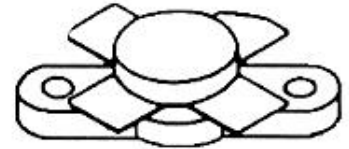


MS1408
**RF AND MICROWAVE TRANSISTORS
108-152MHz APPLICATIONS**
Features

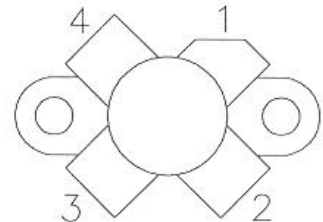
- **FM CLASS C TRANSISTOR**
- **FREQUENCY 136MHz**
- **VOLTAGE 28V**
- **POWER OUT 20W**
- **POWER GAIN 8.2dB**
- **EFFICIENCY 55%**
- **COMMON EMITTER**

DESCRIPTION:

The MS1408 is a 28 volt epitaxial silicon NPN planar transistor designed for 108-152MHz AM class C and FM communications. This device utilizes diffused emitter resistors to achieve VSWR at rated operating 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	65	V
V _{CEO}	Collector-Emitter Voltage	35	V
V _{CES}	Collector-Emitter Voltage	65	V
V _{EBO}	Emitter-Base Voltage	4	V
I _C	Collector Current	3	A
P _{DISS}	Power Dissipation	30	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	5.83	°C/W
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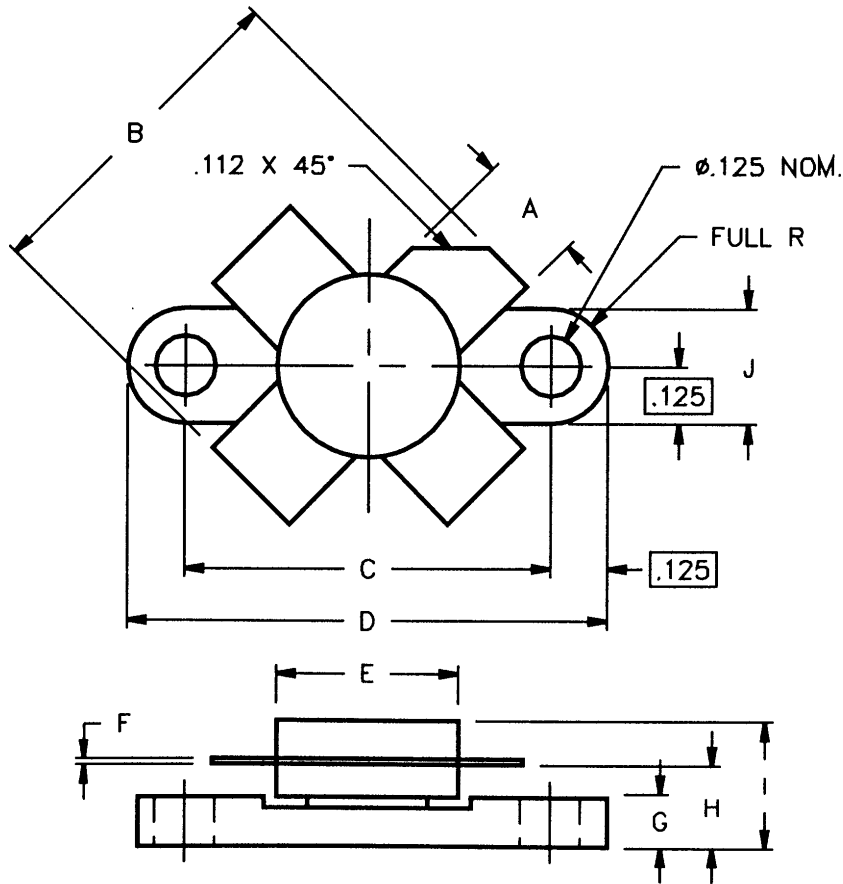
ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 200 mA I_E = 0 V	65			V
BV_{CES}	I_C = 200 mA V_{BE} = 0 V	65			V
BV_{CEO}	I_C = 200 mA I_B = 0 mA	35			V
BV_{EBO}	I_E = 10 mA I_C = 0 mA	4			V
I_{CBO}	V_{CB} = 30 V I_E = 0 V			1	mA
h_{FE}	V_{CE} = 5 V I_C = 200 mA	5			—

DYNAMIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
P_{OUT}	f = 136 MHz V_{CE} = 28 V	20			W
G_{P*}	f = 136 MHz V_{CE} = 28 V	8.2			dB
C_{OB}	f = 1 MHz V_{CB} = 30 V I_E = 0 V			35	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			