

140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936-1013 PHONE: (215) 631-9840 FAX: (215) 631-9855

# MS1579

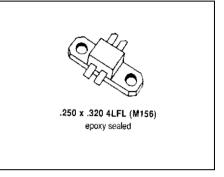
### RF & MICROWAVE TRANSISTORS TV LINEAR APPLICATIONS

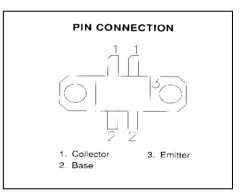
#### **Features**

- 470 860 MHz
- 25 VOLTS
- CLASS A OPERATION
- INTERNAL INPUT MATCHING
- **P**<sub>OUT</sub> = 14 WATTS
- $G_P = 8.5 \text{ dB MINIMUM}$
- 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.





Symbol	Parameter	Value	Unit	
V <sub>сво</sub>	Collector-Base Voltage	45	V	
V <sub>CEO</sub>	Collector-Emitter Voltage	25	V	
$V_{EBO}$	Emitter-Base Voltage	4.0	V	
P <sub>DISS</sub>	Power Dissipation	65	W	
l <sub>c</sub>	Device Current	5.2	Α	
TJ	Junction Temperature	+200	°C	
T <sub>stg</sub>	Storage Temperature	-65 to +150	°C	

## ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

# **Thermal Data**

R <sub>TH(J-C)</sub> Thermal Resistance Junction-case	2.5	°C/W
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# ELECTRICAL SPECIFICATIONS (Tcase = 25°C) STATIC

Symbol	Test Conditions			Value		
	Test conditions	Min.	Typ.	Max.	Unit	
BV <sub>CBO</sub>	l <sub>c</sub> = 20 mA	$I_{E} = 0 \text{ mA}$	45			V
BV <sub>CEO</sub>	l <sub>c</sub> = 40 mA	$I_{B} = 0 \text{ mA}$	25			V
BVEBO	I <sub>ε</sub> = 5 mA	$I_c = 0 mA$	3.0			V
HFE	$V_{CE} = 20 V$	$I_c = 0.5 A$	10		200	

### DYNAMIC

Symbol	Test Conditions			Value			
			Min.	Тур.	Max.	Unit	
Pout	f = 845 MHz	P <sub>IN</sub> = 2.0	$V_{ce} = 25 V$	14			w
G <sub>P</sub>	P <sub>out</sub> = 14 W	P <sub>ℕ</sub> = 2.0	V <sub>ce</sub> = 25 V	8.5			dB
IMD <sub>3</sub>	P <sub>out</sub> = 14 W	P <sub>IN</sub> = 2.0	$V_{ce} = 25 V$		-47		dBc
Сов	f =1 MHz	$V_{\rm CB} = 25 \ V$				20	pf

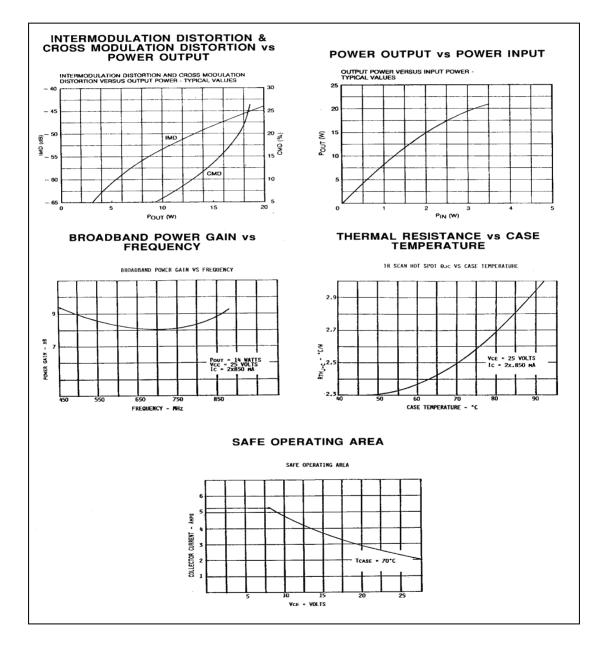
Conditions:  $V_{CE} = 25 V$   $I_{CQ} = 2 \times 850 mA$ 

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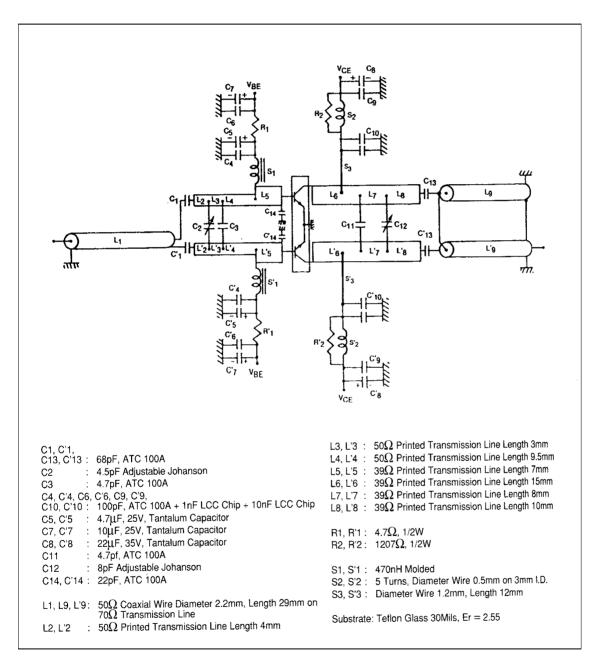
# **TYPICAL PERFORMANCE**



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## **TEST CIRCUIT**

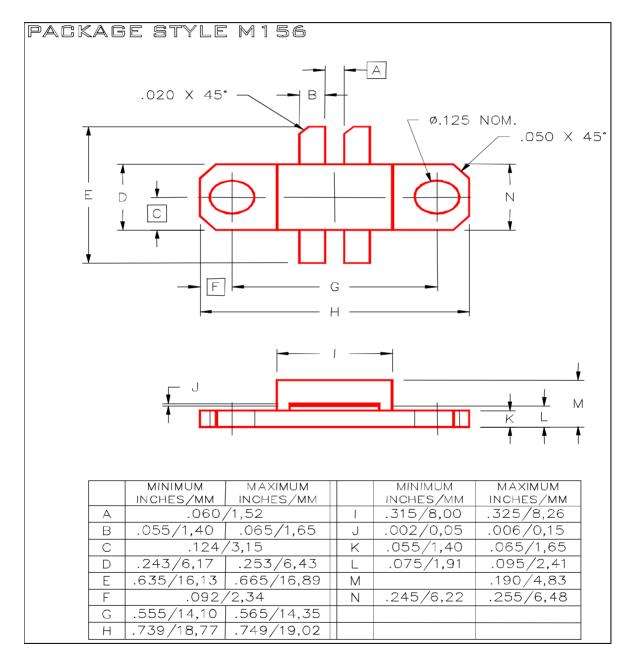


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## PACKAGE MECHANICAL DATA



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