

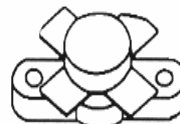


MS1505

RF & MICROWAVE TRANSISTORS VHF MOBILE APPLICATIONS

Features

- 160 MHz
- 13.6 VOLTS
- $P_{OUT} = 30$ WATTS
- $G_p = 10$ dB MINIMUM
- COMMON EMITTER CONFIGURATION

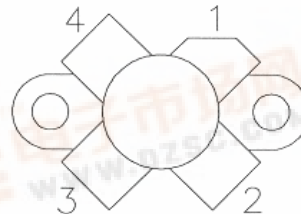


.380 4LFL (M113)
epoxy sealed

DESCRIPTION:

The MS1505 is a 13.6 volt Class C epitaxial silicon NPN planar transistor designed primarily for VHF communications. The MS1505 utilizes an emitter ballasted die geometry to withstand severe load VSWR conditions.

PIN CONNECTION



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

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CEO}	Collector-Emitter Voltage	18	V
V_{CES}	Collector-Emitter Voltage	36	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	8.0	A
P_{DISS}	Power Dissipation	70	W
T_J	Junction Temperature	+200	°C
T_{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

$R_{TH(J-C)}$	Junction-case Thermal Resistance	1.2	°C/W
---------------	----------------------------------	-----	------



ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CES}	I_C = 15mA	V_{BE} = 0mA	36	---	---	V
BV_{CEO}	I_C = 50mA	I_B = 0mA	18	---	---	V
BV_{EBO}	I_E = 5mA	I_C = 0mA	4.0	---	---	V
I_{CBO}	V_{CB} = 15V	I_E = 0mA	---	---	5	mA
h_{FE}	V_{CE} = 5V	I_C = 250mA	20	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 160MHz	P_{IN} = 3.0W	V_{CE} = 13.6V	30	---	---	W
G_P	f = 160MHz	P_{IN} = 3.0W	V_{CE} = 13.6V	10	---	---	dB
C_{OB}	f = 1MHz	V_{CB} = 15V		---	---	110	pf

IMPEDANCE DATA

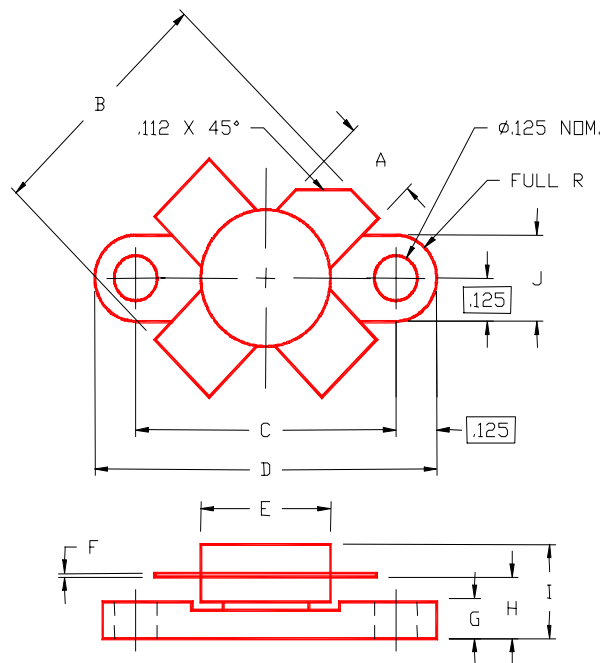
FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
160 MHz	1.0 +j0.4	2.3 + j0.1

P_{IN} = 3.0 W

V_{CE} = 12.5V

PACKAGE MECHANICAL DATA

PACKAGE STYLE M113



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.220/5,59	.230/5,84	I		.260/7,11
B	.785/19,94		J	.240/6,10	.255/6,48
C	.720/18,29	.730/18,54			
D	.970/24,64	.980/24,89			
E		.385/9,78			
F	.004/0,10	.006/0,15			
G	.085/2,16	.105/2,67			
H	.160/4,06	.180/4,57			