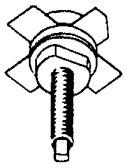
ADVANCED POWER TECHNOLOGY RF®

140 COMMERCE DRIVE
MONTGOMERYVILLE, PA
18936-1013
PHONE: (215) 631-9840
FAX: (215) 631-9855

MS1279

RF & MICROWAVE TRANSISTORS
TV/LINEAR APPLICATIONS



.500 4L STUD (M130)
epoxy sealed

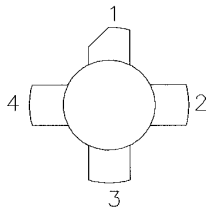
Features

- 170- 230 MHz
- 25 VOLTS
- P_{OUT} = 20 WATTS
- G_P = 8.0 dB GAIN MINIMUM
- GOLD METALLIZATION
- INTERNAL INPUT MATCHING
- COMMON EMITTER CONFIGURATION

DESCRIPTION:

The MS1279 is a gold metallized epitaxial silicon NPN planar transistor using diffused emitter ballast resistors for high linearity Class AB operation in VHF and Band III television transmitters and transposers.

PIN CONNECTION



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

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
V_{CEO}	Collector-Emitter Voltage	35	V
V_{CES}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	8.0	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

Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein
Visit our website at **WWW.ADVANCEDPOWER.COM** or contact our factory direct.

ADVANCED POWER TECHNOLOGY RF®

MS1279

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 50mA	I_E = 0mA	65	---	---	V
BV_{CER}	I_C = 50mA	R_{BE} = 10Ω	60	---	---	V
BV_{CEO}	I_C = 50mA	I_B = 0mA	35	---	---	V
BV_{EBO}	I_E = 10mA	I_C = 0mA	4.0	---	---	V
I_{CES}	V_{CE} = 50V	I_E = 0mA	---	---	5	mA
HFE	V_{CE} = 5V	I_C = 1A	20	---	120	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 225 MHz	V_{CE} = 25 W	I_C = 2.5 mA	20	---	---	W
G_P	f = 225 MHz	V_{CE} = 25 W	I_C = 2.5 mA	8.0	---	---	dB
IMD_3	P_{OUT} = 14W	V_{CE} = 25 W	I_C = 2.5 mA	---	-55	---	dBc
C_{OB}	f =1 MHz	V_{CB} = 30 V		---	---	85	pF

Note: * dB compression

IMPEDANCE DATA

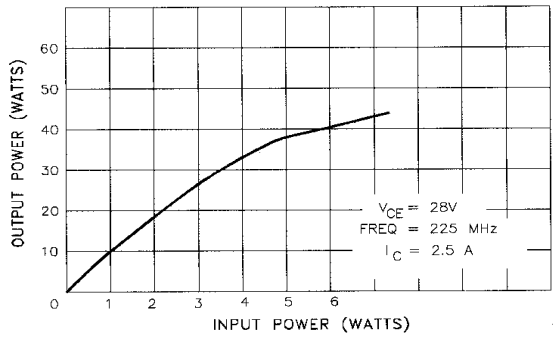
FREQ	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
150 MHz	1.0 + j1.0	9.0 + j5.0
250 MHz	1.0 + j2.0	6.0 + j6.0

V_{CE} = 28V
I_C = 2.5A
P_{OUT} = 20W

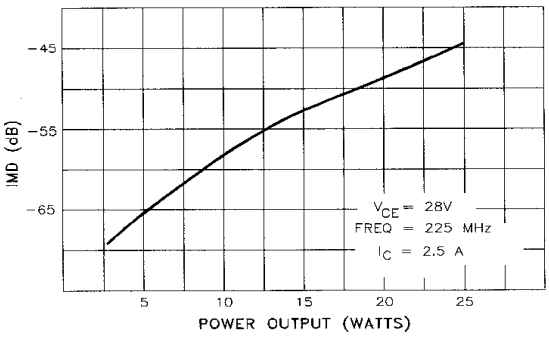
Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein
Visit our website at **WWW.ADVANCEDPOWER.COM** or contact our factory direct.

