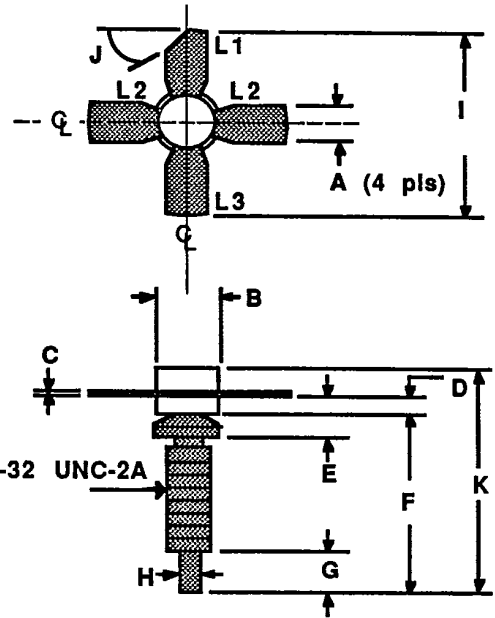


GENERAL DESCRIPTION

This device is specifically designed for operation in VHF AM power amplifier applications covering the range 100 to 150 MHz. The device incorporates Nichrome resistor stabilization, and provides superior performance from a 13 volt supply.

BAM20
20 WATTS - 27 VOLTS
100-150 MHz

VHF BIPOLAR



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 25 W

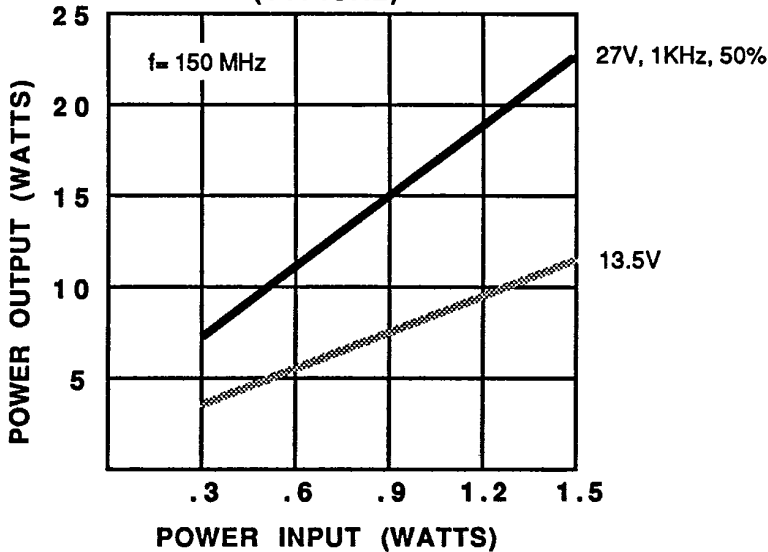
Maximum Voltage and Current

BVces Collector to Emitter Voltage 60 V
 BVebo Emitter to Base Voltage 4.0 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	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= 27 Volts
 Frequency Range= 100-150 MHz



