

**DESCRIPTION**

The MS1005 is a silicon NPN Transistor designed for telecommunications in HF and VHF frequency bands. This device utilizes gold metallized die with diffused emitter resistors to achieve high reliability and ruggedness.

**IMPORTANT:** For the most current data, visit: <http://www.advancedpower.com>

**KEY FEATURES**

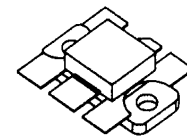
- 30 MHz
- 40 Volts
- IMD -30 dB
- Common Emitter
- Gold Metallization
- $P_{OUT} = 200$  W Min.
- $G_P = 16$ db Gain

**APPLICATIONS/BENEFITS**

- HF SSB Applications

**ABSOLUTE MAXIMUM RATINGS ( $T_{CASE} = 25^{\circ}C$ )**

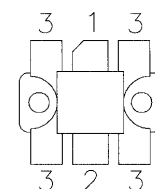
Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	110	V
$V_{CEO}$	Collector-Emitter Voltage	55	V
$V_{EBO}$	Emitter-Base Voltage	4.0	V
$I_C$	Device Current	40	A
$P_{DISS}$	Power Dissipation	330	W
$T_J$	Junction Temperature	+200	$^{\circ}C$
$T_{STG}$	Storage Temperature	-65 to +150	$^{\circ}C$



.400 x .425 6LFL (M153)  
epoxy sealed

**THERMAL DATA**

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	0.36	$^{\circ}C/W$
---------------	----------------------------------	------	---------------

**PIN CONNECTION**


1. Collector      3. Emitter  
2. Base

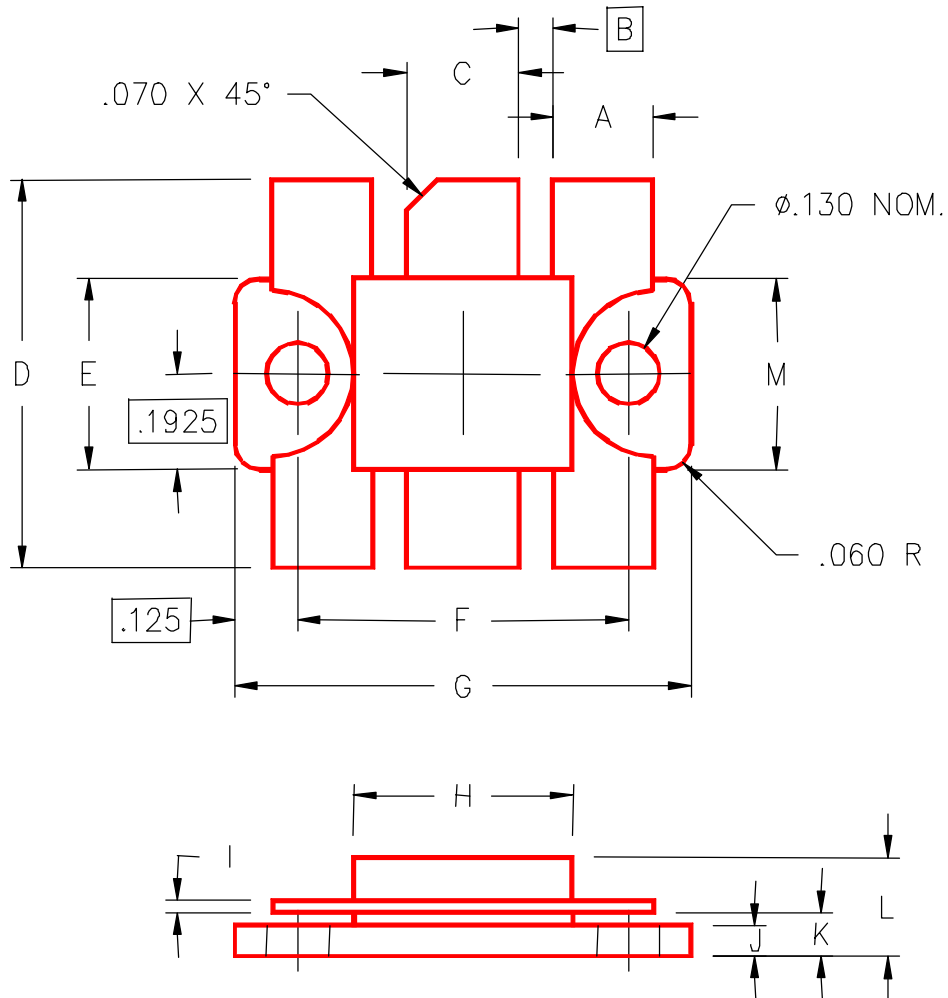
**STATIC ELECTRICAL SPECIFICATIONS (TCASE = 25°C)**

Symbol	Test Conditions	MS1005			Units
		Min.	Typ.	Max.	
<b>BV<sub>CBO</sub></b>	<b>I<sub>C</sub> = 200mA</b> <b>I<sub>E</sub> = 0mA</b>	110	—	—	V
<b>BV<sub>CES</sub></b>	<b>I<sub>C</sub> = 200mA</b> <b>V<sub>BE</sub> = 0V</b>	110	—	—	V
<b>BV<sub>CER</sub></b>	<b>I<sub>C</sub> = 200mA</b> <b>R<sub>BE</sub> = 10Ω</b>	100	—	—	V
<b>BV<sub>CEO</sub></b>	<b>I<sub>C</sub> = 200mA</b> <b>I<sub>B</sub> = 0mA</b>	55	—	—	V
<b>BV<sub>EBO</sub></b>	<b>I<sub>E</sub> = 20mA</b> <b>I<sub>C</sub> = 0mA</b>	4.0	—	—	V
<b>I<sub>CES</sub></b>	<b>V<sub>CE</sub> = 45V</b> <b>I<sub>E</sub> = 0mA</b>	—	—	-30	mA
<b>h<sub>FE</sub></b>	<b>V<sub>CE</sub> = 6V</b> <b>I<sub>C</sub> = 10A</b>	15	—	360	—

**DYMANIC ELECTRICAL SPECIFICATIONS (TCASE = 25°C)**

Symbol	Test Conditions	MS1005			Units
		Min.	Typ.	Max.	
<b>P<sub>OUT</sub></b>	<b>f = 30 MHz</b> <b>V<sub>CE</sub> = 40 V</b> <b>I<sub>CQ</sub> = 150 mA</b>	200	—	—	W
<b>G<sub>P</sub></b>	<b>f = 30 MHz</b> <b>V<sub>CE</sub> = 40 V</b> <b>I<sub>CQ</sub> = 150 mA</b>	16	—	—	dB
<b>IMD</b>	<b>f = 30 MHz</b> <b>V<sub>CE</sub> = 40 V</b> <b>I<sub>CQ</sub> = 150 mA</b>	—	—	-30	dB
<b>C<sub>OS</sub></b>	<b>f = 1 MHz</b> <b>V<sub>CB</sub> = 50 V</b>	—	—	360	pF

PACKAGE STYLE M153



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.195/4,95	.205/5,21	I	.003/0,08	.007/0,18
B	.067/1,70		J	.055/1,40	.065/1,65
C	.220/5,59	.230/5,84	K	.095/2,41	.110/2,79
D	.790/20,07	.810/20,57	L		.220/5,59
E	.380/9,65	.390/9,91	M	.395/10,03	.405/10,29
F	.645/16,38	.655/16,64			
G	.885/22,48	.905/22,98			
H	.420/10,67	.430/10,92			