New Jersey Semi-Conductor Products, Inc.

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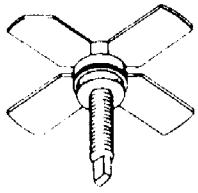
MS1261

RF & MICROWAVE TRANSISTORS
VHF MOBILE APPLICATIONS



.280 4L STUD (M122)
epoxy sealed

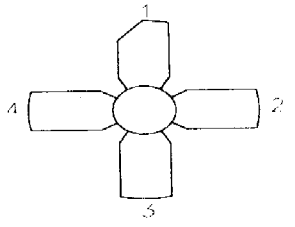
• Features

- 175 MHz
- 12.5 VOLTS
- P_{OUT} = 15 WATTS
- Gp = 12 dB MINIMUM
- INPUT IMPEDANCE MATCHING
- COMMON EMITTER CONFIGURATION

DESCRIPTION:

The MS1261 is a Class C 12.5V epitaxial silicon NPN planar transistor designed primarily for UHF communications. This devices utilizes a gold metallized, emitter ballasted die geometry for superior reliability and infinite VSWR capability.

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	36	V
V_{CEO}	Collector-Emitter Voltage	18	V
V_{CES}	Collector-Emitter Voltage	36	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	2.5	A
P_{DISS}	Power Dissipation	34	W
T_J	Junction Temperature	+200	°C
T_{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	8.75	°C/W

NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CES}	I_C = 50 mA	V_{BE} = 0V	36	---	---	V
BV_{CEO}	I_C = 15 mA		18	---	---	V
BV_{EBO}	I_E = 2.5 mA	I_C = 0mA	4.0	---	---	V
I_{CBO}	V_{CE} = 15 V	I_E = 0mA	---	---	1	mA
H_{FE}	V_{CE} = 5 V	I_C = 250mA	20	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 175 MHz	P_{IN} = 1W	V_{CE} = 12.5V	15	---	---	W
η_c	f = 175 MHz	P_{IN} = 1W	V_{CE} = 12.5V	60	---	---	%
G_P	f = 175 MHz	P_{IN} = 1W	V_{CE} = 12.5V	12	---	---	dB
C_{OB}	f = 1 MHz	V_{CB} = 12.5V		---	---	45	pf

IMPEDANCE DATA

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
175 MHz	1.2 – j0.4	5.2 + j1.1

P_{OUT} = 15W
V_{CC} = 12.5V

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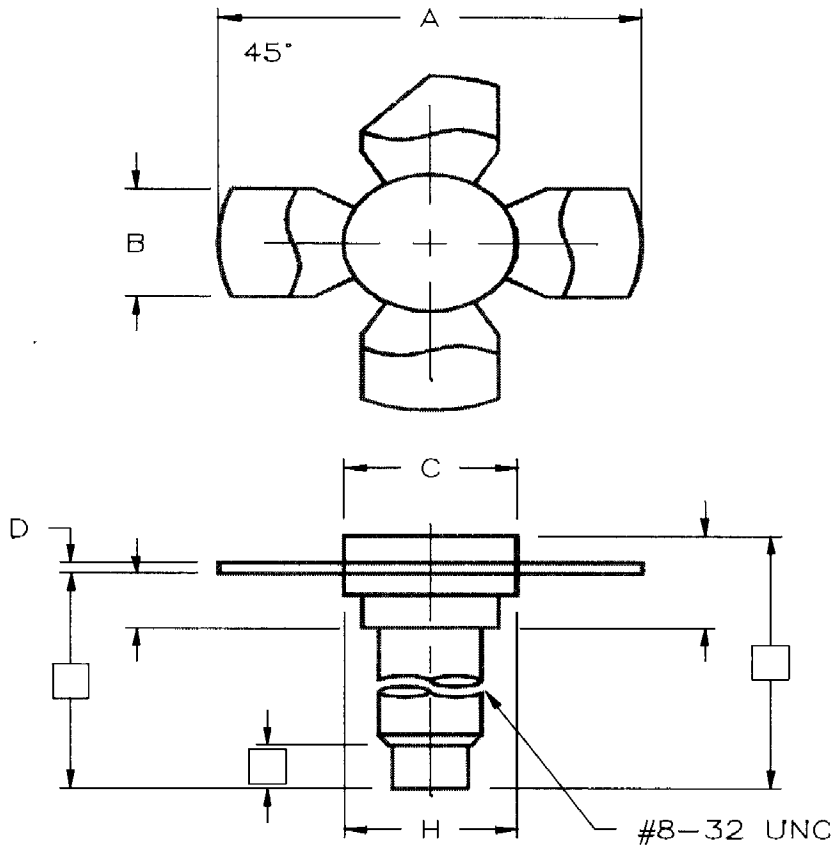
PACKAGE MECHANICAL DATA

PACKAGE STYLE M122



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	1.010/25,65	1.055/26,80	I	.640/16,26	
B	.220/5,59	.230/5,84	J	.175/4,45	.217/5,51
C	.270/6,86	.285/7,24			
D	.003/0,08	.007/0,18			
E	.117/2,97	.137/3,48			
F	.572/14,53				
G	.130/3,30				
H	.275/6,99	.285/7,24			