



THE DATASHEET OF MS1227

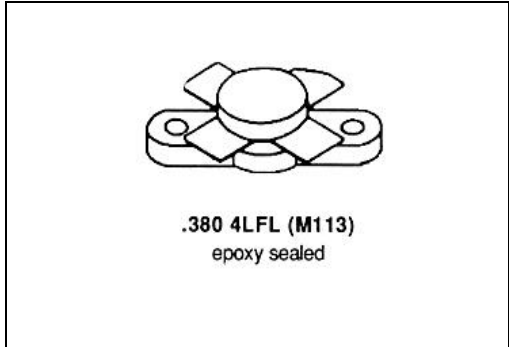


MS1227

RF & MICROWAVE TRANSISTORS HF SSB APPLICATIONS

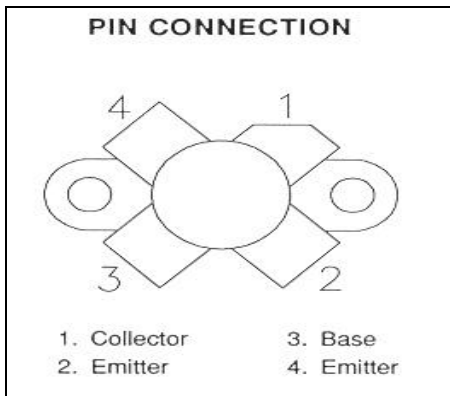
Features

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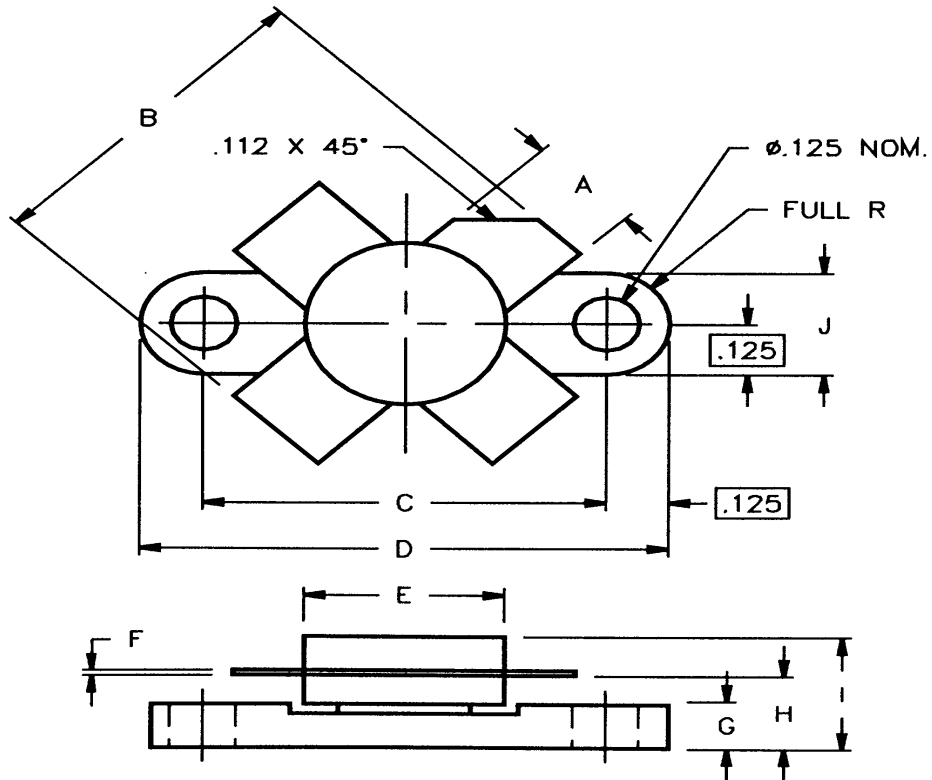
ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{cbo}	I _C = 50mA	I _E = 0mA	36	---	---	V
Bv _{ces}	I _C = 50mA	V _{BE} = 0V	36	---	---	V
Bv _{ceo}	I _C = 50mA	I _B = 0mA	18	---	---	V
Bvebo	I _E = 5mA	I _C = 0mA	4.0	---	---	V
I _{ces}	V _{CB} = 15V	I _E = 0mA	---	---	5	mA
H _{FE}	V _{CE} = 5V	I _C = 1A	10	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
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

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			

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