ADVANCED POWER TECHNOLOGY RF®

140 COMMERCE DRIVE
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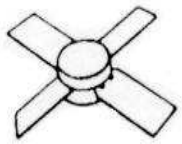
MS2290

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS



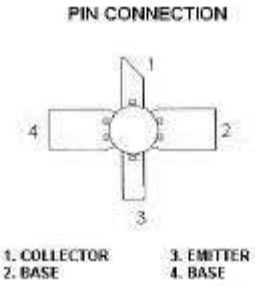
.280 4LSL (M115)
hermetically sealed

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.



ABSOLUTE MAXIMUM RATINGS (Tcase = 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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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

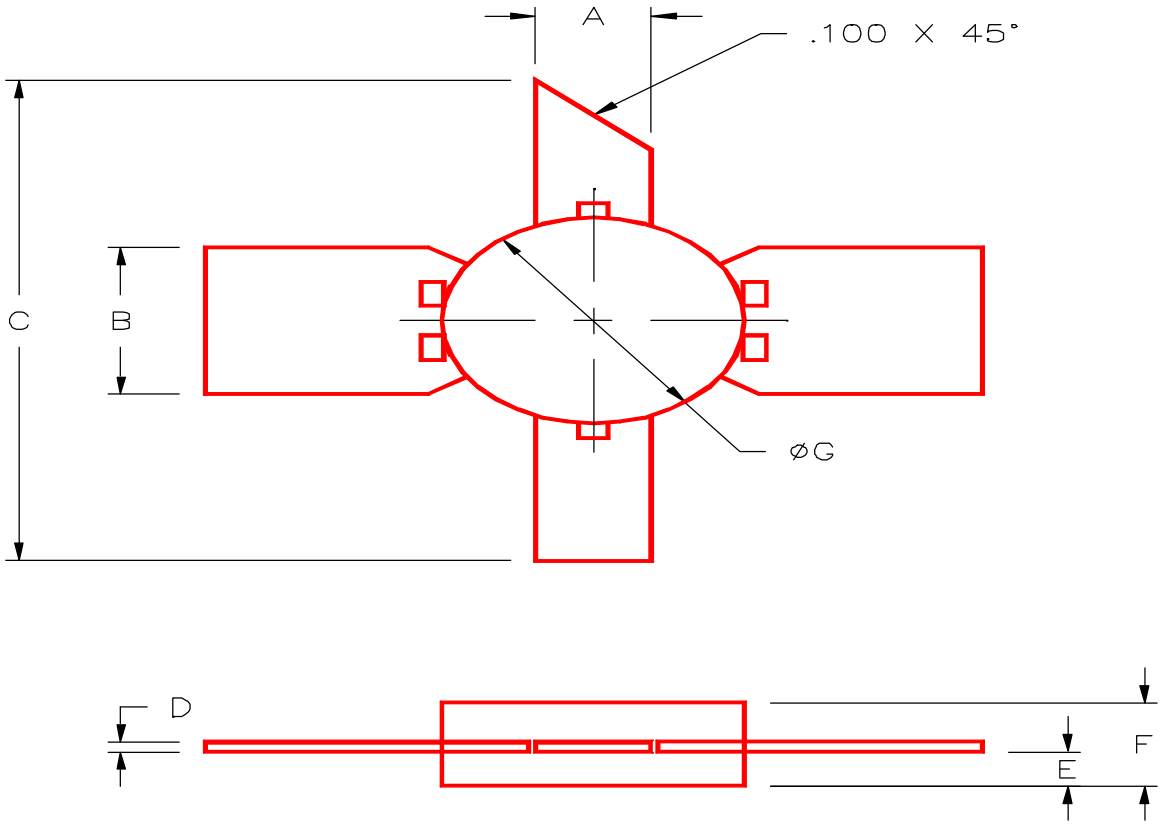
Freq	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
1090 MHz	3.4 + j12	8.2 + j27

P_{OUT} = 200 mW
V_{CE} = 18 V

MS2290

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			