

MS1006

RF AND MICROWAVE TRANSISTORS HF SSB APPLICATIONS

Features

- Optimized for SSB
- 30 MHz
- 50 Volts
- Common Emitter
- Gold Metallization
- $P_{OUT} = 75 \text{ W Min.}$
- $G_P = 14 \text{ dB Gain}$

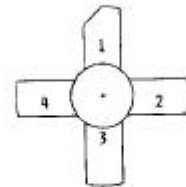
DESCRIPTION:

The MS1006 is a 50 V Class AB epitaxial silicon NPN planar transistor designed primarily for SSB and VHF communications. This device utilizes emitter ballasting for improved ruggedness and reliability.



.380 4LSTUD(M135)
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	110	V
V_{CEO}	Collector-Emitter Voltage	55	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	3.25	A
P_{DISS}	Power Dissipation	127	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	2.0	°C/W
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
BV_{CES}	I_C = 100 mA V_{BE} = 0 V	110	—	—	V
BV_{CEO}	I_C = 200 mA I_B = 0 mA	55	—	—	V
BV_{EBO}	I_E = 10 mA I_C = 0 mA	4.0	—	—	V
h_{FE}	V_{CE} = 6 V I_C = 1.4 A	19	—	50	—

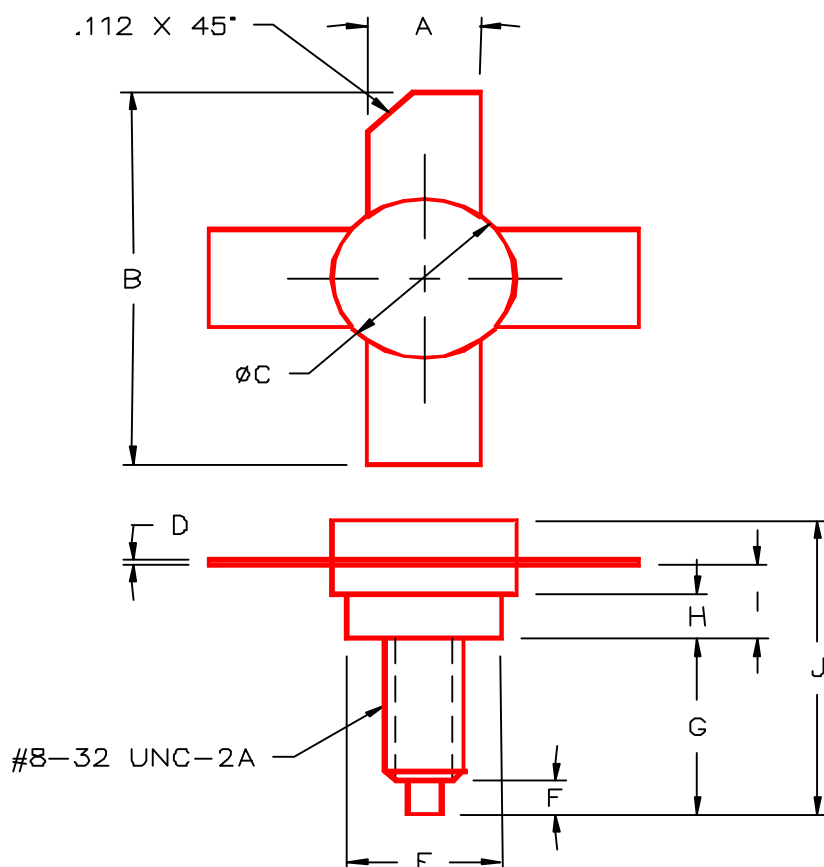
DYNAMIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
P_{OUT}	f = 30 MHz V_{CE} = 50 V	75	—	—	W
G_p *	P_{OUT} = 75 W PEP V_{CE} = 50 V	14	—	—	dB
IMD *	P_{OUT} = 75 W PEP V_{CE} = 50 V	—	—	-30	dBc
η_C *	P_{OUT} = 75 W PEP V_{CE} = 50 V	37	—	—	%
C_{OB}	f = 1 MHz V_{CB} = 50 V	—	—	100	PF

Note: * f₁ = 30.00 MHz, f₂ = 30.01 MHz

PACKAGE MECHANICAL DATA

PACKAGE STYLE M135



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.220/5,59	.230/5,84	I	.155/3,94	.175/4,45
B	.980/24,89		J		.750/19,05
C	.370/9,40	.385/9,78			
D	.004/0,10	.007/0,18			
E	.320/8,13	.330/8,38			
F	.100/2,54	.130/3,30			
G	.450/11,43	.490/12,45			
H	.090/2,29	.100/2,54			