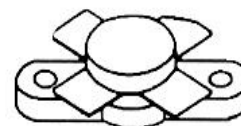


MS1507

RF & MICROWAVE TRANSISTORS VHF MOBILE APPLICATIONS

Features

- 160 MHz
- 13.6 VOLTS
- $P_{OUT} = 40$ WATTS
- $G_P = 9.0$ dB MINIMUM
- COMMON EMITTER CONFIGURATION

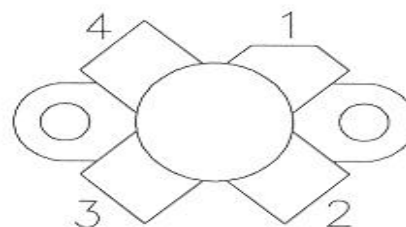


.380 4LFL (M113)
 epoxy sealed

DESCRIPTION:

The MS1507 is a 13.6 volt Class C epitaxial silicon NPN planar transistor designed primarily for VHF communications. The MS1507 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 (Tcase = 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
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

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

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 160 \text{ MHz}$	$P_{IN} = 5.0 \text{ W}$	$V_{CE} = 13.6 \text{ V}$	40	---	---	W
G_P	$f = 160 \text{ MHz}$	$P_{IN} = 5.0 \text{ W}$	$V_{CE} = 13.6 \text{ V}$	9.0	---	---	dB
C_{OB}	$V_{CE} = 12.5 \text{ V}$	$f = 1 \text{ MHz}$		---	---	120	pf

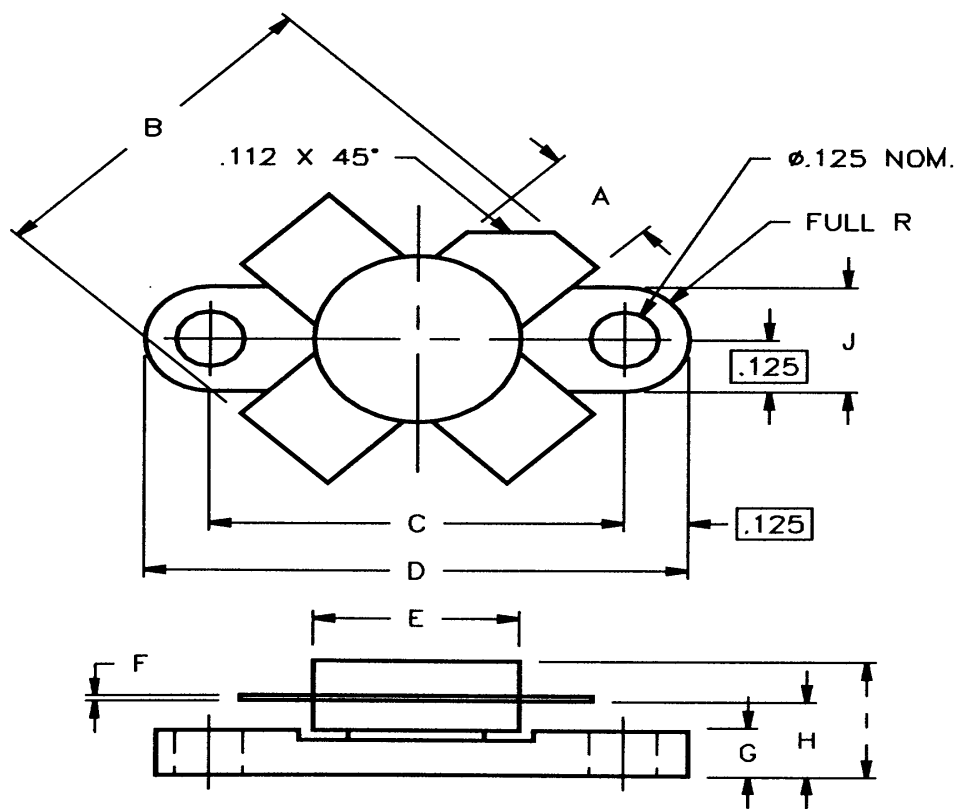
IMPEDANCE DATA

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
160 MHz	$1.0 + j0.4$	$2.3 + j0.1$

$P_{IN} = 3.0 \text{ W}$

$V_{CE} = 12.5 \text{ V}$

PACKAGE MECHANICAL DATA



	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			