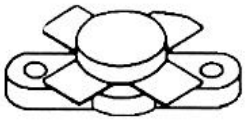
MS1227

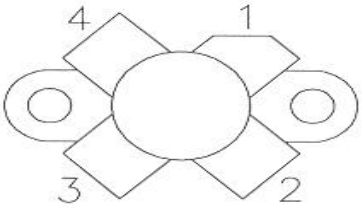
RF & MICROWAVE TRANSISTORS
HF SSB APPLICATIONS



.380 4LFL (M113)
epoxy sealed

Features

- 30 MHz
- 12.5 VOLTS
- GOLD METALIZATION
- P_{OUT} = 20 W MINIMUM
- G_P = 15 dB
- COMMON EMITTER CONFIGURATION



DESCRIPTION:

The MS1227 is a 12.5V epitaxial NPN planar transistor designed primarily for SSB communications. This device utilizes emitter ballasting for improved ruggedness and reliability.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CEO}	Collector-Emitter Voltage	18	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	4.5	A
P_{DISS}	Power Dissipation	80	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	2.2	°C/W

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

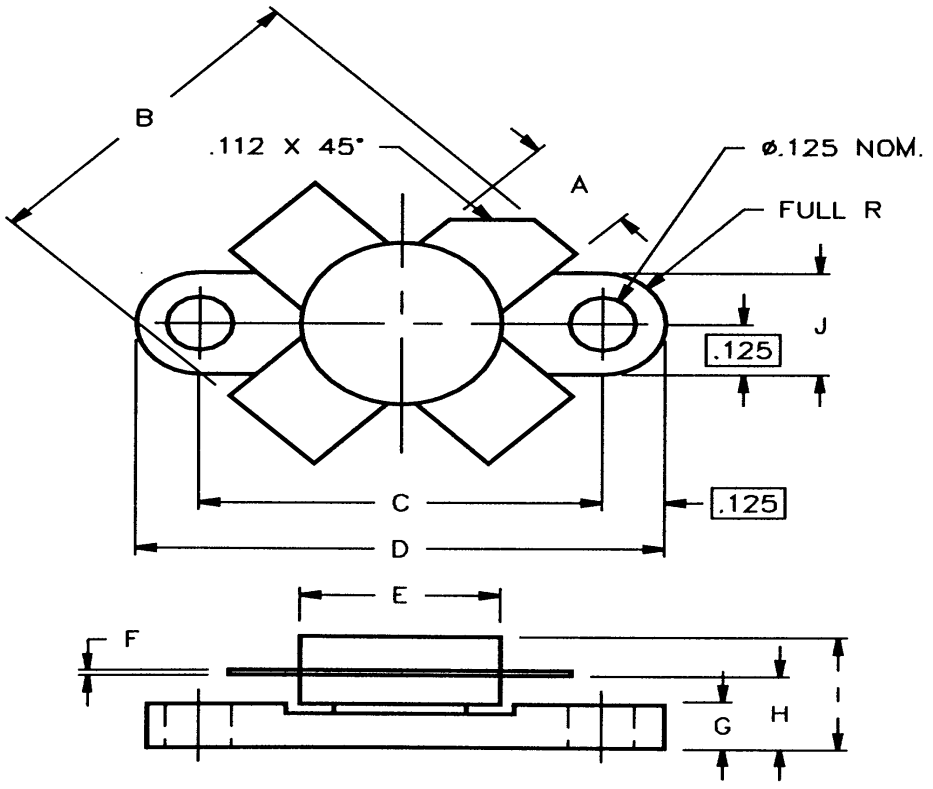
Symbol	Test Conditions		Value			
			Min.	Typ.	Max.	Unit
BVcbo	I_C = 50mA	I_E = 0mA	36	---	---	V
Bvces	I_C = 50mA	V_{BE} = 0V	36	---	---	V
Bvceo	I_C = 50mA	I_B = 0mA	18	---	---	V
Bvebo	I_E = 5mA	I_C = 0mA	4.0	---	---	V
Ices	V_{CB} = 15V	I_E = 0mA	---	---	5	mA
H_{FE}	V_{CE} = 5V	I_C = 1A	10	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			
				Min.	Typ.	Max.	Unit
P_{OUT}	f = 30MHz	V_{CC} = 12.5V	I_{CQ} = 25mA	20	---	---	W
G_P	f = 30MHz	V_{CC} = 12.5V	I_{CQ} = 25mA	15	---	---	dB
IMD	f = 30MHz	V_{CC} = 12.5V	I_{CQ} = 25mA	---	---	-30	dB
Cob	f = 1 MHz	V_{CB} = 30V		---	---	135	pf

MS1227

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			