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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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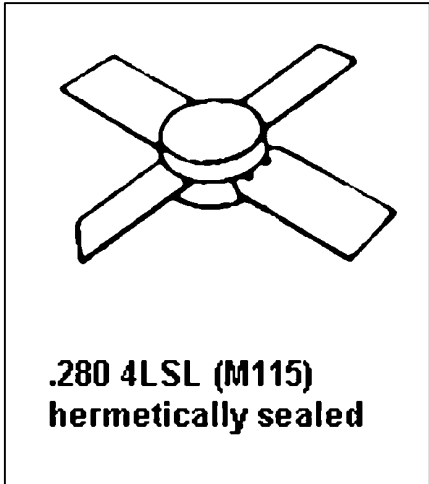


**SD1536-03**

**RF & MICROWAVE TRANSISTORS  
AVIONICS APPLICATIONS**

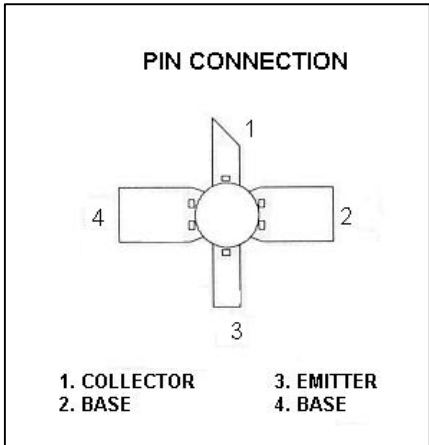
**Features**

- 1025 – 1150 MHz
- 50 VOLTS
- P<sub>OUT</sub> = 90 W
- G<sub>p</sub> = 8.4 dB MINIMUM
- INPUT MATCHED
- COMMON BASE CONFIGURATION



**DESCRIPTION:**

The SD1536-03 is a gold metallized silicon NPN power transistor designed for applications requiring high peak power and low duty cycles such as IFF, DME and TACAN. Internal Impedance matching provides improved broadband performance.



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

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector – Base Voltage	65	V
V <sub>CES</sub>	Collector – Emitter Voltage	65	V
V <sub>EBO</sub>	Emitter – Base Voltage	3.5	V
I <sub>C</sub>	Device Current	10	A
P <sub>DISS</sub>	Power Dissipation	292	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	0.60	°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>CBO</sub></b>	<b>I<sub>C</sub> = 10 mA</b>	<b>I<sub>E</sub> = 0 mA</b>	<b>65</b>	---	---	<b>V</b>
<b>BV<sub>CER</sub></b>	<b>I<sub>C</sub> = 25 mA</b>	<b>R<sub>BE</sub> = 10 Ω</b>	<b>65</b>	---	---	<b>V</b>
<b>BV<sub>EBO</sub></b>	<b>I<sub>E</sub> = 1 mA</b>	<b>I<sub>C</sub> = 0 mA</b>	<b>3.5</b>	---	---	<b>V</b>
<b>I<sub>CES</sub></b>	<b>V<sub>CE</sub> = 50 V</b>	<b>I<sub>E</sub> = 0 mA</b>	---	---	<b>10</b>	<b>mA</b>
<b>h<sub>FE</sub></b>	<b>V<sub>CE</sub> = 5 V</b>	<b>I<sub>C</sub> = 100 mA</b>	<b>5</b>	---	---	---

**DYNAMIC**

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
<b>P<sub>OUT</sub></b>	<b>f = 1025 - 1150MHz</b>	<b>P<sub>IN</sub> = 13.0 W</b>	<b>V<sub>CE</sub> = 50 V</b>	<b>90</b>	---	---	<b>W</b>
<b>G<sub>P</sub></b>	<b>f = 1025 - 1150MHz</b>	<b>P<sub>IN</sub> = 13.0 W</b>	<b>V<sub>CE</sub> = 50 V</b>	<b>8.4</b>	---	---	<b>dB</b>

**Conditions: Pulse Width = 10 μSec, Duty Cycle = 1%**

**This device is suitable for use under other pulse width/duty cycle conditions.**

**Please contact the factory for specific applications assistance.**

**IMPEDANCE DATA**

FREQ	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> (Ω)
<b>960 MHz</b>	<b>2.5 + j13.0</b>	<b>4.6 – j5.5</b>
<b>1030 MHz</b>	<b>5.2 + j15.0</b>	<b>5.0 – j5.5</b>
<b>1090 MHz</b>	<b>16.3 + j15.0</b>	<b>4.8 – j5.5</b>
<b>1150 MHz</b>	<b>14.7 + j2.5</b>	<b>4.7 – j7.0</b>
<b>1215 MHz</b>	<b>7.6 + j0.5</b>	<b>4.7 – j5.0</b>

**P<sub>IN</sub> = 13W**

**V<sub>CE</sub> = 50 V**

**PACKAGE MECHANICAL DATA**

