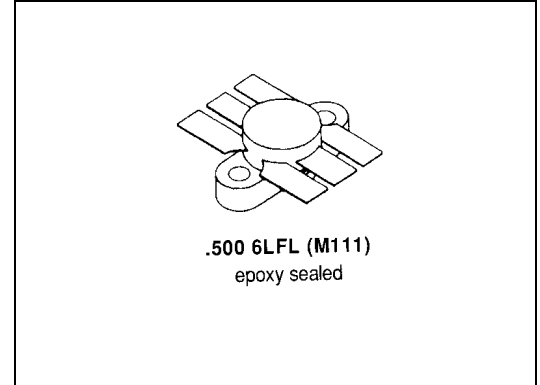


MS1480

RF & MICROWAVE TRANSISTORS UHF MOBILE APPLICATIONS

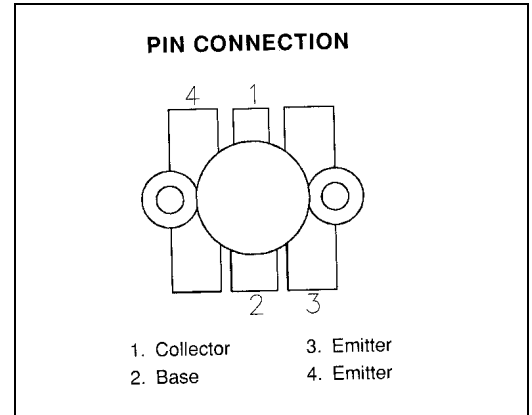
Features

- 470 MHz
- 12.5 VOLTS
- $P_{OUT} = 45\text{ W}$
- $G_p = 5.0\text{ dB MINIMUM}$
- 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.



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

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	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-65 to +150	$^{\circ}\text{C}$

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	1.0	$^{\circ}\text{C/W}$
---------------	----------------------------------	-----	----------------------

**ELECTRICAL SPECIFICATIONS (T_{case} = 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

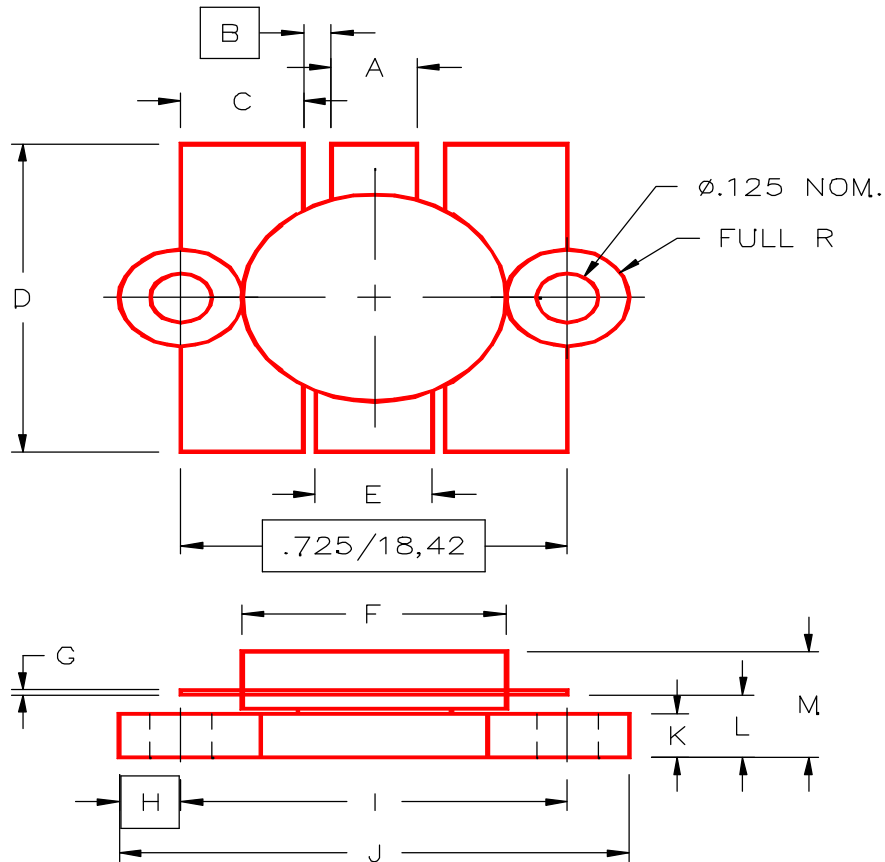
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 470 MHz	P_{IN} = 14 W	V_{CE} = 12.5V	45	---	---	W
G_P	f = 470 MHz	P_{IN} = 14 W	V_{CE} = 12.5V	5.0	---	---	dB
C_{OB}	V_{CB} = 12.5 V	f = 1 MHz		---	130	---	pf

IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
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				