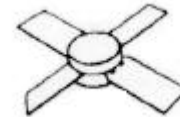


MS2322

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

Features

- 1025 - 1150 MHz
- 50 VOLT OPERATION
- $P_{OUT} = 15$ WATTS
- $G_P = 10$ dB MINIMUM
- 20:1 VSWR CAPABILITY @ RATED CONDITIONS
- COMMON BASE CONFIGURATION

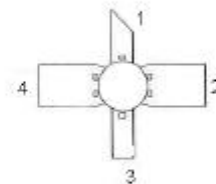


.280 4LSL (M115)
Epoxy Sealed

DESCRIPTION:

The MS2322 is a gold metallized, silicon NPN power transistor designed for pulsed applications with low duty cycles such as IFF, DME and TACAN. Internal impedance matching is utilized for maximum broadband performance and simplified external matching.

PIN CONNECTION



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

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	65	V
V_{CES}	Collector-Emitter Voltage	65	V
V_{EBO}	Emitter-Base Voltage	3.5	V
I_C	Device Current	1.5	A
P_{DISS}	Power Dissipation	87.5	W
T_J	Junction Temperature	+200	$^{\circ}C$
T_{STG}	Storage Temperature	-65 to +150	$^{\circ}C$

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	2.0	$^{\circ}C/W$
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 10mA I_E = 0mA	65	---	---	V
BV_{CES}	I_C = 25mA V_{BE} = 0V	65	---	---	V
BV_{EBO}	I_E = 1mA I_C = 0mA	3.5	---	---	V
I_{CES}	V_{CE} = 50V I_E = 0mA	---	---	2	mA
HFE	V_{CE} = 5V I_C = 100mA	10	---	200	---

DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 1025 - 1150 MHz P_{IN} = 1.5W V_{CC} = 50V	15	---	---	W
G_P	f = 1025 - 1150 MHz P_{IN} = 1.5W V_{CC} = 50V	10	---	---	dB
η_C	f = 1025 - 1150 MHz P_{IN} = 1.5W V_{CC} = 50V	30	---	---	%
Conditions	Pulse Width = 10 μs Duty Cycle = 1%				

IMPEDANCE DATA

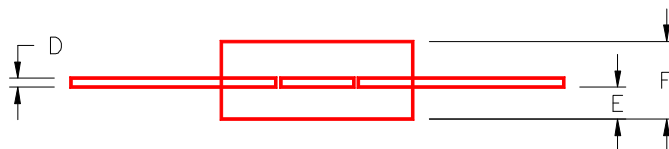
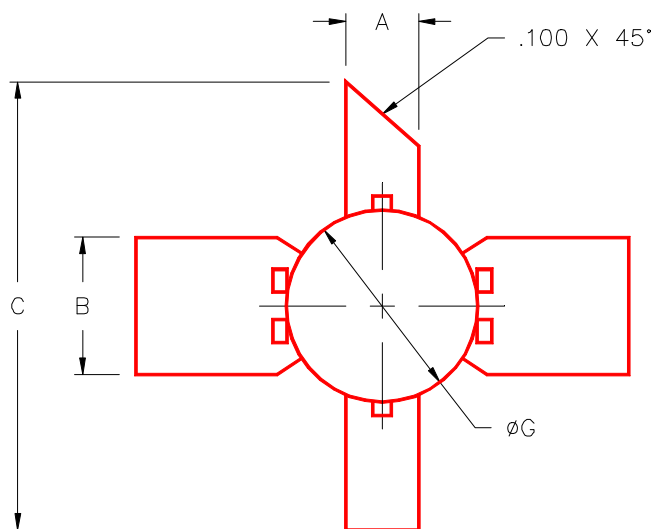
FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
1030 MHz	3.5 + j12.5	17.0 + j14.5
1090 MHz	3.0 + j13.5	19.5 + j12.5
1150 MHz	3.5 + j14.0	18.0 + j12.0

V_{CC} = 50V

P_{IN} = 1.5W

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			