



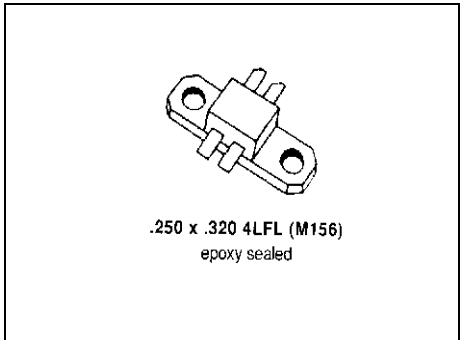
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**MS1579**

**RF & MICROWAVE TRANSISTORS  
TV LINEAR APPLICATIONS**

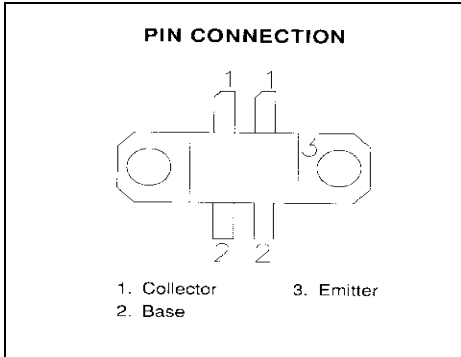
**Features**

- 470 - 860 MHz
- 25 VOLTS
- CLASS A OPERATION
- INTERNAL INPUT MATCHING
- P<sub>OUT</sub> = 14 WATTS
- G<sub>p</sub> = 8.5 dB MINIMUM
- COMMON EMITTER CONFIGURATION



**DESCRIPTION:**

The MS1579 is a gold metallized, epitaxial silicon NPN transistor designed for Class A, UHF and Band IV, V television transmitters applications. Diffused emitter ballast resistors ensure long term reliability under Class A linear operation.



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

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	45	V
V <sub>CEO</sub>	Collector-Emitter Voltage	25	V
V <sub>EBO</sub>	Emitter-Base Voltage	4.0	V
P <sub>DISS</sub>	Power Dissipation	65	W
I <sub>c</sub>	Device Current	5.2	A
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>	Thermal Resistance Junction-case	2.5	°C/W
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**MS1579**

**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> = 20 mA</b>	<b>I<sub>E</sub> = 0 mA</b>	<b>45</b>	---	---	<b>V</b>
<b>BV<sub>CEO</sub></b>	<b>I<sub>C</sub> = 40 mA</b>	<b>I<sub>B</sub> = 0 mA</b>	<b>25</b>	---	---	<b>V</b>
<b>BV<sub>EBO</sub></b>	<b>I<sub>E</sub> = 5 mA</b>	<b>I<sub>C</sub> = 0 mA</b>	<b>3.0</b>	---	---	<b>V</b>
<b>HFE</b>	<b>V<sub>CE</sub> = 20 V</b>	<b>I<sub>C</sub> = 0.5 A</b>	<b>10</b>	---	<b>200</b>	---

