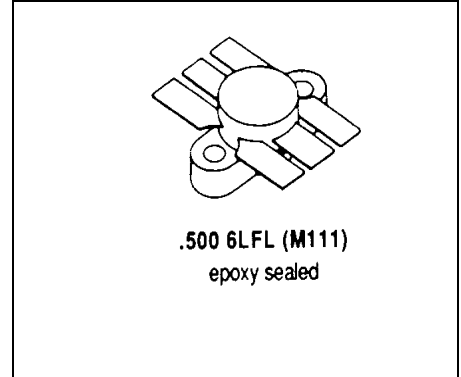


# MS1277

## RF & MICROWAVE TRANSISTORS TV/LINEAR APPLICATIONS

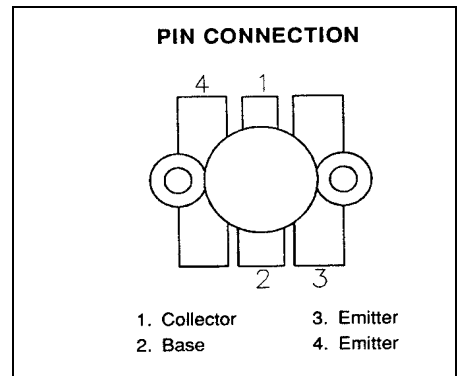
### Features

- 170 - 230 MHz
- 28 VOLTS
- $P_{OUT} = 14$  WATTS
- $G_P = 14$  dB GAIN MINIMUM
- GOLD METALLIZATION
- INTERNAL INPUT MATCHING
- COMMON EMITTER CONFIGURATION



### DESCRIPTION:

The MS1277 is a gold metallized epitaxial silicon NPN planar transistor using diffused emitter ballast resistors for high linearity Class A operation in VHF and Band III television transmitters and transposers.



### ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25°C)

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	35	V
V <sub>EBO</sub>	Emitter-Base Voltage	4.0	V
I <sub>C</sub>	Device Current	10	A
P <sub>DISS</sub>	Power Dissipation	140	W
T <sub>J</sub>	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	1.5	°C/W
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## ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

### STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
<b>BV<sub>CER</sub></b>	<b>I<sub>C</sub> = 50 mA</b>	<b>R<sub>BE</sub> = 10 Ω</b>	<b>60</b>	---	---	<b>V</b>
<b>BV<sub>CEO</sub></b>	<b>I<sub>C</sub> = 50 mA</b>	<b>I<sub>B</sub> = 0 mA</b>	<b>35</b>	---	---	<b>V</b>
<b>BV<sub>EBO</sub></b>	<b>I<sub>E</sub> = 10 mA</b>	<b>I<sub>C</sub> = 0 mA</b>	<b>4.0</b>	---	---	<b>V</b>
<b>I<sub>CES</sub></b>	<b>V<sub>CE</sub> = 50 V</b>	<b>I<sub>E</sub> = 0 mA</b>	---	---	<b>5</b>	<b>mA</b>
<b>HFE</b>	<b>V<sub>CE</sub> = 5 V</b>	<b>I<sub>C</sub> = 1 A</b>	<b>10</b>	---	<b>100</b>	---

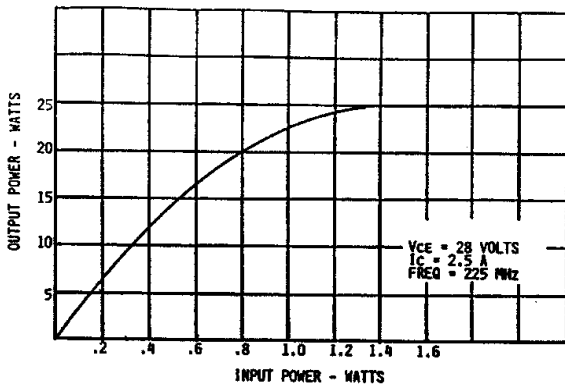
### DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
<b>P<sub>OUT</sub></b>	<b>f = 225 MHz</b>	<b>V<sub>CE</sub> = 28 W</b>	<b>I<sub>C</sub> = 2.5 A</b>	<b>14</b>	---	---	<b>W</b>
<b>G<sub>P</sub></b>	<b>f = 225 MHz</b>	<b>V<sub>CE</sub> = 28 W</b>	<b>I<sub>C</sub> = 2.5 A</b>	<b>14</b>	---	---	<b>dB</b>
<b>IMD</b>	<b>f = 225 MHz</b>	<b>V<sub>CE</sub> = 28 W</b>	<b>I<sub>C</sub> = 2.5 A</b>	---	---	<b>-55</b>	<b>dBc</b>
<b>C<sub>OB</sub></b>	<b>f = 1 MHz</b>	<b>V<sub>CB</sub> = 28 V</b>		---	---	<b>80</b>	<b>pf</b>

