

MS2290

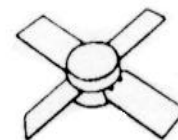
RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

Features

- 1090 MHz
- 18 VOLTS
- $P_{out} = 0.2$ WATTS
- $G_p = 10$ dB MINIMUM
- CLASS A OPERATION
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- COMMON EMITTER CONFIGURATION

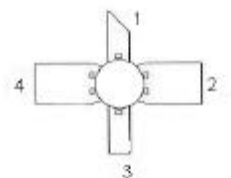
DESCRIPTION:

The MS2290 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 4LSL (M115)
hermetically sealed

PIN CONNECTION



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

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

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-Emitter	20	V
V_{CBO}	Collector-Base Voltage	50	V
V_{EBO}	Emitter-Base Voltage	3.5	V
I_C	Collector Current	200	mA
P_D	Total Device Dissipation	7.0	W
T_{stg}	Storage Temperature Range	-65 + 150	°C

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	25	°C/W
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MS2290

ELECTRICAL SPECIFICATIONS (Tcase = 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_{CES}	I _C = 5.0 mA	V _{BE} = 0mA	50	---	---	V
BV_{CBO}	I _C = 5.0 mA	I _E = 0 mA	50	---	---	V
BV_{EBO}	I _E = 1.0 mA	I _C = 0 mA	3.5	---	---	V
I_{CBO}	V _{CB} = 20 V	I _E = 0 mA	---	---	0.5	mA
HFE	V _{CE} = 5.0 V	I _C = 100 mA	10	---	100	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
G_{PE}	f = 1090 MHz	P _{OUT} = 0.2 W	V _{CE} = 18 V	10	---	---	dB
C_{OB}	f = 1.0 MHz	V _{CB} = 28 V		---	---	5.0	pf

Conditions: V_{CE} = 18V I_{CQ} = 100mA

IMPEDANCE DATA

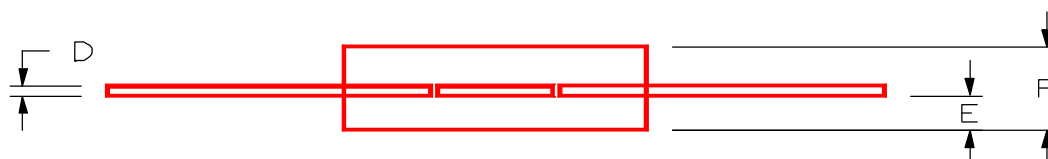
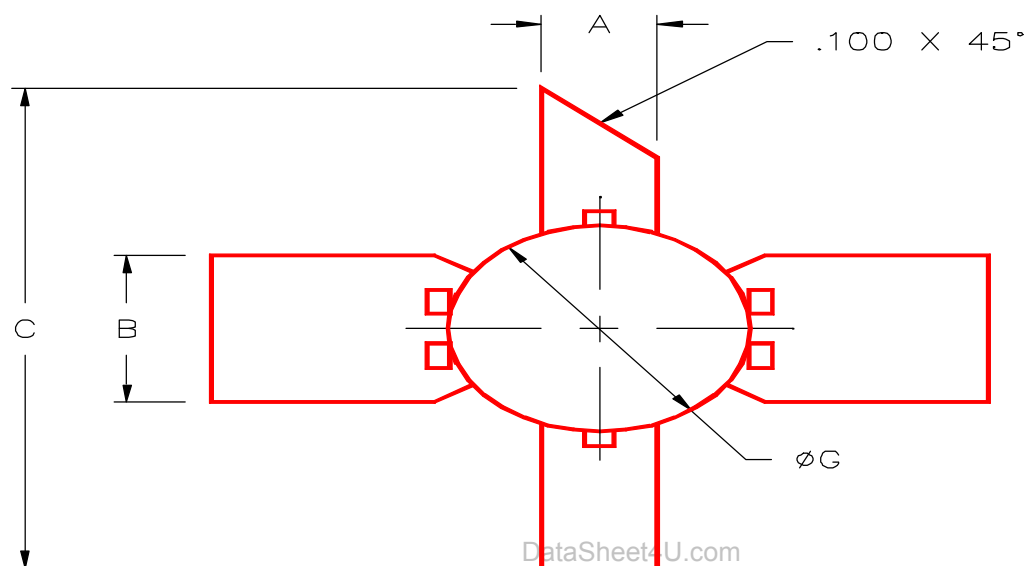
Freq	Z _{IN} (Ω)	Z _{CL} (Ω)
1090 MHz	3.4 + j12	8.2 + j27

P_{OUT} = 200 mW

V_{CE} = 18 V

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			