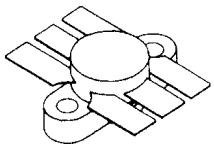
ADVANCED POWER TECHNOLOGY RF®

140 COMMERCE DRIVE
MONTGOMERYVILLE, PA
18936-1013
PHONE: (215) 631-9840
FAX: (215) 631-9855

MS1480

RF & MICROWAVE TRANSISTORS
UHF MOBILE APPLICATIONS



.500 6LFL (M111)
epoxy sealed

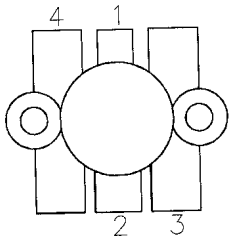
Features

- 470 MHz
- 12.5 VOLTS
- P_{OUT} = 45 W
- G_P = 5.0 dB MINIMUM
- COMMON EMITTER CONFIGURATION

DESCRIPTION:

The MS1480 is an epitaxial silicon NPN planar transistor designed primarily for 12.5 V Class C UHF communications. This device utilizes diffused emitter resistors to achieve infinite VSWR capability under specified operating conditions.

PIN CONNECTION



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

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CEO}	Collector-Emitter Voltage	16	V
V_{CES}	Collector-Emitter Voltage	36	V
V_{EBO}	Emitter-Base Voltage	4.0	V
P_{DISS}	Power Dissipation	175	W
I_C	Device Current	10.0	A
T_J	Junction Temperature	200	°C
T_{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	1.0	°C/W

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 5 mA	I_E = 0 mA	36	---	---	V
BV_{CES}	I_C= 20 mA	V_{BE} = 0 V	36	---	---	V
BV_{CEO}	I_C = 50 mA	I_B = 0 mA	16	---	---	V
BV_{EBO}	I_E = 5 mA	I_C = 0 mA	4.0	---	---	V
I_{CES}	V_{CE} = 22 V	I_E = 0 mA	---	---	5	mA
I_{CBO}	V_{CB} = 15 V	I_E = 0 mA	---	---	5	mA
HFE	V_{CE} = 5 V	I_C = 1A	20	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 470 MHz	P_{IN} = 14 W	V_{CE} = 12.5V	45	---	---	W
G_P	f = 470 MHz	P_{IN} = 14 W	V_{CE} = 12.5V	5.0	---	---	dB
C_{OB}	V_{CB} = 12.5 V	f = 1 MHz		---	130	---	pf

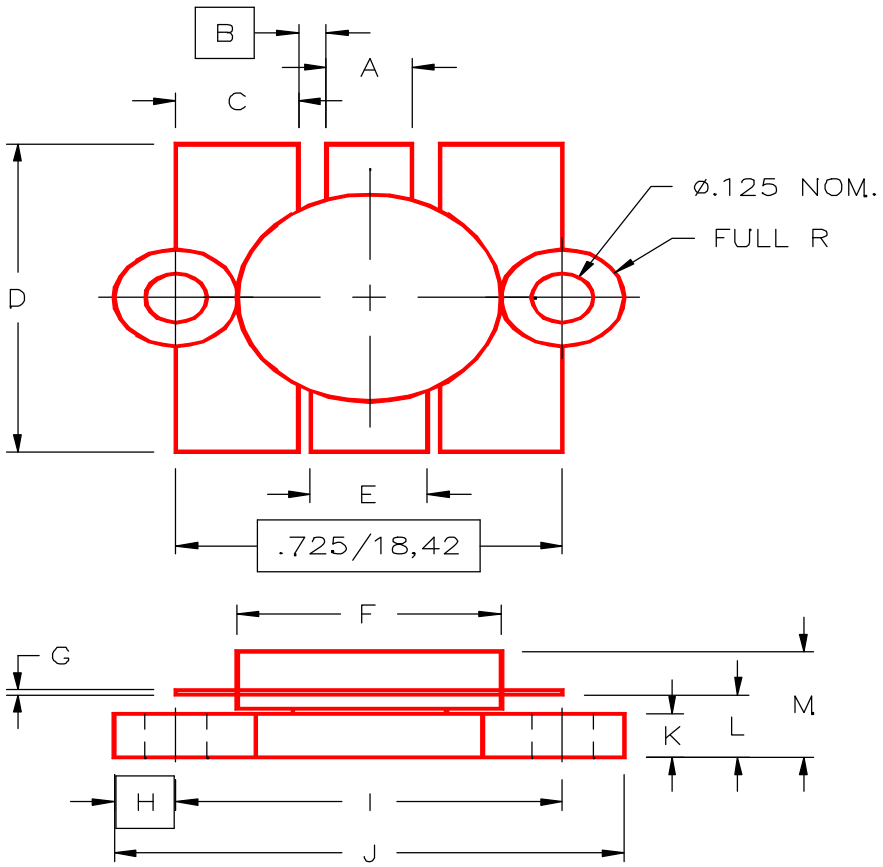
IMPEDANCE DATA

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
470 MHz	1.5 – j2.8	1.4 – j2.4
512MHz	0.75 – j1.3	0.6 – j0.8

P_{IN} = 14W
V_{CE} =12.5V

PACKAGE MECHANICAL DATA

PACKAGE STYLE M111



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.150/3,43	.160/4,06	I	.720/18,29	.730/18,54
B	.045/1,14		J	.970/24,64	.980/24,89
C	.210/5,33	.220/5,59	K	.095/2,41	.105/2,67
D	.835/21,21	.865/21,97	L	.150/3,81	.170/4,32
E	.200/5,08	.210/5,33	M		.280/7,11
F	.490/12,45	.510/12,95			
G	.003/0,08	.007/0,18			
H	.125/3,18				