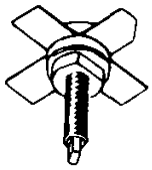
Microsemi
POWER PRODUCTS GROUP

MS1202

RF & MICROWAVE TRANSISTORS
FM MOBILE APPLICATIONS

Features

- 175 MHz
- 12.5 VOLTS
- P_{OUT} = 7.0 W
- G_P = 8.4 dB MINIMUM
- COMMON EMITTER CONFIGURATION

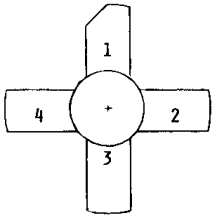


.380 4LSTUD (M135)
epoxy sealed

DESCRIPTION:

The MS1202 is a epitaxial silicon NPN transistor designed for 12.5 volt class C applications in the 118 – 136 MHz frequency band and 28 volt FM ground station applications. Gold metalization and emitter ballast resistors provide long term product ruggedness and reliability.

PIN CONNECTION



1 collector
2 emitter
3 base
4 emitter

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - Base Voltage	65	V
V_{CEO}	Collector - Emitter Voltage	35	V
V_{EBO}	Emitter - Base Voltage	4.0	V
P_{DISS}	Device Dissipation	15	W
T_J	Junction Temperature	200	°C
I_C	Device Current	1.0	A
T_{STG}	Storage Temperature	-65 to +200	°C

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	11.7	°C/W

Rev A January 2009

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{ces}	I_C = 200 mA	V_{BE} = 0 mA	65	---	---	V
BV_{ceo}	I_C = 200 mA	I_B =0	35	---	---	V
BV_{ebo}	I_E = 5 mA	I_C = 0 mA	4	---	---	V
I_{cbo}	V_{CB} = 30 V	I_E = 0 mA	---	---	1.0	mA
H_{FE}	V_{CE} = 5 V	I_C = 100 mA	5	---	150	---

DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P_{OUT}	f =175 MHz	V_{CE} =28V	7.0	---	---	W
G_P	f =175 MHz	V_{CE} =28V	8.4	---	---	dB
η_c	f =175 MHz	V_{CE} =28V	60			%
Cob	f =1 MHz	V_{CE} =30V	---	---	15	pF

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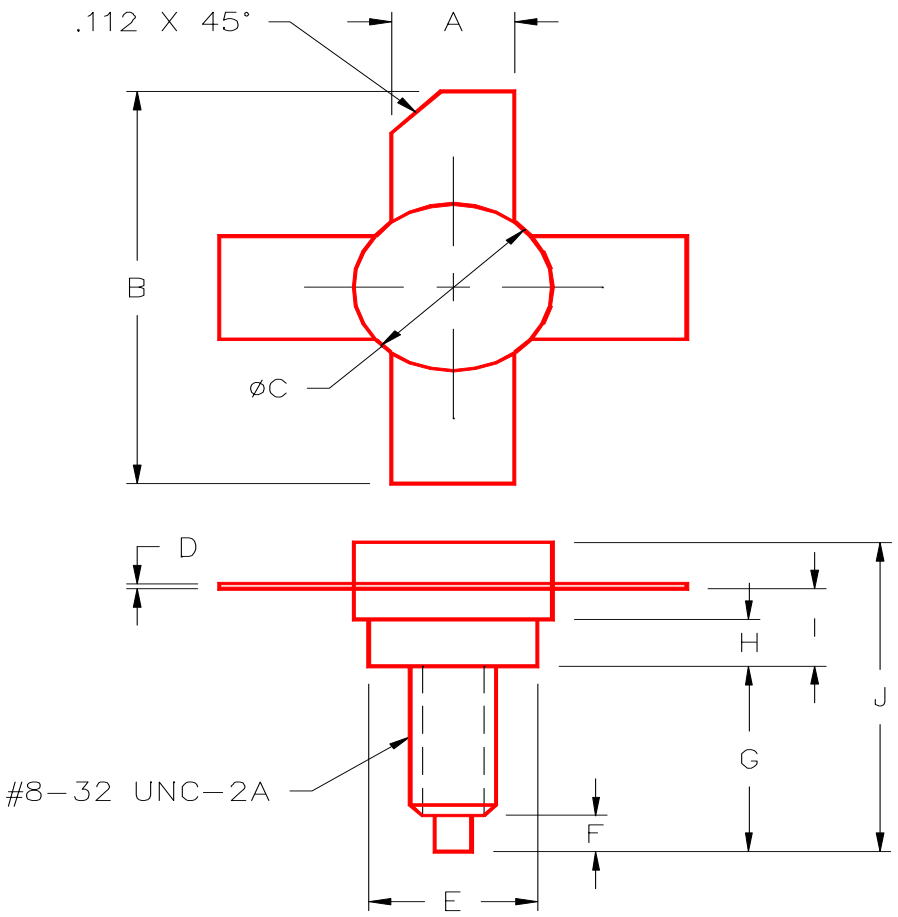
PACKAGE MECHANICAL DATA

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			