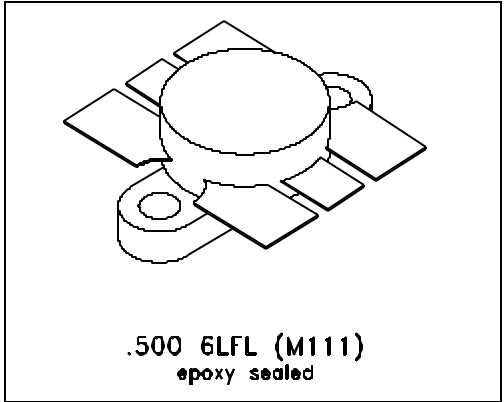


**MS1255**

**RF & MICROWAVE TRANSISTORS  
 VHF MOBILE APPLICATIONS**

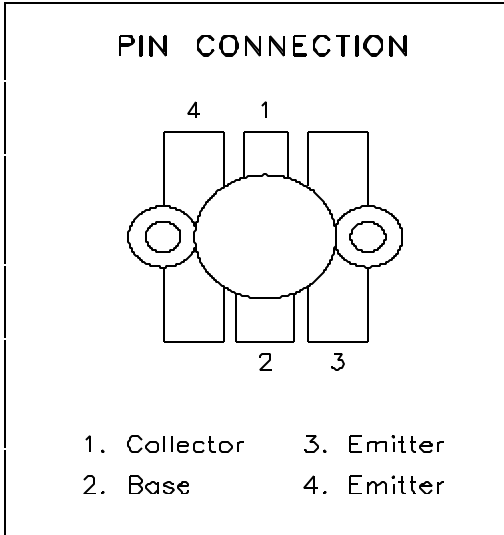
Features

- 175 MHz
- 12.5 VOLTS
- COMMON EMITTER
- P<sub>OUT</sub> = 70 WATTS MIN.



**DESCRIPTION:**

The MS1255 is a 12.5 Volt Class C epitaxial silicon NPN planar transistor designed primarily for VHF FM communications. This device utilizes diffused emitter resistors to withstand extremely high VSWR under rated operating conditions, and is internally input matched to optimize power gain and efficiency over the 136 - 175 MHz band.



**ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25°C)**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	36	V
V <sub>CEO</sub>	Collector-Emitter Voltage	18	V
V <sub>EBO</sub>	Emitter - Base Voltage	4.0	V
I <sub>C</sub>	Device Current	12	A
P <sub>DISS</sub>	Power Dissipation	183	W
T <sub>J</sub>	Junction Temperature	+200	°C
T <sub>STG</sub>	Storage Temperature	- 65 to + 150	°C

**Thermal Data**

R <sub>TH(j-c)</sub>	Junction-Case Thermal Resistance	1.05	°C/W
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**ELECTRICAL SPECIFICATIONS (Tcase = 25°C)**

**STATIC**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
<b>BV<sub>CBO</sub></b>	<b>I<sub>C</sub> = 50 mA    I<sub>E</sub> = 0</b>	<b>36</b>	----	----	<b>V</b>
<b>BV<sub>CEO</sub></b>	<b>I<sub>C</sub> = 50 mA    I<sub>E</sub> = 0</b>	<b>18</b>	----	----	<b>V</b>
<b>BV<sub>EBO</sub></b>	<b>I<sub>E</sub> = 10 mA    I<sub>C</sub> = 0</b>	<b>4</b>	----	----	<b>V</b>
<b>I<sub>CES</sub></b>	<b>V<sub>CE</sub> = 15V    I<sub>E</sub> = 0</b>	----	----	<b>10</b>	<b>mA</b>
<b>h<sub>FE</sub></b>	<b>V<sub>CE</sub> = 5V    I<sub>C</sub> = 1A</b>	<b>25</b>	----	<b>200</b>	----

**DYNAMIC**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
<b>P<sub>OUT</sub></b>	<b>f = 174MHz    P<sub>IN</sub> = 20 W    V<sub>CE</sub> = 12.5 V</b>	<b>70</b>	----	----	<b>W</b>
<b>G<sub>P</sub></b>	<b>f = 174MHz    P<sub>IN</sub> = 20 W    V<sub>CE</sub> = 12.5 V</b>	<b>5.4</b>	----	----	<b>dB</b>
<b>h<sub>C</sub></b>	<b>f = 174MHz    P<sub>IN</sub> = 20 W    V<sub>CE</sub> = 12.5 V</b>	<b>50</b>	----	----	<b>%</b>

**MS1255**

**PACKAGE MECHANICAL DATA**

