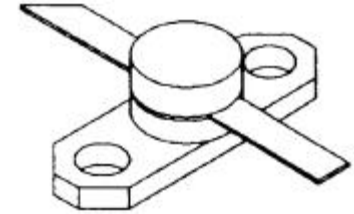


MS2201

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

Features

- 1025-1150 MHz
- GOLD METALLIZATION
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- Pout = 2 W MINIMUM
- G_p = 9 dB

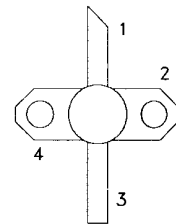


**.280 2LFL M220
epoxy sealed**

DESCRIPTION:

The MS2201 is a silicon NPN, Class C microwave transistor designed for Class C 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}	Power Dissipation	10	W
V _{CC}	Collector-Supply Voltage	37	V
T _J	Junction Temperature	200	°C
I _C	Device Current	250	mA
T _{STG}	Storage Temperature	-65 to +200	°C

Thermal Data

R _{TH(J-C)}	Junction-case Thermal Resistance*	10	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 1 mA I_E = 0 mA	45	---	---	V
BV_{CER}	I_C = 5 mA R_{BE} = 10Ω	45	---	---	V
BV_{EBO}	I_E = 1 mA I_C = 0 mA	3.5	---	---	V
I_{CES}	V_{CE} = 35 V	---	---	1.0	mA
HFE	V_{CE} = 5 V I_C = 100 mA	30	---	300	---

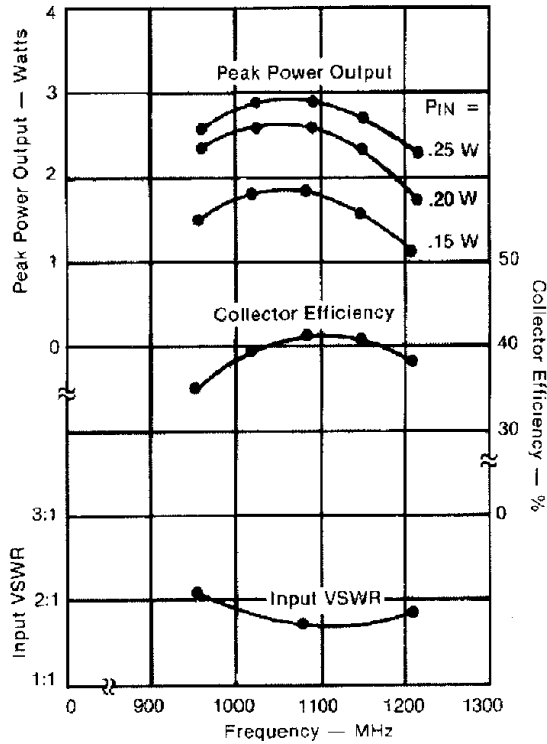
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 1025 - 1150 MHz P_{IN} = 250mW V_{CE} = 35V	2	---	---	W
η_C	f = 1025 - 1150 MHz P_{IN} = 250mW V_{CE} = 35V	35	---	---	%
G_p	f = 1025 - 1150 MHz P_{IN} = 250mW V_{CE} = 35V	9	---	---	dB

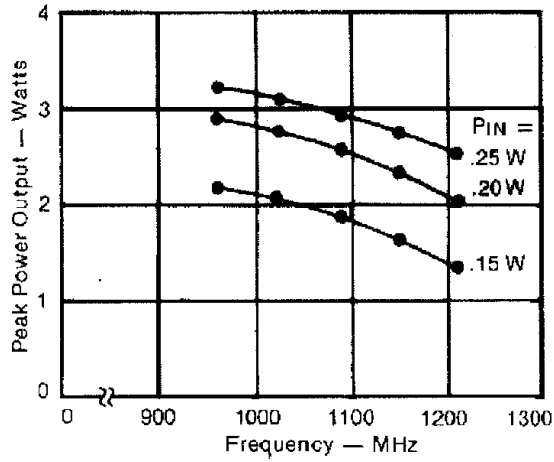
Conditions: Pulse Width = 10 μs Duty Cycle = 1%