**DYNAMIC**

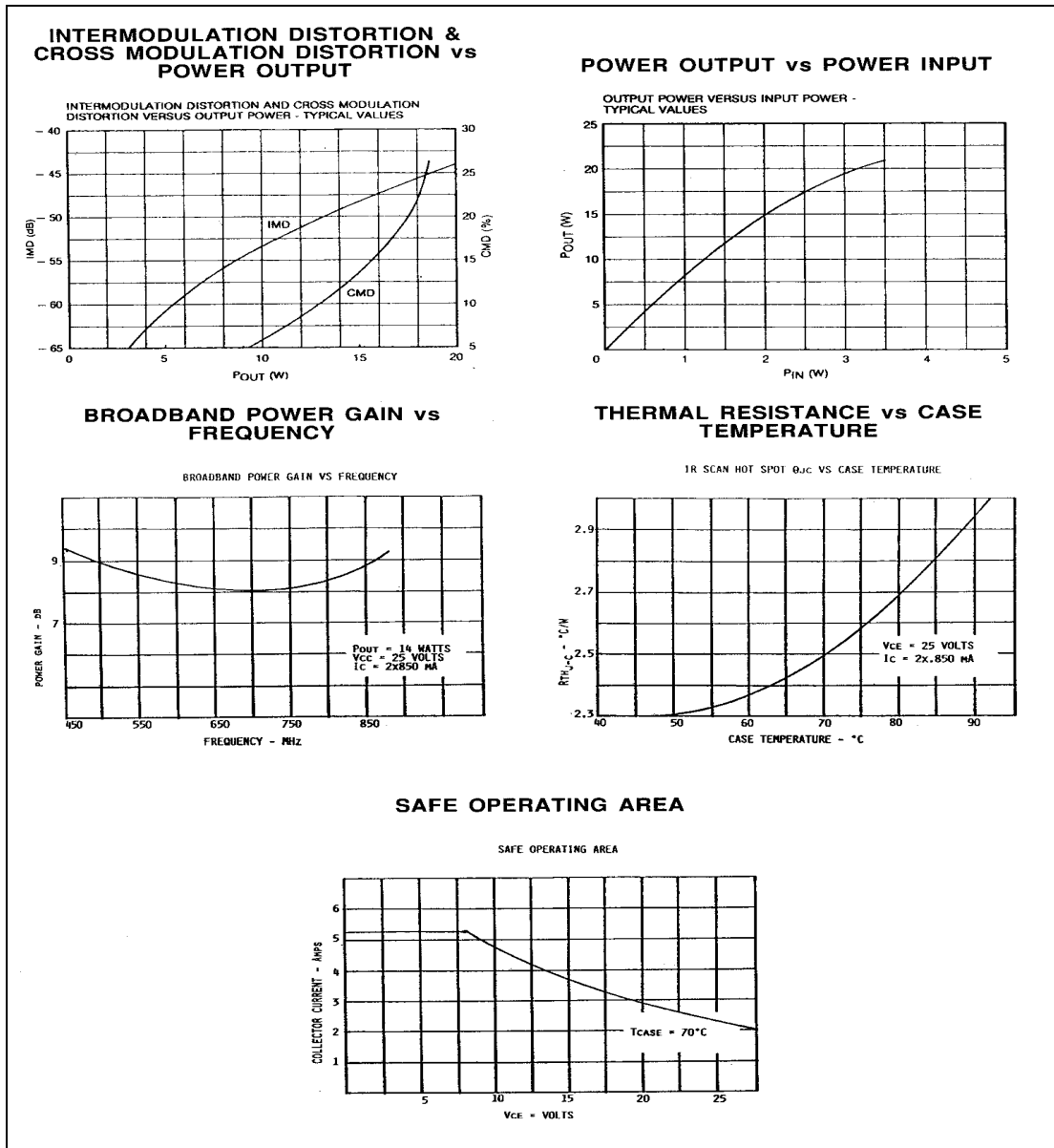
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
<b>P<sub>OUT</sub></b>	<b>f = 845 MHz</b>	<b>P<sub>IN</sub> = 2.0</b>	<b>V<sub>CE</sub> = 25 V</b>	<b>14</b>	---	---	<b>W</b>
<b>G<sub>p</sub></b>	<b>P<sub>OUT</sub> = 14 W</b>	<b>P<sub>IN</sub> = 2.0</b>	<b>V<sub>CE</sub> = 25 V</b>	<b>8.5</b>	---	---	<b>dB</b>
<b>IMD<sub>3</sub></b>	<b>P<sub>OUT</sub> = 14 W</b>	<b>P<sub>IN</sub> = 2.0</b>	<b>V<sub>CE</sub> = 25 V</b>	---	<b>-47</b>	---	<b>dBc</b>
<b>C<sub>OB</sub></b>	<b>f = 1 MHz</b>	<b>V<sub>CB</sub> = 25 V</b>		---	---	<b>20</b>	<b>pf</b>

