

## MS1262

### RF & MICROWAVE TRANSISTOR UHF MOBILE APPLICATIONS

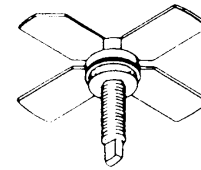
#### Features

- 512 MHz
- 12.5 VOLTS
- $P_{OUT} = 15$  W MINIMUM
- $G_P = 7.8$  dB
- INPUT MATCHED
- COMMON EMITTER CONFIGURATION

#### DESCRIPTION:

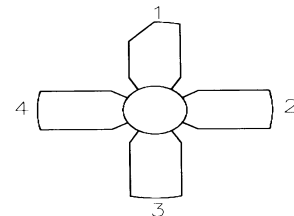
The MS1262 is a NPN silicon RF power transistor designed for 12.5 volt UHF amplifier applications operating to 512 MHz. The MS1262 has internal impedance matching for broadband operation and diffused emitter ballast for high load VSWR tolerance.

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**.280 4L STUD (M122)**  
epoxy sealed

#### PIN CONNECTION



1. Collector      3. Base  
2. Emitter        4. Emitter

### ABSOLUTE MAXIMUM RATINGS ( $T_{case} = 25^{\circ}\text{C}$ )

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	36	V
$V_{CEO}$	Collector-Emitter Voltage	16	V
$V_{EBO}$	Emitter-Base Voltage	4.0	V
$I_C$	Collector Current	3.4	A
$P_{TOT}$	Total Power Dissipation	37.5	W
$T_{STG}$	Storage Temperature	-65 to +150	$^{\circ}\text{C}$
$T_J$	Junction Temperature	+200	$^{\circ}\text{C}$

### Thermal Data

$R_{\theta JC}$	Thermal Resistance Junction-case	4.6	$^{\circ}\text{C/W}$
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**ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)**
**STATIC**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
<b>BV<sub>CEO</sub></b>	<b>I<sub>C</sub> = 50mA      I<sub>B</sub> = 0</b>	<b>16</b>	---	---	<b>V</b>
<b>BV<sub>CES</sub></b>	<b>I<sub>C</sub> = 50mA      V<sub>BE</sub> = 0</b>	<b>36</b>	---	---	<b>V</b>
<b>BV<sub>EBO</sub></b>	<b>I<sub>E</sub> = 5.0mA      I<sub>C</sub> = 0</b>	<b>4.0</b>	---	---	<b>V</b>
<b>I<sub>CES</sub></b>	<b>V<sub>CE</sub> = 15V      V<sub>BE</sub> = 0</b>	---	---	<b>5.0</b>	<b>mA</b>
<b>H<sub>FE</sub></b>	<b>V<sub>CE</sub> = 5.0V      I<sub>C</sub> = 500mA</b>	<b>20</b>	---	<b>120</b>	---

**DYNAMIC**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
<b>P<sub>OUT</sub></b>	<b>f = 470 MHz      P<sub>IN</sub> = 2.5 W      V<sub>CC</sub> = 12.5V</b>	<b>15</b>	---	---	<b>W</b>
<b>G<sub>p</sub></b>	<b>f = 512 MHz      P<sub>IN</sub> = 2.5 W      V<sub>CC</sub> = 12.5V</b>	<b>7.8</b>	---	---	<b>dB</b>
<b>η<sub>c</sub></b>	<b>f = 470 MHz      P<sub>IN</sub> = 2.5 W      V<sub>CC</sub> = 12.5V</b>	<b>50</b>	---	---	<b>%</b>
<b>C<sub>OB</sub></b>	<b>f = 1.0 MHz      V<sub>CB</sub> = 12.5V</b>	---	---	<b>50</b>	<b>pf</b>

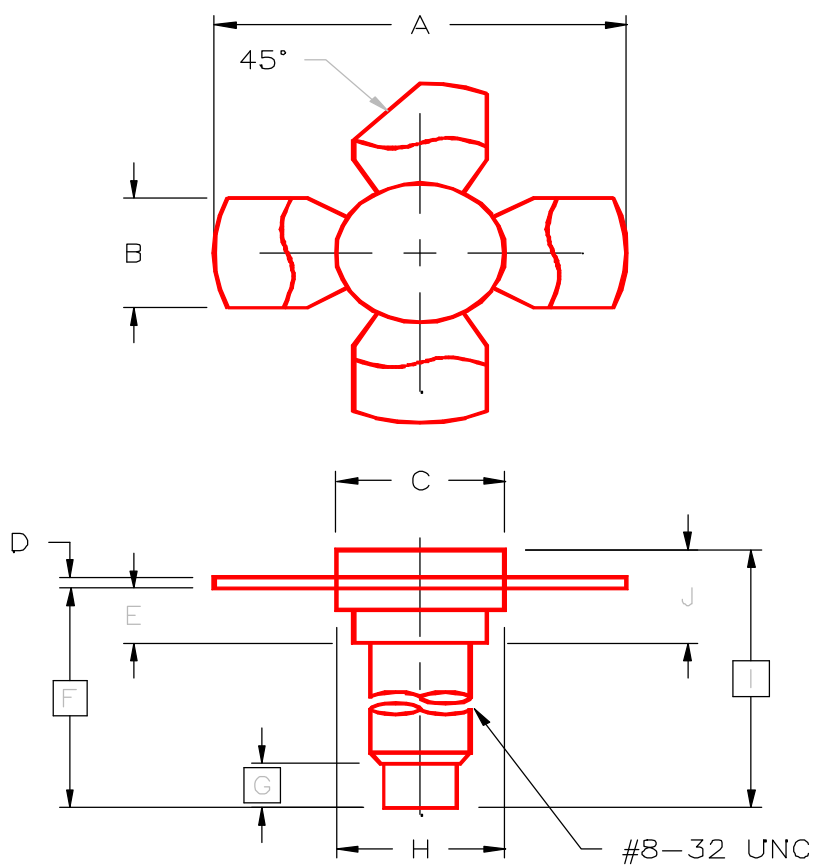
**IMPEDANCE DATA**

FREQ	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> (Ω)
<b>470 MHz</b>	<b>0.95 – j1.1</b>	<b>2.2 + j0.9</b>
<b>512 MHz</b>	<b>0.82 + j2.5</b>	<b>2.1 + j2.3</b>

**P<sub>IN</sub>=2.5W**  
**V<sub>CE</sub>=12.5V**

## 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			