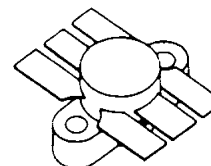


## MS1277

### 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

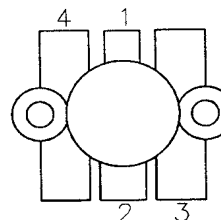


.500 6LFL (M111)  
epoxy sealed

#### 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.

#### PIN CONNECTION



1. Collector      3. Emitter  
2. Base          4. Emitter

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

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	35	V
$V_{EBO}$	Emitter-Base Voltage	4.0	V
$I_C$	Device Current	10	A
$P_{DISS}$	Power Dissipation	140	W
$T_J$	Junction Temperature	+200	°C
$T_{STG}$	Storage Temperature	-65 to +150	°C

#### Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	1.5	°C/W
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# MS1277

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

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

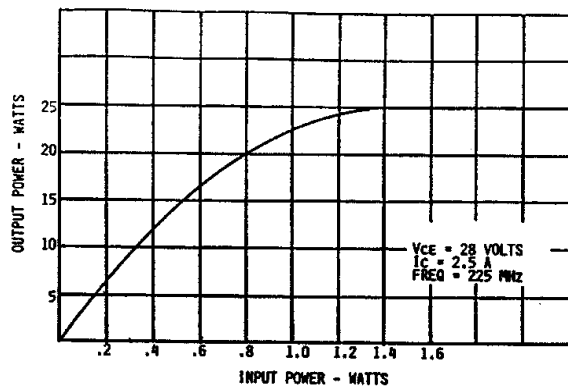
## DYNAMIC

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

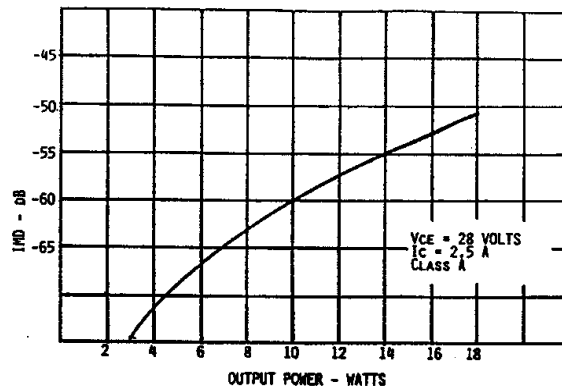
Note: \* dB compression

## TYPICAL PERFORMANCE

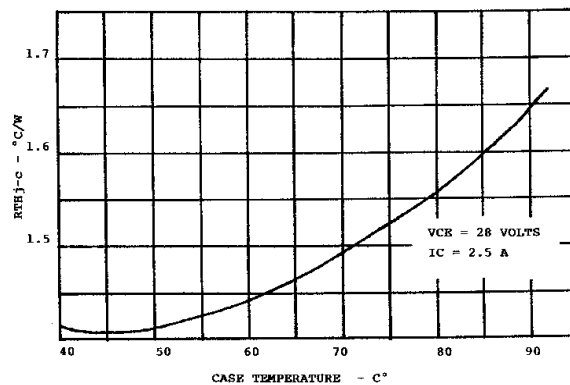
**POWER OUTPUT vs POWER INPUT**



**IMD vs POWER OUTPUT**

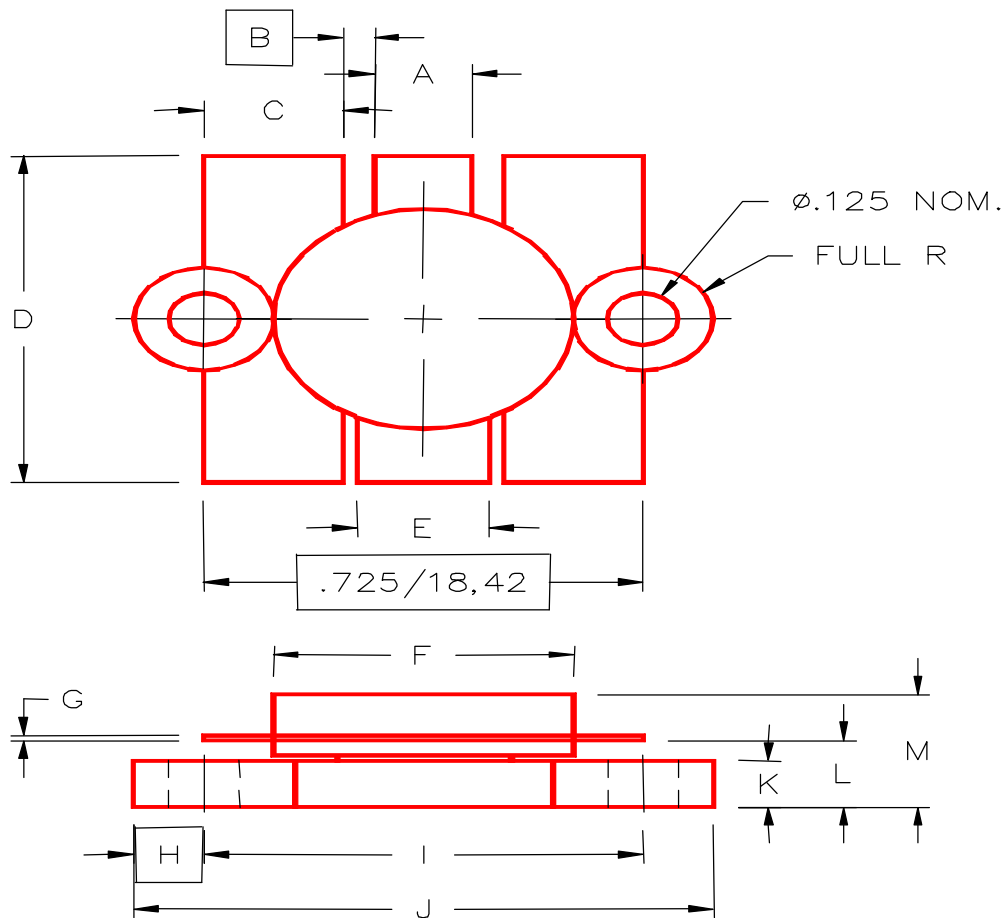


**THERMAL RESISTANCE vs CASE TEMPERATURE**



## 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				