

MS2203

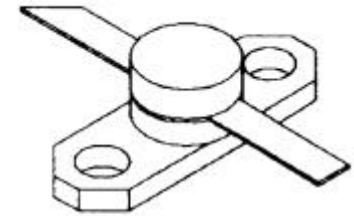
RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

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

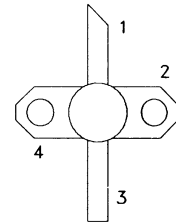
DESCRIPTION:

The MS2203 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.



**.280 2LFL M220
epoxy sealed**

PIN CONNECTION



1. Collector 3. Emitter
2. Base 4. Base

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

Symbol	Parameter	Value	Unit
V _{CE}	Collector-Emitter	20	V
I _C	Collector Current	300	mA
P _D	Total Device Dissipation	5	W
T _J	Junction Temperature	200	°C
T _{stg}	Storage Temperature Range	-65 + 150	°C

Thermal Data

R _{TH(J-C)}	Thermal Resistance Junction-case	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_{CE} = 28 V	---	---	1.0	mA
h_{FE}	V_{CE} = 5.0 V I_C = 100 mA	15	---	120	---

DYNAMIC

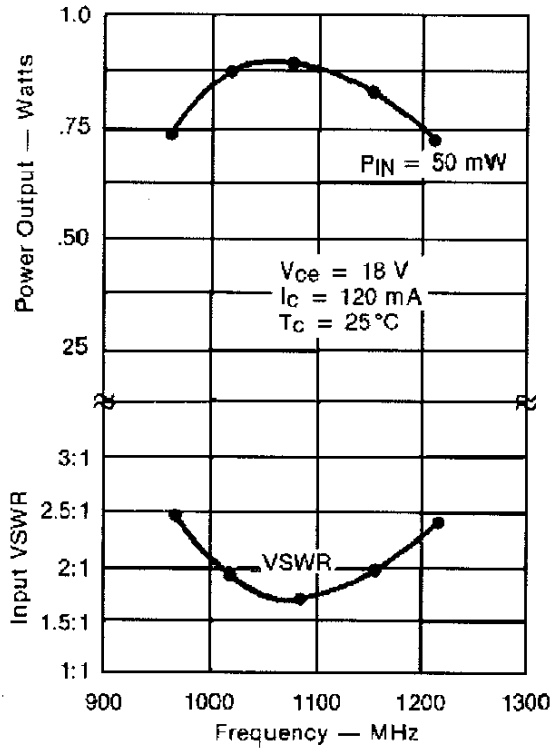
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 1025 – 1150 MHz P_{IN} = 50mW	0.6	0.85	---	W
G_{PE}	f = 1025 – 1150 MHz P_{IN} = 50 mW	10.8	12.3	---	dB

