.0	mA
h_{FE}	V_{CE} = 5.0 V I_C = 100 mA	15	---	120	---

DYNAMIC

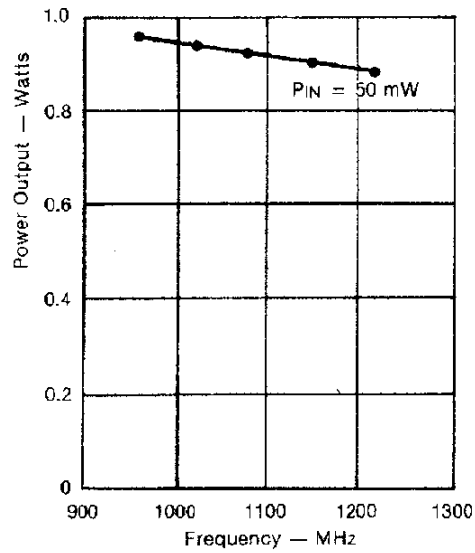
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 1025 – 1150 MHz P_{IN} = 50mW	0.6			W
G_{PE}	f = 1025 - 1150 MHz P_{IN} = 50 mW	10.8	---	---	dB

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

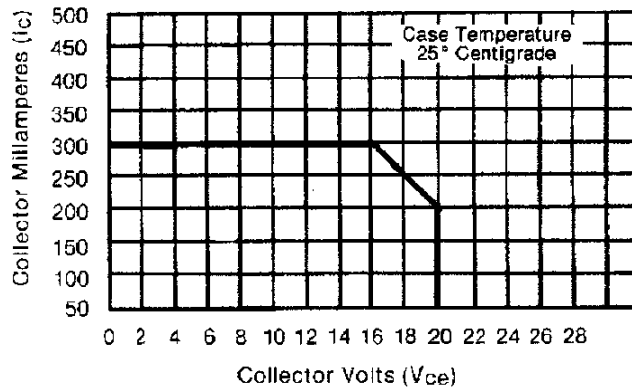
**TYPICAL PERFORMANCE
BROADBAND POWER AMPLIFIER**



**NARROWBAND POWER
OUTPUT vs FREQUENCY**

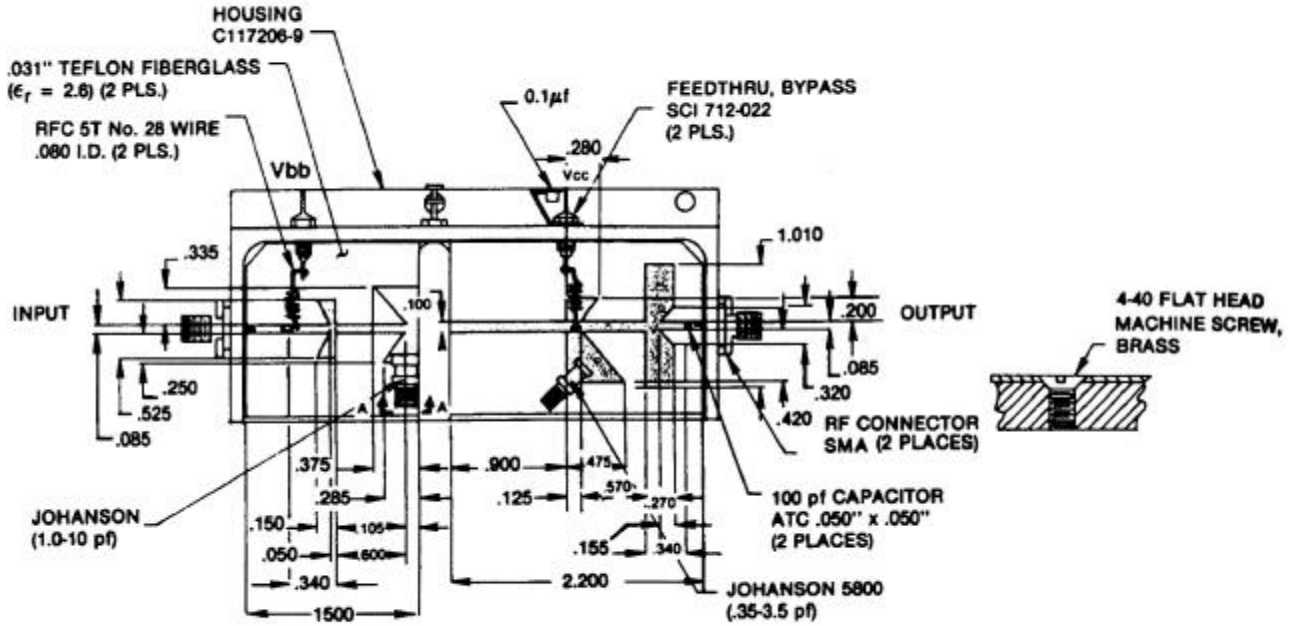


**MAXIMUM OPERATING AREA for
FORWARD BIAS OPERATION**



TEST CIRCUIT

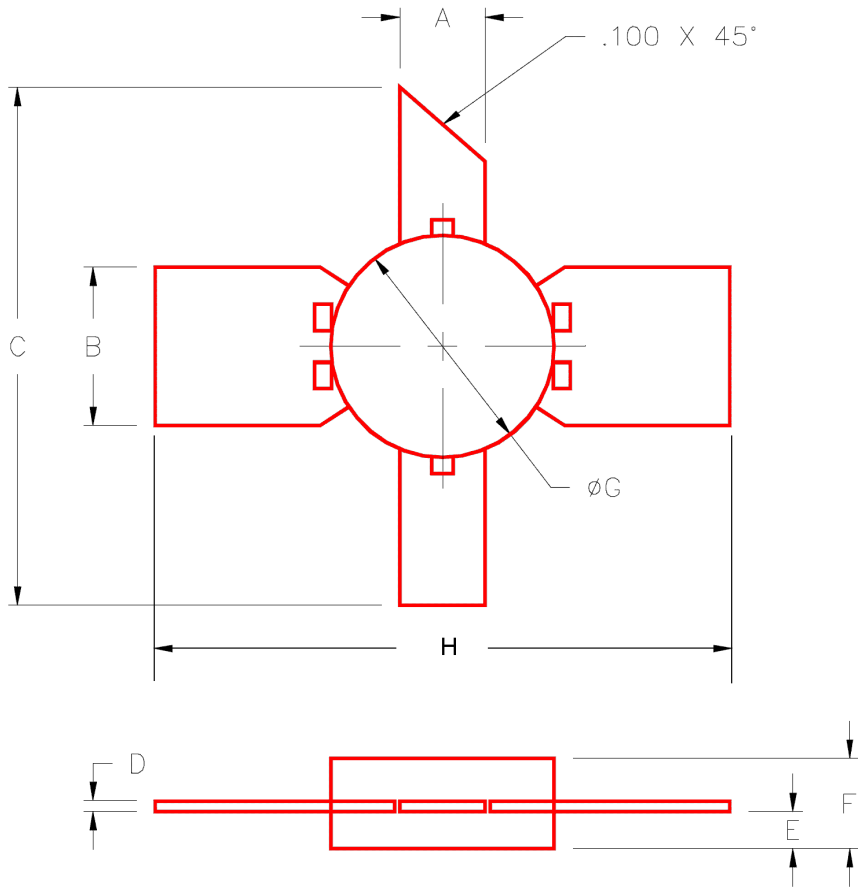
Ref.: Dwg. No. C127297



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				