**Conditions:**      **V<sub>CE</sub> = 25 V**                      **I<sub>CQ</sub> = 2 x 850 mA**



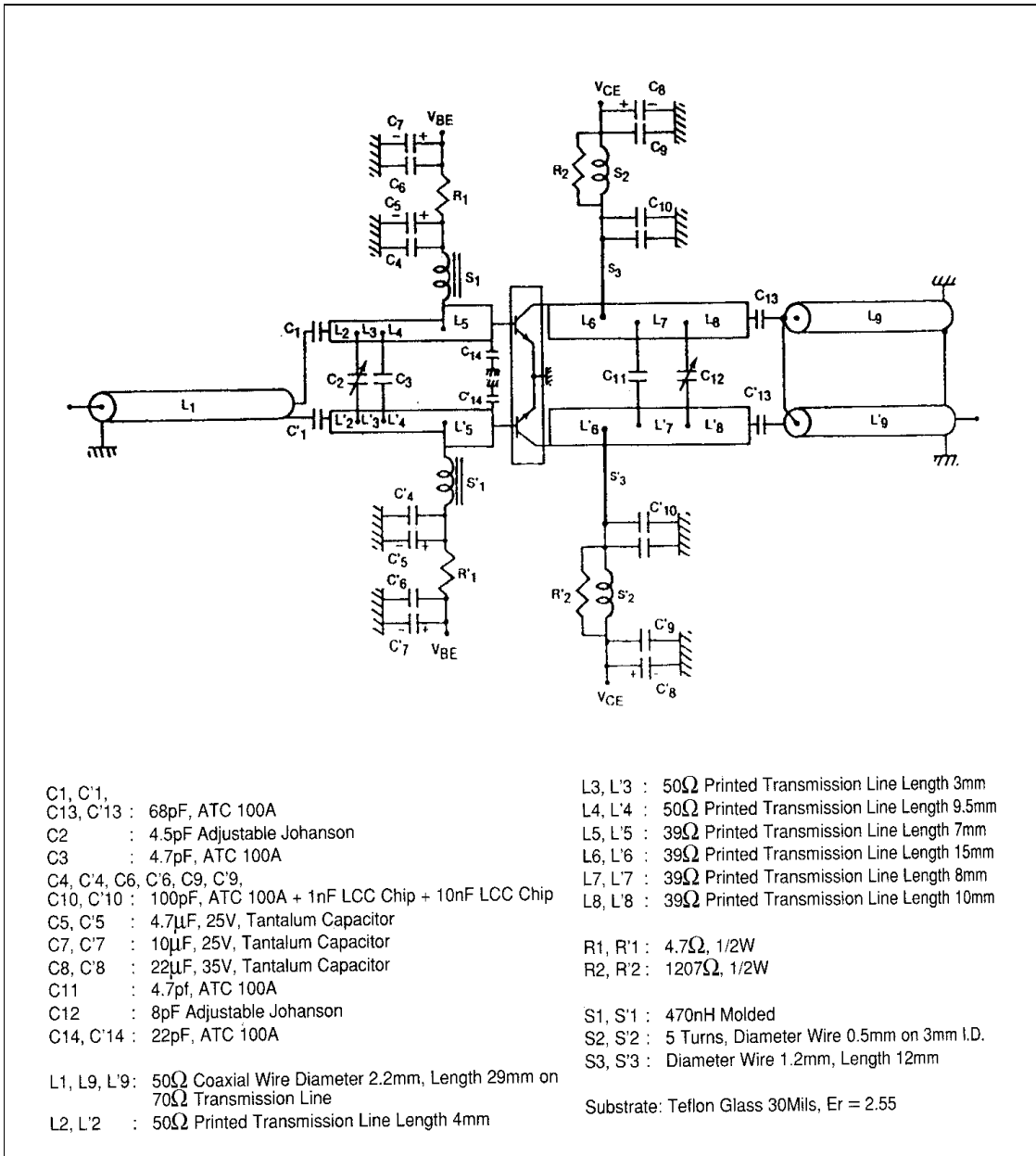
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**TYPICAL PERFORMANCE**





