

MS1337

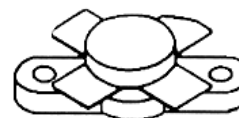
RF & MICROWAVE TRANSISTORS VHF MOBILE APPLICATIONS

Features

- 175 MHz
- 12.5 VOLTS
- $P_{OUT} = 30W$ MINIMUM
- $G_P = 10$ dB GAIN
- COMMON EMITTER CONFIGURATION

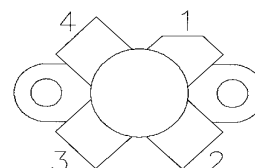
DESCRIPTION:

The MS1337 is a 12.5 volt epitaxial silicon NPN planar transistor designed primarily for Class C, VHF communication applications. The MS1337 utilizes an emitter ballasted die geometry to withstand severe load mismatch conditions.



.380 4LFL (M113)
epoxy sealed

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

STATIC

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

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f =175 MHz	P_{IN} = 3.0 W	V_{CE} =12.5 V	30	---	---	W
G_p	f =175 MHz	P_{IN} = 3.0 W	V_{CE} =12.5 V	10	---	---	dB
Cob	f =1 MHz	V_{CB} = 15 V		---	---	120	pf

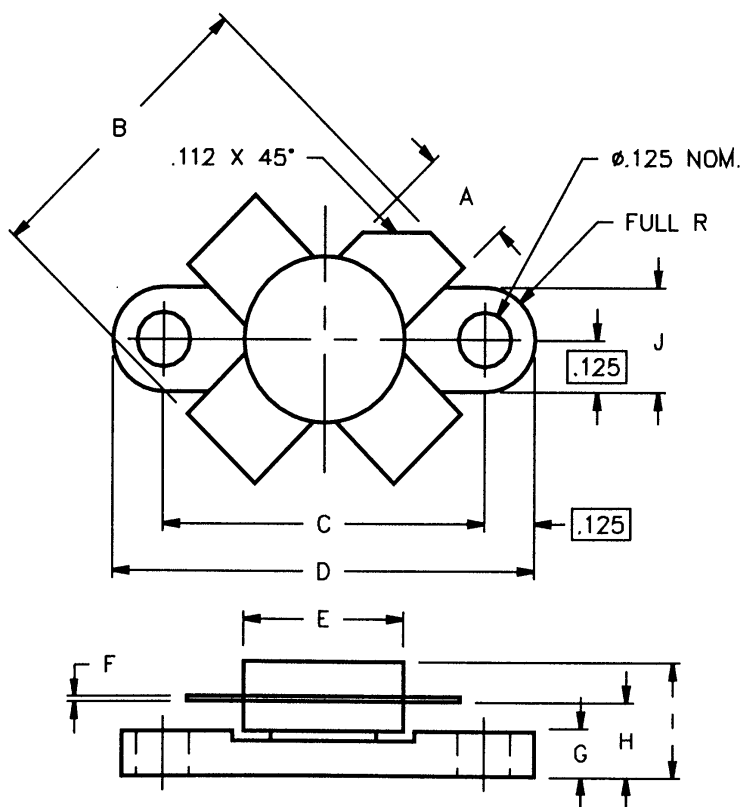
IMPEDANCE DATA

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

P_{IN} = 3.0W
V_{CE} = 12.5V

MS1337

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			