TYPICAL PERFORMANCE

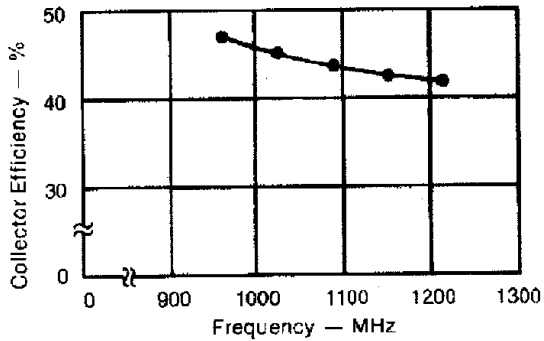
BROADBAND POWER AMPLIFIER



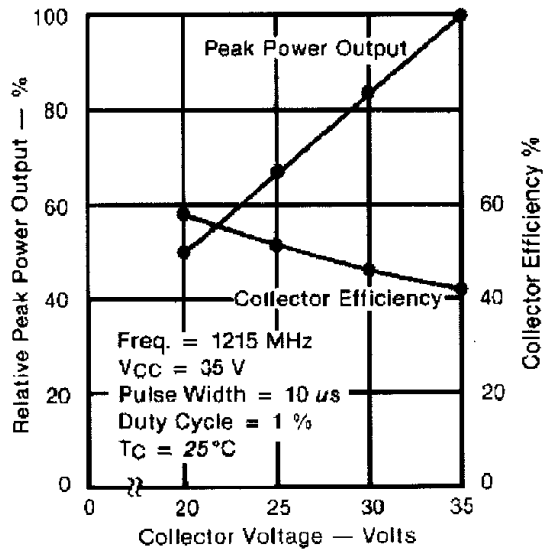
NARROWBAND PEAK POWER OUTPUT vs FREQUENCY



NARROWBAND COLLECTOR EFFICIENCY vs FREQUENCY

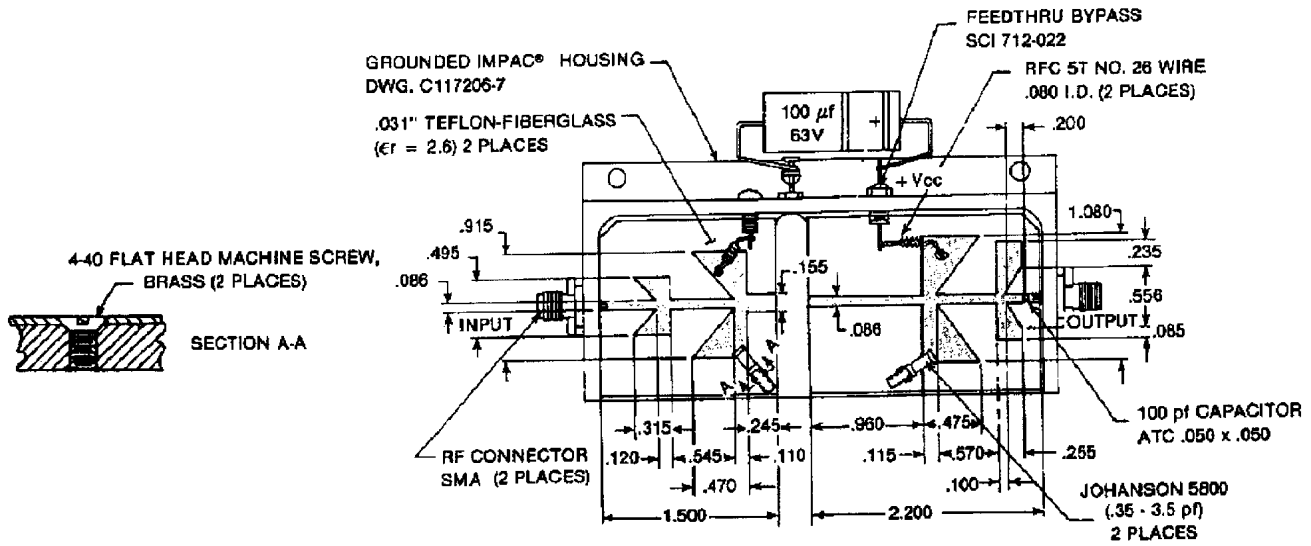


RELATIVE PEAK POWER OUTPUT & COLLECTOR EFFICIENCY vs COLLECTOR VOLTAGE



TEST CIRCUIT

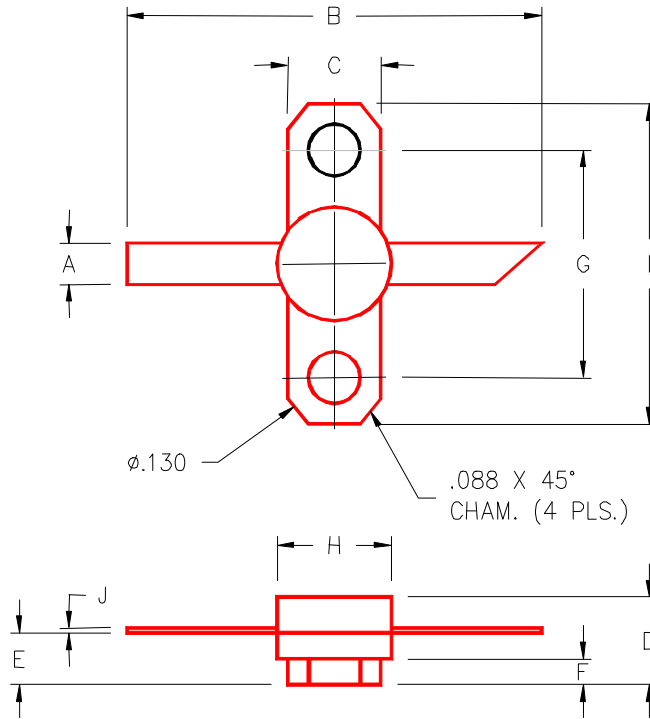
Ref.: Dwg. No. C127298



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				