

140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936-1013

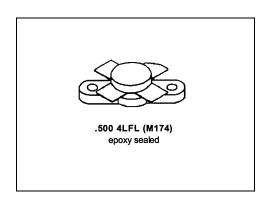
PHONE: (215) 631-9840 FAX: (215) 631-9855

## MS1000

# RF & MICROWAVE TRANSISTORS HF SSB APPLICATIONS

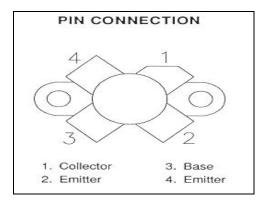
#### **Features**

- 30 MHz
- 28 VOLTS
- IMD = -30 dB
- GOLD METALLIZATION
- P<sub>OUT</sub> = 125 WATTS
- G<sub>P</sub> = 15dB MINIMUM
- COMMON EMITTER CONFIGURATION



#### **DESCRIPTION:**

The MS1000 is a 28V Class A silicon NPN planar transistor designed primarily for SSB communications. Diffused emitter ballast provide infinite VSWR capability under rated operating conditions.



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

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	65	V
V <sub>CEO</sub>	Collector-Emitter Voltage	36	V
$V_{EBO}$	Emitter-Base Voltage	4.0	V
Ic	Device Current	20	Α
P <sub>D</sub>	Power Dissipation	270	W
Tj	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	0.65	°C/W
, ,			



140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936-1013

PHONE: (215) 631-9840 FAX: (215) 631-9855

**MS1000** 

## **ELECTRICAL SPECIFICATIONS (Tcase = 25°C)**

### **STATIC**

Symbol	Test Conditions		Value		Unit	
		Min.	Typ.	Max.	Offic	
BV <sub>CBO</sub>	I <sub>C</sub> = 100 mA	$I_E = 0 \text{ mA}$	65			V
BV <sub>CES</sub>	I <sub>C</sub> = 100 mA	$V_{BE} = 0 V$	65			V
BV <sub>CEO</sub>	I <sub>C</sub> = 100 mA	$I_B = 0 \text{ mA}$	35			V
BV <sub>EBO</sub>	I <sub>E</sub> = 10 mA	$I_C = 0 \text{ mA}$	4.0			V
I <sub>CES</sub>	V <sub>CE</sub> = 30 V	$I_E = 0 \text{ mA}$			15	mA
h <sub>FE</sub>	V <sub>CE</sub> = 5 V	I <sub>C</sub> = 5 A	10		200	

## **DYNAMIC**

Symbol	Test Conditions		Value			Unit	
			Min.	Typ.	Max.	Offic	
P <sub>out</sub>	f = 30MHz	$P_{IN} = 3.95W$	$V_{CE} = 28V$	125			W
G <sub>P</sub>	f = 30MHz	$P_{IN} = 3.95W$	$V_{CE} = 28V$	15			dB
IMD*	f = 30MHz	$V_{CC} = 28V$	I <sub>CQ</sub> = 100mA			-30	dB
Сов	f = 1 MHz	$V_{CB} = 30V$				285	pf

<sup>\*</sup> TWO-TONE MEASUREMENT



140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936-1013

PHONE: (215) 631-9840 FAX: (215) 631-9855

**MS1000** 

### PACKAGE MECHANICAL DATA

