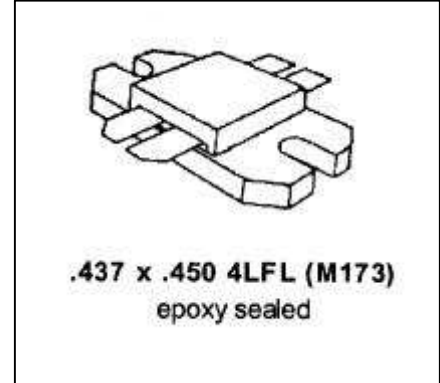


## MS1582

### RF & MICROWAVE TRANSISTORS TV/LINEAR APPLICATIONS

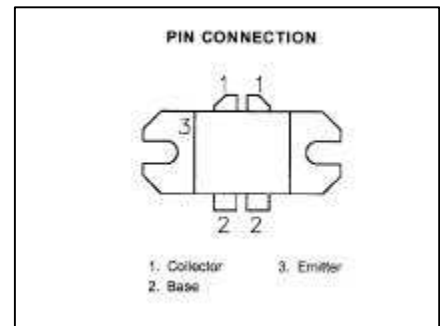
#### Features

- 470 - 860 MHz
- 28 VOLTS
- GOLD METALIZATION
- $P_{OUT} = 25$  WATT
- $G_P = 9.0$  dB MINIMUM
- INTERNAL INPUT MATCHING
- COMMON EMITTER CONFIGURATION



#### DESCRIPTION

The MS1582 is a gold metallized epitaxial silicon NPN planar transistor designed for high linearity Class AB operation in UHF and Band IV, V television transmitters and transposers.



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

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector - Base Voltage	45	V
$V_{CEO}$	Collector - Emitter Voltage	30	V
$V_{EBO}$	Emitter - Base Voltage	3.0	V
$I_C$	Device Current	8	A
$P_{DISS}$	Power Dissipation	135	W
$T_J$	Junction Temperature	+200	$^{\circ}C$
$T_{STG}$	Storage Temperature	-65 to +150	$^{\circ}C$

#### Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	1.3	$^{\circ}C/W$
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**ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)**  
**STATIC**

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BVcbo	I <sub>C</sub> = 50 mA	I <sub>E</sub> = 0 mA	45	---	---	V
BVceo	I <sub>C</sub> = 200 mA	I <sub>B</sub> = 0 mA	30	---	---	V
BVebo	I <sub>E</sub> = 10 mA	I <sub>C</sub> = 0 mA	3.0	---	---	V
I <sub>ceo</sub>	V <sub>CE</sub> = 25 V	I <sub>E</sub> = 0 mA	---	---	5	mA
HFE	V <sub>CE</sub> = 5 V	I <sub>C</sub> = 3 A	10	---	80	---

**DYNAMIC**

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
G <sub>p</sub>	f = 860 MHz	P <sub>IN</sub> = 3.1 W	V <sub>CE</sub> = 25 V	9.0	---	---	dB
IMD <sub>3</sub>	f = 860 MHz	P <sub>OUT</sub> = 25 W	V <sub>CE</sub> = 25 V	---	---	-45	dB
P <sub>out</sub>	f = 860 MHz	P <sub>IN</sub> = 3.95 W	V <sub>CE</sub> = 25 V	25	---	---	W
C <sub>OB</sub>	f = 1 MHz	V <sub>CB</sub> = 28 V		---	70	---	pf

Conditions: V<sub>CE</sub> = 25 V I<sub>C</sub> = 3.2 A

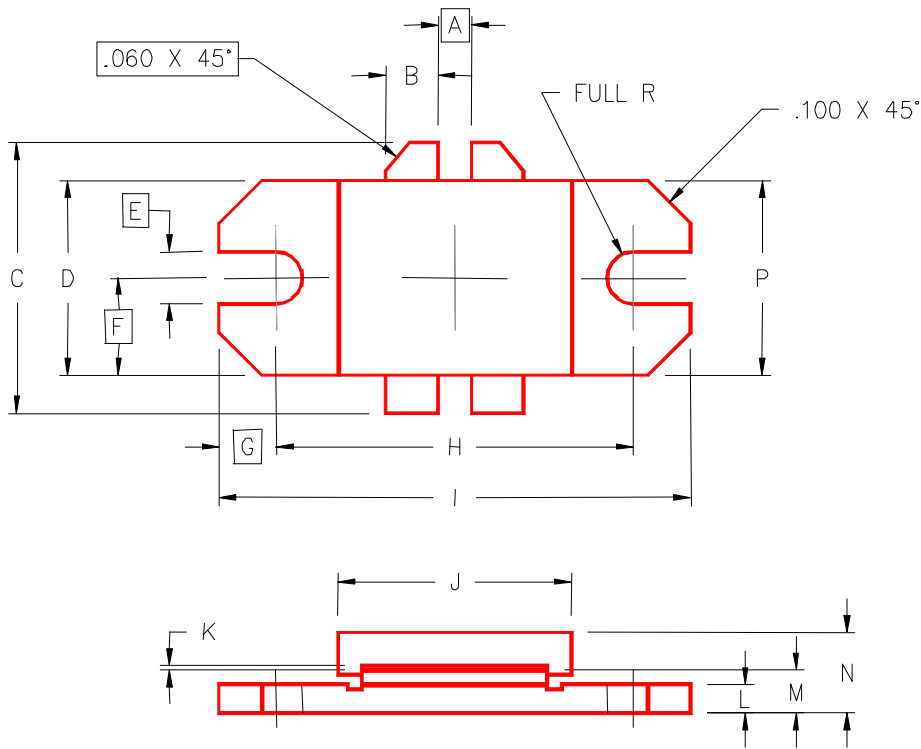
**IMPEDANCE DATA:**

FREQ	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> (Ω)
470 MHz	7.5 + j 9.5	25 + j 7.5
590 MHz	8.2 + j 7.5	15.6 - j 0.13
710 MHz	6.6 + j 6.2	11.9 - j 0.28
860 MHz	4.7 + j 3.0	6.7 - j 0.38

P<sub>OUT</sub> = 25W  
V<sub>CC</sub> = 25V  
I<sub>C</sub> = 3.2 A

**PACKAGE MECHANICAL DATA**

PACKAGE STYLE M173



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.055/1,40		I	1.095/27,81	1.105/28,07
B	.120/3,05	.130/3,30	J	.525/13,34	.535/13,59
C	.785/19,94		K	.002/0,05	.006/0,15
D	.455/11,56	.465/11,81	L	.055/1,40	.065/1,65
E	.125/3,18		M	.080/2,03	.095/2,41
F	.230/5,64		N		.195/4,95
G	.128/3,25		P	.455/11,56	.465/11,81
H	.838/21,28	.850/21,59			