TYPICAL PERFORMANCE

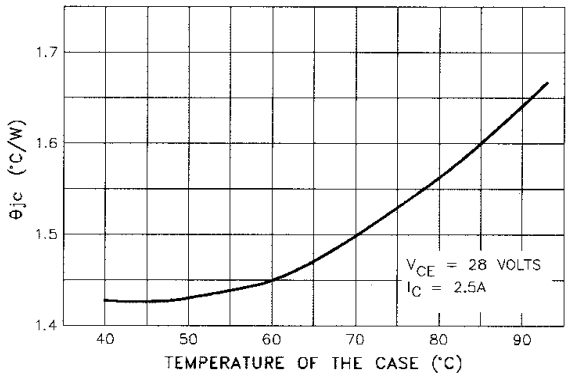
POWER OUTPUT vs POWER INPUT



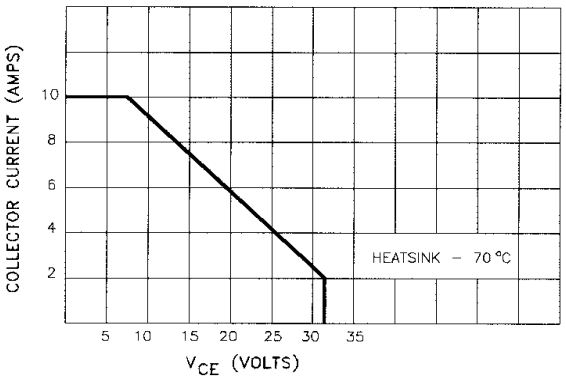
INTERMODULATION DISTORTION vs POWER OUTPUT



THERMAL RESISTANCE vs CASE TEMPERATURE



SAFE OPERAITNG AREA



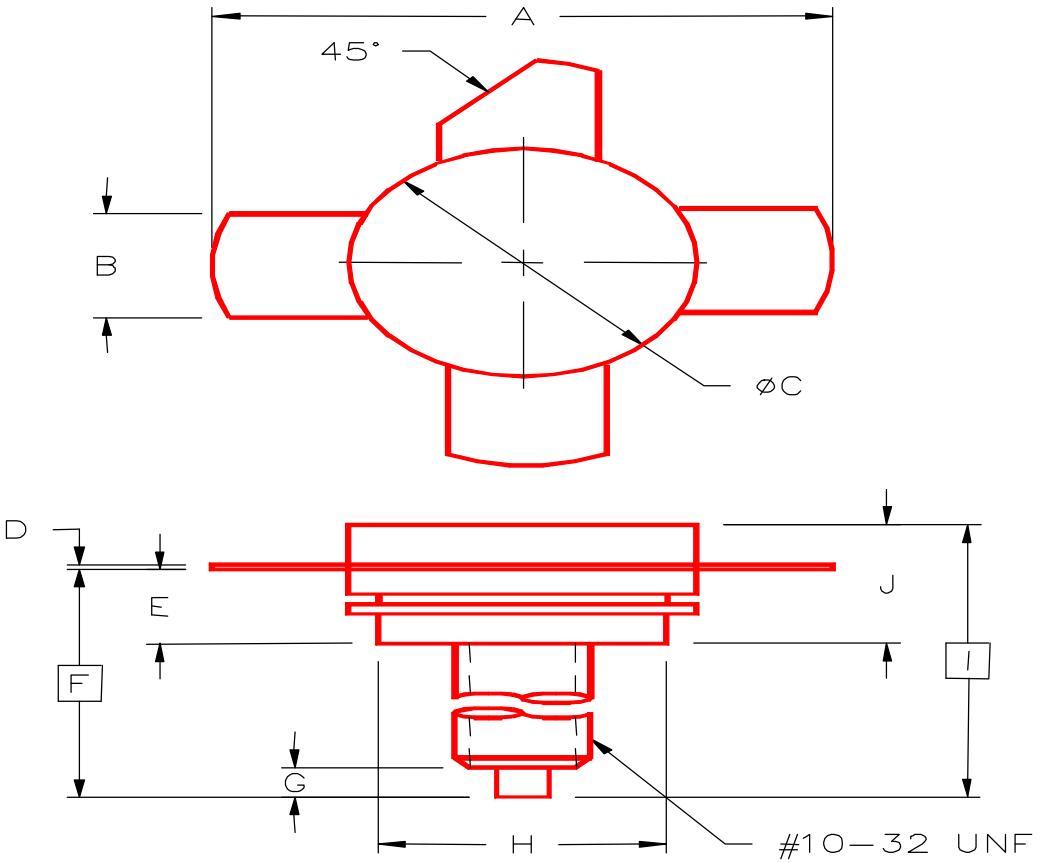
Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein
Visit our website at **WWW.ADVANCEDPOWER.COM** or contact our factory direct.

ADVANCED POWER TECHNOLOGY RF®

MS1279

PACKAGE MECHANICAL DATA

PACKAGE STYLE M130



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	1.010/25,65	1.050/26,67	I	.720/18,29	
B	.220/5,59	.230/5,84	J	.250/6,35	.290/7,37
C	.495/12,57	.505/12,83			
D	.003/0,08	.007/0,18			
E	.160/4,06	.180/4,57			
F	.622/15,80				
G	.100/2,54	.130/3,31			
H	.415/10,54	.425/10,80			

Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein
Visit our website at **WWW.ADVANCEDPOWER.COM** or contact our factory direct.