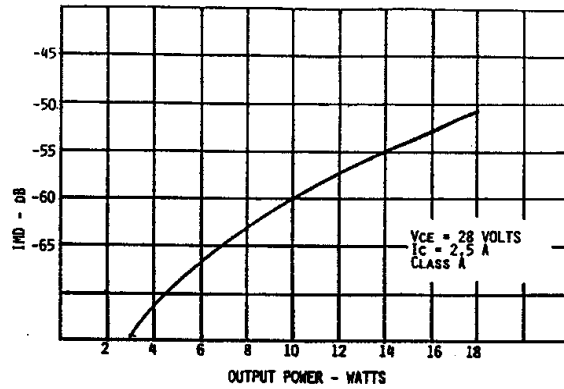
Note: \* dB compression

**TYPICAL PERFORMANCE**

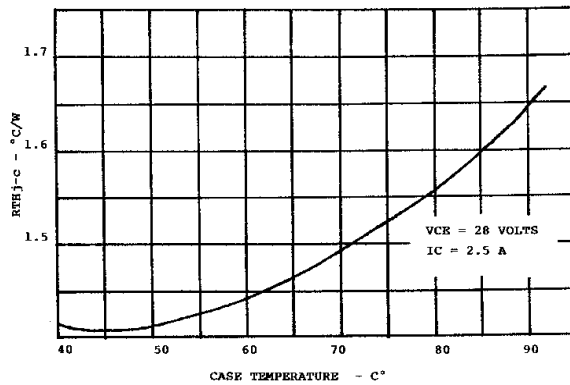
**POWER OUTPUT vs POWER INPUT**



**IMD vs POWER OUTPUT**

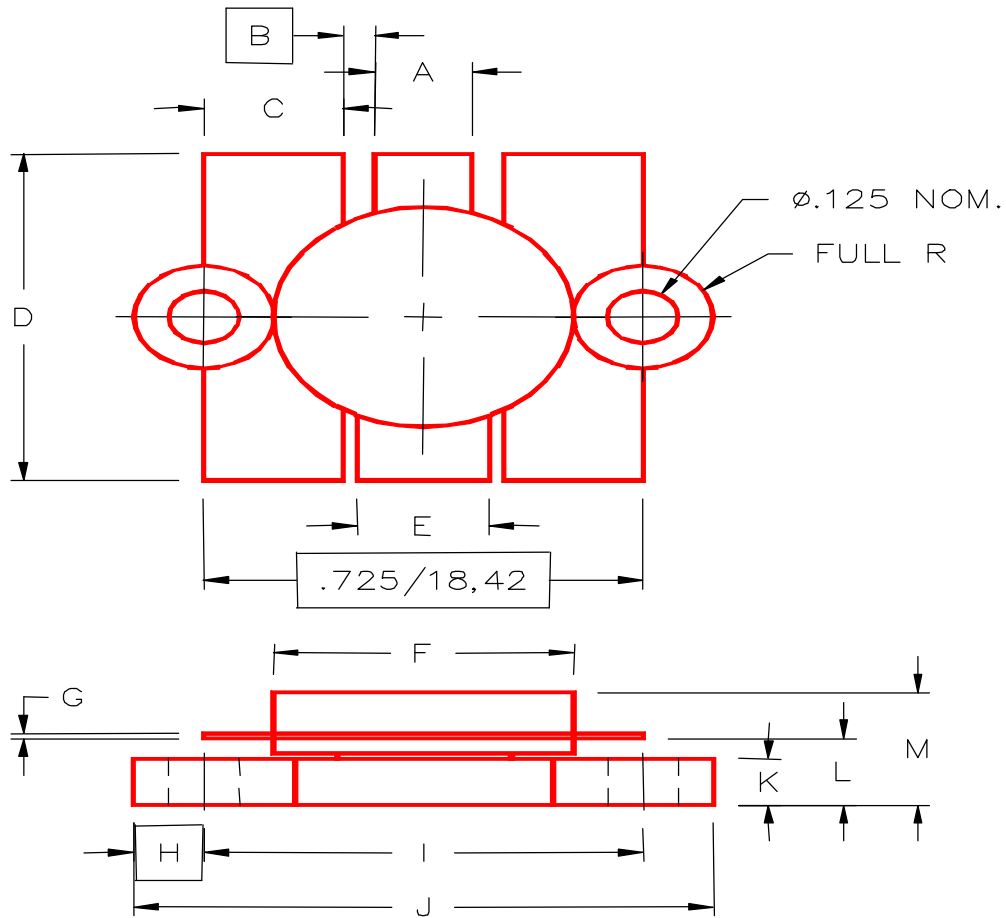


**THERMAL RESISTANCE vs CASE TEMPERATURE**



**PACKAGE MECHANICAL DATA**

PACKAGE STYLE M1 1 1



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.150/3,43	.160/4,06	I	.720/18,29	.730/18,54
B	.045/1,14		J	.970/24,64	.980/24,89
C	.210/5,33	.220/5,59	K	.095/2,41	.105/2,67
D	.835/21,21	.865/21,97	L	.150/3,81	.170/4,32
E	.200/5,08	.210/5,33	M		.280/7,11
F	.490/12,45	.510/12,95			
G	.003/0,08	.007/0,18			
H	.125/3,18				