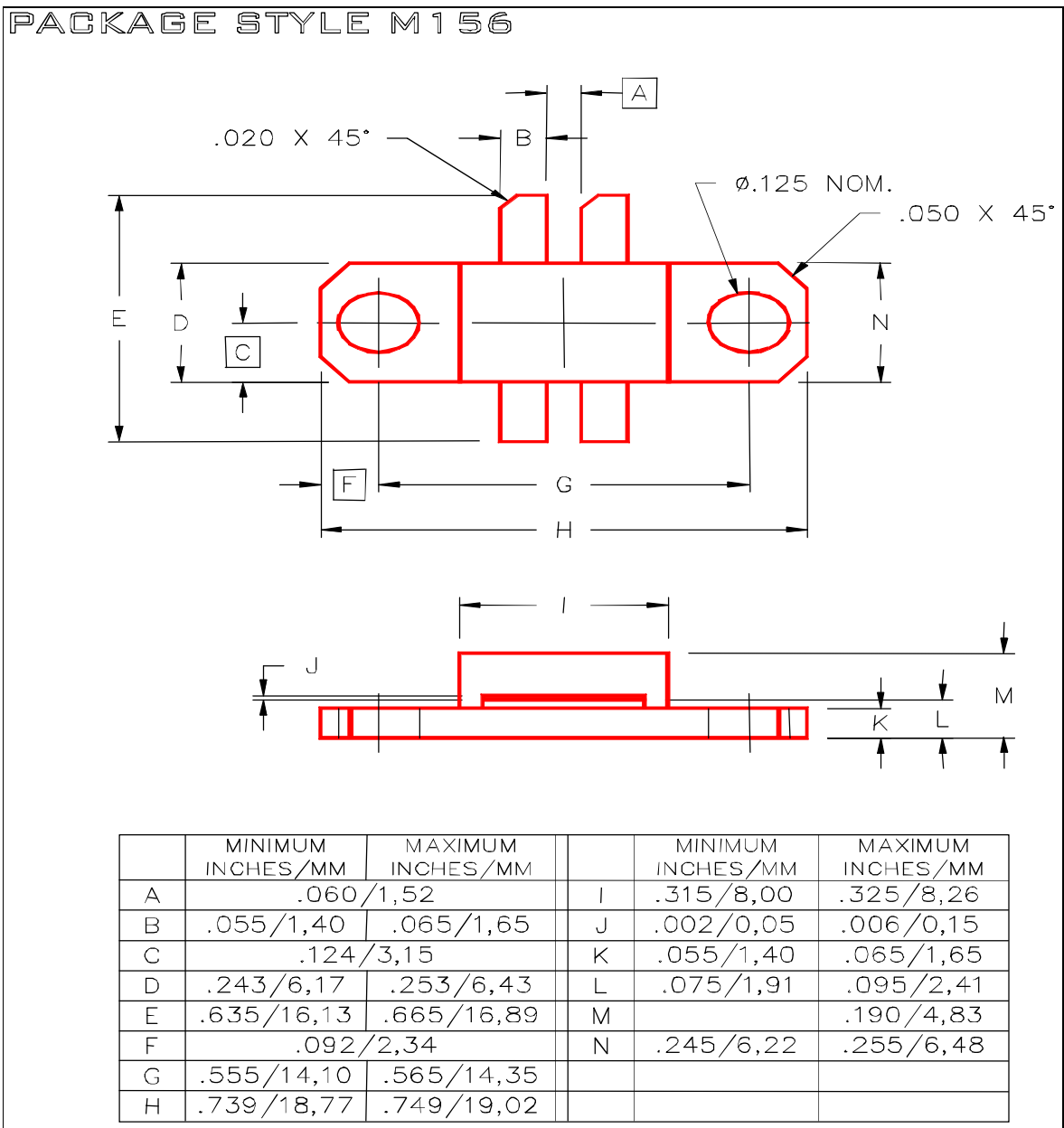
## TEST CIRCUIT





**MS1579**

**PACKAGE MECHANICAL DATA**



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