ADVANCED POWER TECHNOLOGY RF®

MS1006

RF & MICROWAVE TRANSISTORS

PRODUCT PREVIEW

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.

IMPORTANT: For the most current data, visit: **http://www.advancedpower.com**

KEY FEATURES

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

APPLICATIONS/BENEFITS

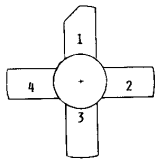
- HF SSB Applications

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

.380 4LSTUD(M135)
epoxy sealed

PIN CONNECTION



1 collector
2 emitter
3 base
4 emitter

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	2.0	°C/W

MS1006

STATIC ELECTRICAL SPECIFICATIONS (TCASE = 25°C

Symbol	Test Conditions		MS1006			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	—

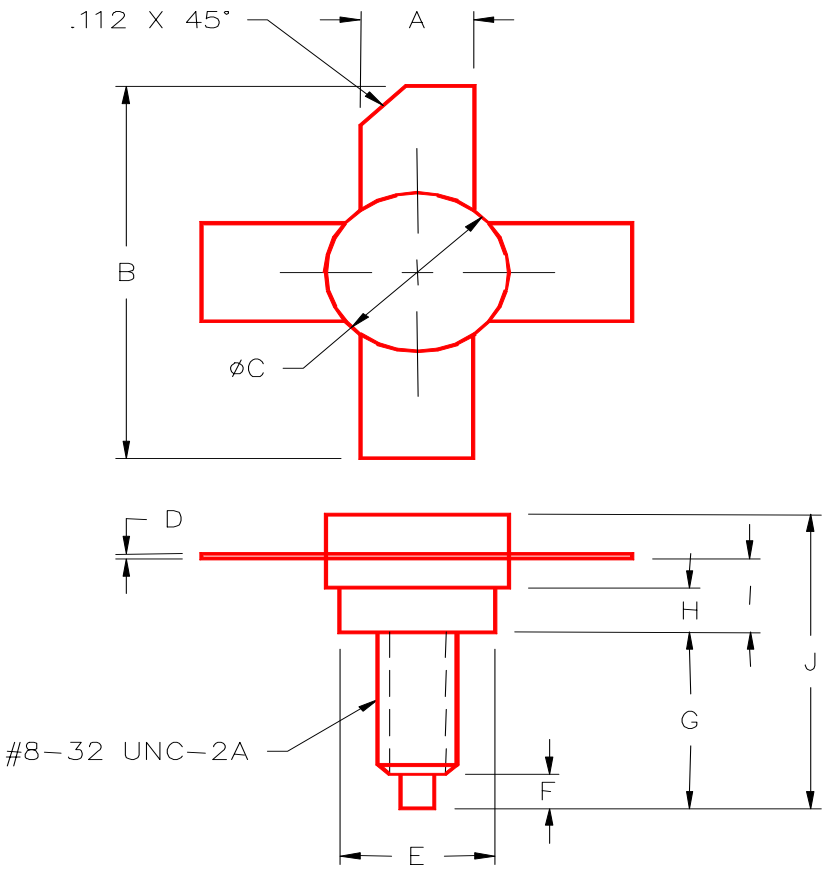
DYMANIC ELECTRICAL SPECIFICATIONS (TCASE = 25°C

Symbol	Test Conditions		MS1006			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: *f_1 = 30.00 MHz, f_2 = 30.01 MHz

ELECTRICALS

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			

PACKAGE DATTA