

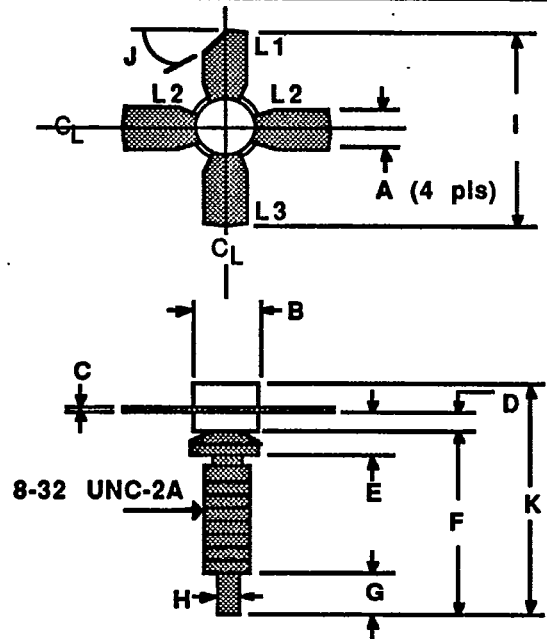
# B12-28 (2N6198)

12 WATTS - 28 VOLTS  
100-200 MHz

## GENERAL DESCRIPTION

The B12-28 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.

## VHF COMMUNICATIONS



## ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 25 W

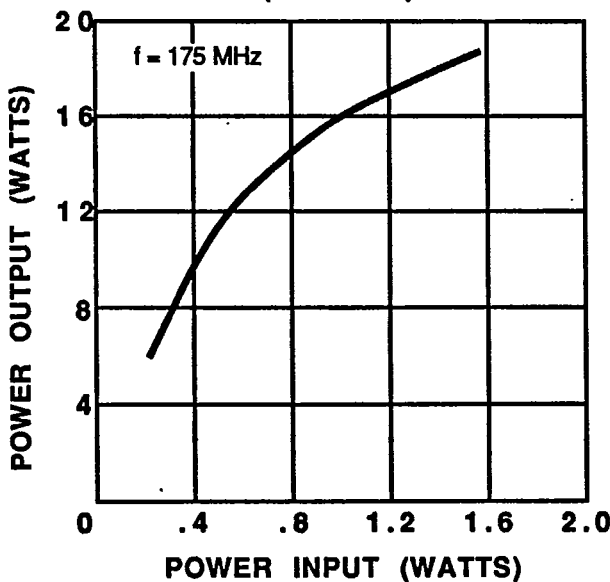
### Maximum Voltage and Current

BVces Collector to Emitter Voltage 60 V  
 BVebo Emitter to Base Voltage 4 V  
 Ic Collector Current 2.5 A

### Maximum Temperatures

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

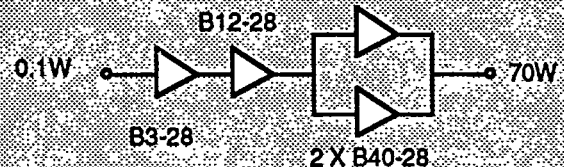
POWER OUTPUT VS POWER INPUT (TYPICAL)



DIM	Millimeter	TOL	Inches	TOL
L1 : C				
L2 : E				
L3 : B				
A	5.71	.13	.225	.005
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 = 100-175 MHz



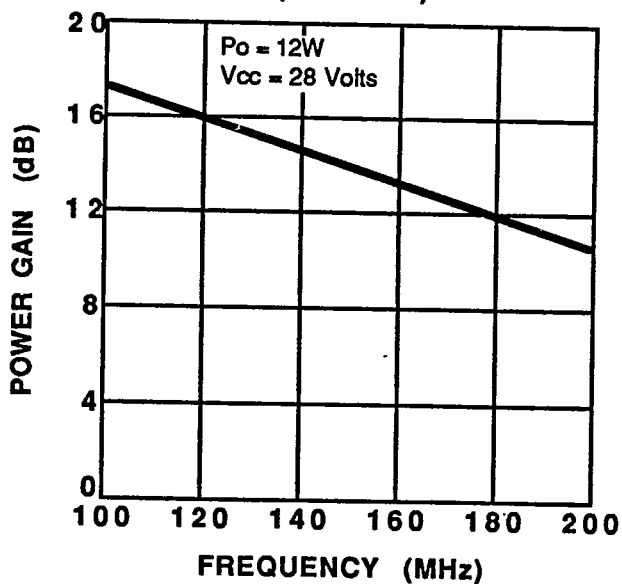
**B12-28(2N6198)-2**

**ELECTRICAL CHARACTERISTICS<sup>1</sup>**

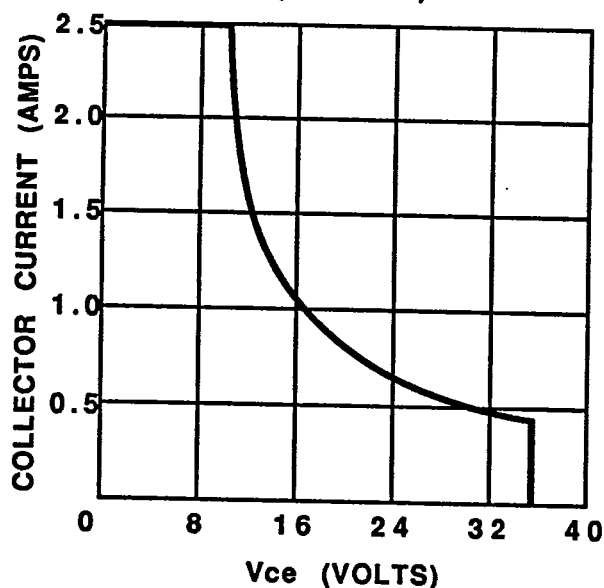
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P <sub>out</sub>	Power Output	f=175 MHz V <sub>cc</sub> = 28V	12			Watts
P <sub>in</sub>	Power Input				1.0	Watts
P <sub>g</sub>	Power Gain		10.8	13		dB
η <sub>c</sub>	Collector Efficiency			60		%
VSWR	Load Mismatch Tolerance				∞:1	
BV <sub>ebo</sub>	Breakdown Voltage (Emitter to Base)	I <sub>c</sub> = 0A, I <sub>e</sub> = 5mA	4.0			Volts
BV <sub>ces</sub>	Breakdown Voltage (Collector to Emitter)	V <sub>be</sub> = 0A, I <sub>c</sub> = 5mA	60			Volts
BV <sub>ceo</sub>	Breakdown Voltage (Collector to Emitter)	I <sub>b</sub> = 0A, I <sub>c</sub> = 50mA	35			Volts
C <sub>ob</sub>	Capacitance-Collector to Base	V <sub>cb</sub> = 28V, f= 1 MHz		25		pF
h <sub>FE</sub>	DC-Current Gain	V <sub>ce</sub> = 5V, I <sub>c</sub> = 1A	10			
θ <sub>jc</sub>	Thermal Resistance				7.0	°C/W

Note 1: T<sub>c</sub> = +25°C unless otherwise specified

**POWER GAIN VS FREQUENCY (TYPICAL)**



**DC SAFE OPERATING AREA (TYPICAL)**



SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

236