

GENERAL DESCRIPTION

The B3-28 is specifically designed for VHF broadband linear power amplifier applications in the 100-200 MHz range. The device is capable of operation in Class A, AB or C amplifiers and provides the maximum power output/power gain combination.

B3-28

3 WATTS - 28 VOLTS
100-200 MHz

VHF COMMUNICATIONS

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 10 W

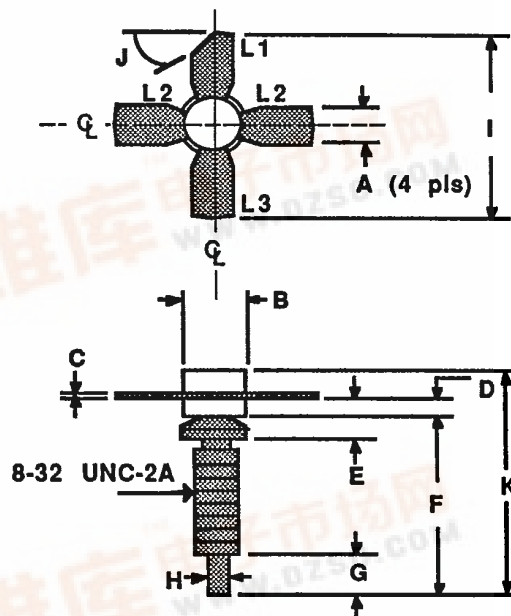
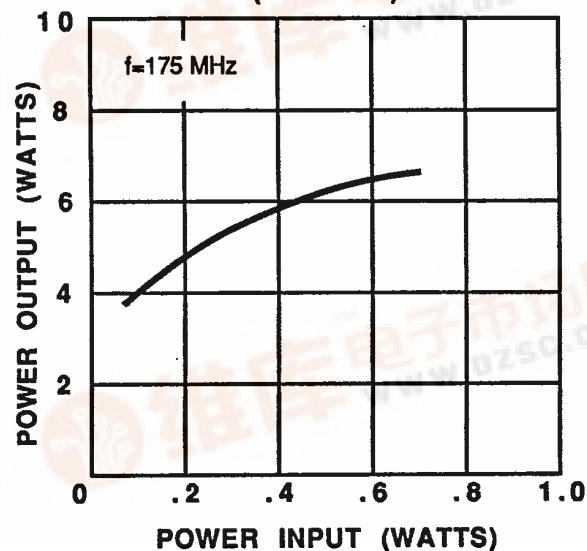
Maximum Voltage and Current

BVces	Collector to Emitter Voltage	60 V
BVebo	Emitter to Base Voltage	4.0 V
Ic	Collector Current	1.0 A

Maximum Temperatures

Storage Temperature	-65 to +150°C
Operating Junction Temperature	+200°C

POWER OUTPUT VS POWER INPUT (TYPICAL)

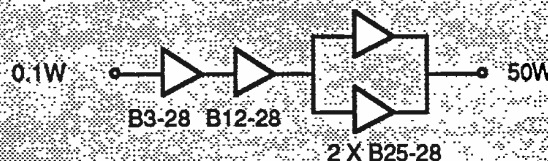


L1 : C	DIM	Millimeter	TOL	Inches	TOL
L2 : E	A	5.71	.13	.225	.005
L3 : B	B	9.52 DIA	.13	.375 DIA	.005
	C	0.13	.02	.005	.001
	D	1.78	.13	.070	.005
	E	4.06	.13	.160	.005
	F	14.59	.25	.585	.010
	G	3.30	.13	.130	.005
	H	1.52	.13	.060	.005
	I	25.40	.25	1.000	.010
	J	45°	5°	45°	5°
	K	19.00	REF	.748	REF

TYPICAL AMPLIFIER LINE UP

Vcc= 28 Volts

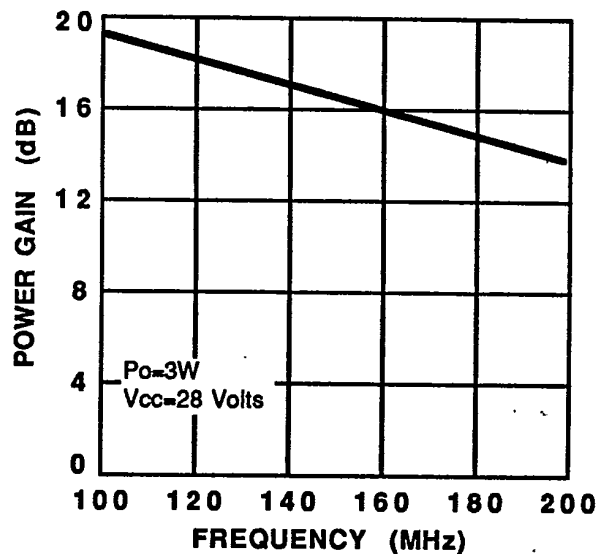
Frequency Range= 100-200 MHz



B3-28-2

ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 175 MHz V _{cc} = 28V	3.0			Watts
P _{in}	Power Input				0.15	Watts
P _g	Power Gain		13.0			dB
η_c	Collector Efficiency			60		%
VSWR	Load Mismatch Tolerance				$\infty:1$	
B _{Vebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 5mA	4.0			Volts
B _{Vces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 5mA	60			Volts
B _{Vceo}	Breakdown Voltage (Collector to Emitter)	I _b = 0A, I _c = 25mA	35			Volts
C _{ob}	Capacitance- Collector to Base	V _{cb} = 28V, f = 1.0MHz		12		pF
h _{FE}	DC-Current Gain	V _{ce} = 5V, I _c = 100A	10			
θ_{jc}	Thermal Resistance				21	°C/W

Note 1: T_c = +25°C unless otherwise specifiedPOWER GAIN VS FREQUENCY
(TYPICAL)DC SAFE OPERATING AREA
(TYPICAL)