ADVANCED POWER TECHNOLOGY RF®

140 COMMERCE DRIVE
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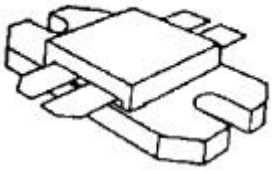
MS1582

RF & MICROWAVE TRANSISTORS
TV/LINEAR APPLICATIONS



.437 x .450 4LFL (M173)
epoxy sealed

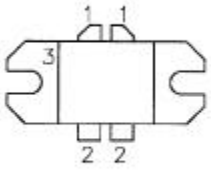
Features

- 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.

PIN CONNECTION



1. Collector 3. Emitter
2. Base

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°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	ºC
T_{STG}	Storage Temperature	-65 to +150	ºC

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	1.3	°C/W

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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BVcbo	I_C = 50 mA	I_E = 0 mA	45	---	---	V
BVceo	I_C = 200 mA	I_B = 0 mA	30	---	---	V
BVebo	I_E= 10 mA	I_C = 0 mA	3.0	---	---	V
Iceo	V_{CE} = 25 V	I_E = 0 mA	---	---	5	mA
HFE	V_{CE} = 5 V	I_C = 3 A	10	---	80	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
G_P	f = 860 MHz	P_{IN} = 3.1 W	V_{CE} = 25 V	9.0	---	---	dB
IMD_3	f = 860 MHz	P_{OUT} = 25 W	V_{CE} = 25 V	---	---	-45	dB
P_{out}	f = 860 MHz	P_{IN} = 3.95 W	V_{CE} = 25 V	25	---	---	W
C_{OB}	f = 1 MHz	V_{CB} = 28 V		---	70	---	pf

Conditions: V_{CE} = 25 V I_C = 3.2 A

IMPEDANCE DATA:

FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
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_{OUT} = 25W
V_{CC} = 25V
I_C = 3.2 A

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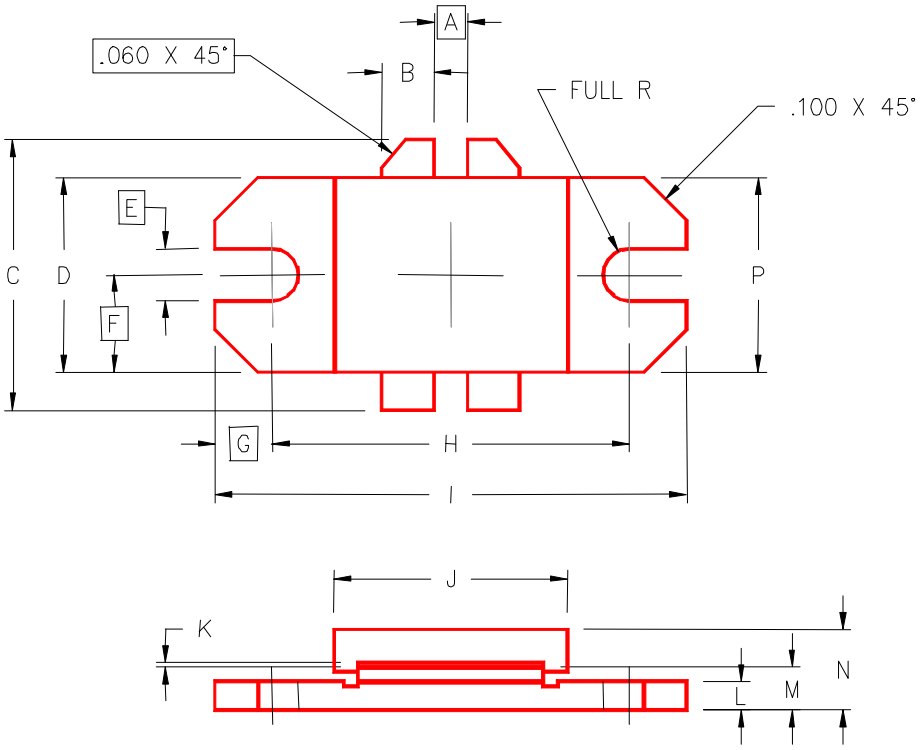
PACKAGE MECHANICAL DATA

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			