Conditions: V_{CE} = 18V

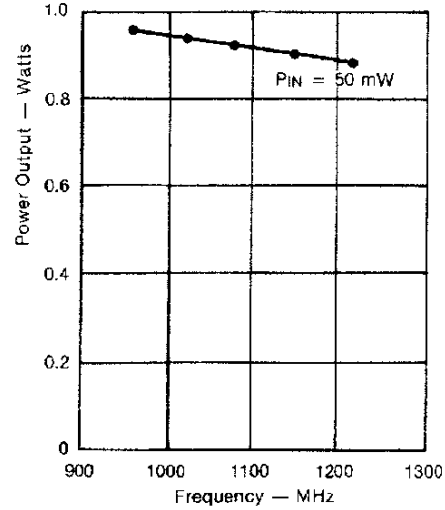
Pulse width = 10μS Duty Cycle = 1%

TYPICAL PERFORMANCE

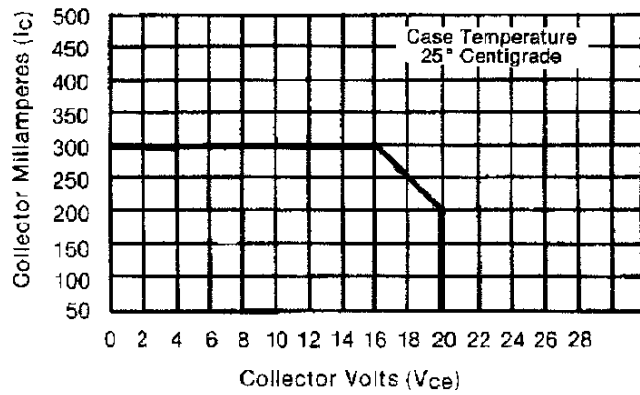
BROADBAND POWER AMPLIFIER



NARROWBAND POWER OUTPUT vs FREQUENCY



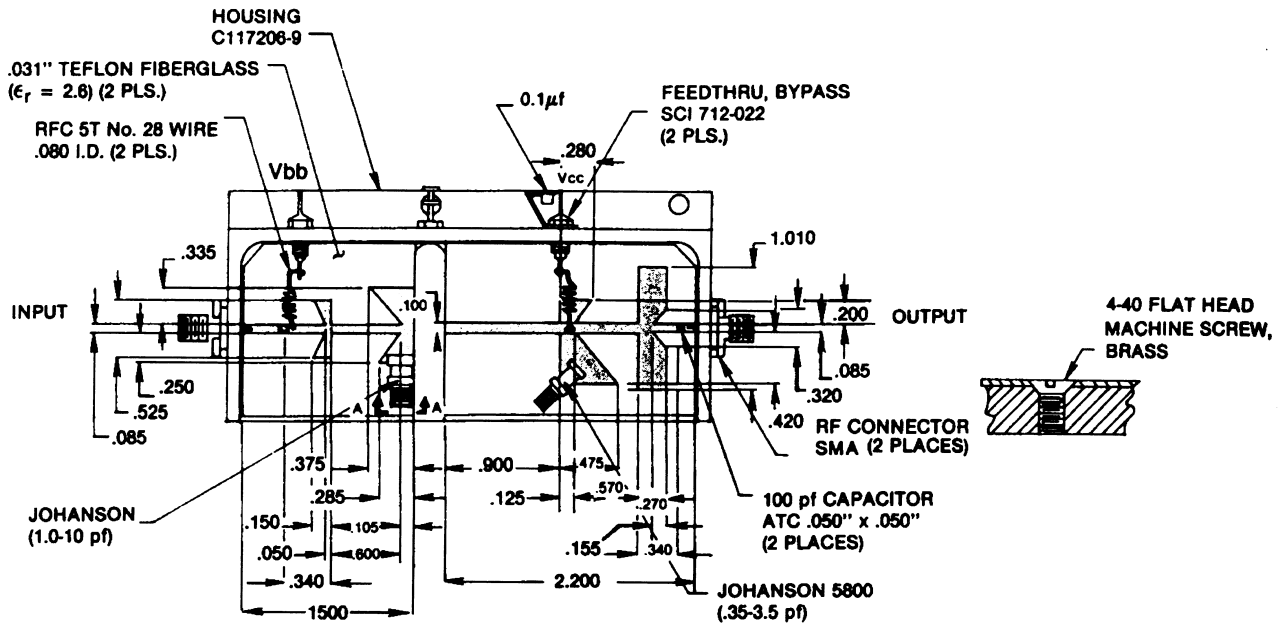
MAXIMUM OPERATING AREA for FORWARD BIAS OPERATION



MS2203

TEST CIRCUIT

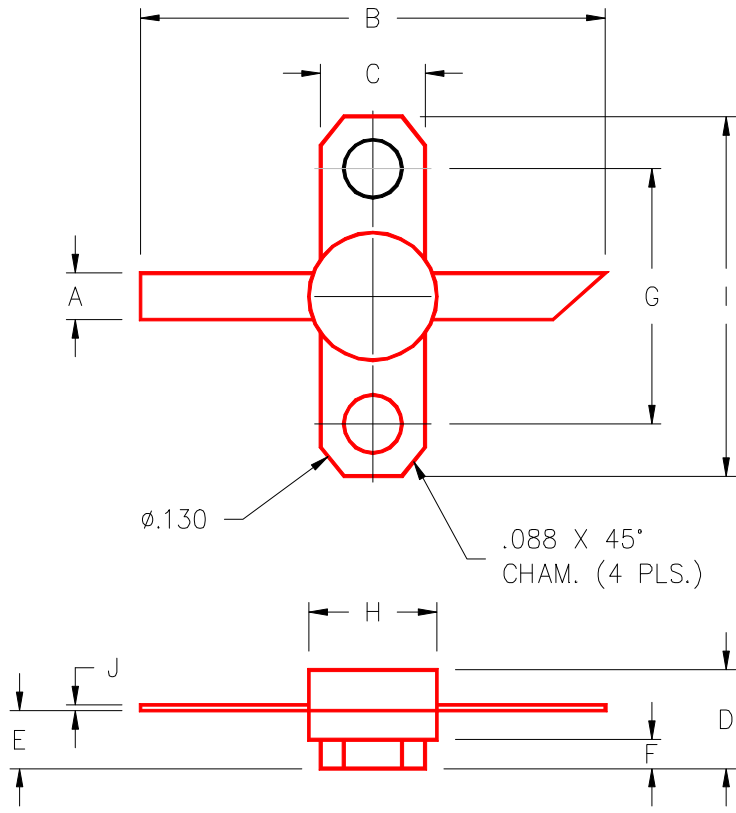
Ref.: Dwg No. C127297



All dimensions are in inches.

PACKAGE MECHANICAL DATA

PACKAGE STYLE M220



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.100/2,54		J	.003/0,08	.006/0,15
B	1.050/26,67				
C	.250/6,35				
D		.210/5,33			
E	.120/3,05	.130/3,30			
F	.062/1,58				
G	.562/14,28				
H		.285/7,24			
I	.800/20,32				