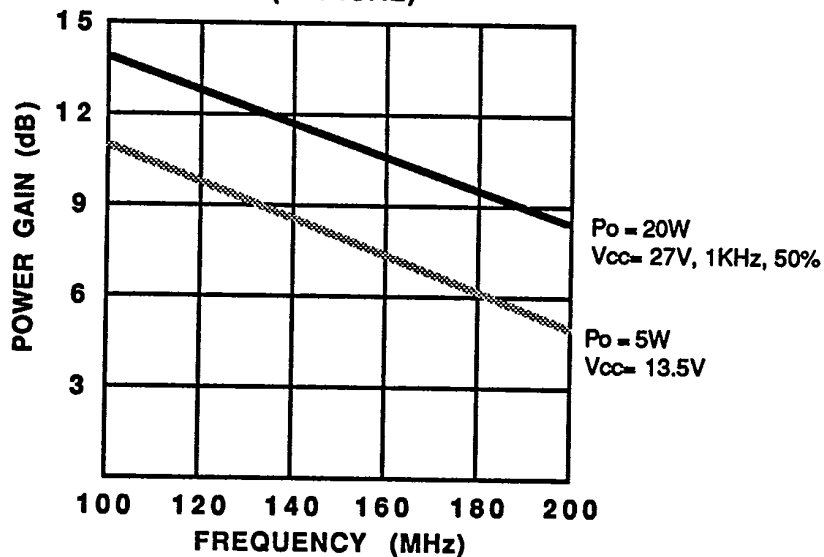
BAM20-2

ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 150 MHz V _{cc} = 13.5V	5			Watts
P _{in}	Power Input					
P _{out}	Power Output	f = 150 MHz V _{cc} = 27V, 1KHz, 50%	20		1.5	Watts
P _{in}	Power Input					
η _c	Collector Efficiency					
VSWR	Load Mismatch Tolerance	f = 150 MHz, V _{cc} = 13.5V, P _{out} = 5W			30:1	
BV _{ebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 5mA	4.0			Volts
BV _{ces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 20mA	60			Volts
BV _{ceo}	Breakdown Voltage (Collector to Emitter)	I _b = 0A, I _c = 50mA	30			Volts
Z _{in}	Series Input Impedance	At Rated Power Out		1.7+j2.4		
Z _l	Series Load Impedance	At Rated Power Out		17+j16.5		
C _{cb}	Capacitance-Collector to Base	V _{cb} = 28V, f = 1.0 MHz			13	pF
h _{FE}	DC-Current Gain	V _c = 5V, I _c = 500mA	10		100	
θ _{jc}	Thermal Resistance				7.0	°C/W

Note 1: T_c = +25°C unless otherwise specified

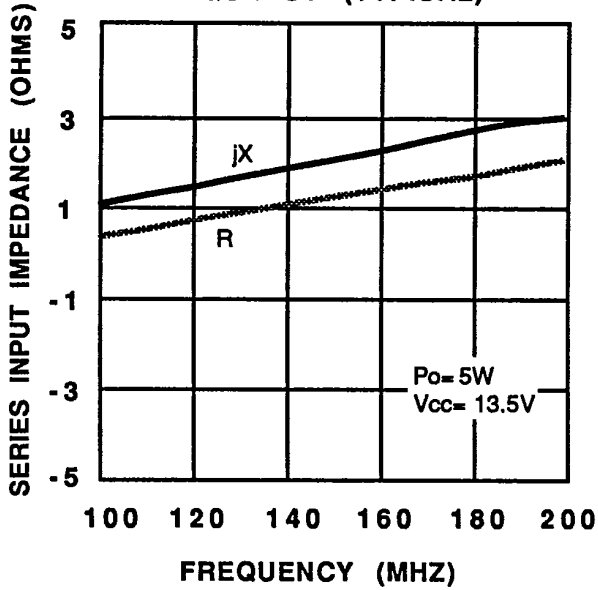
POWER GAIN VS FREQUENCY (TYPICAL)



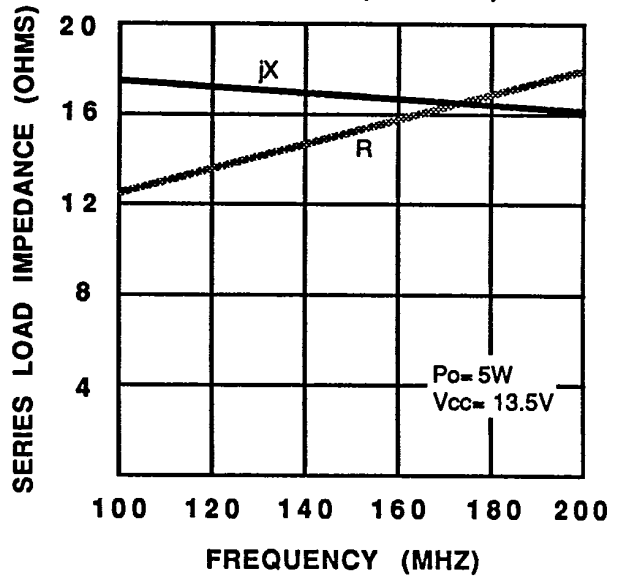
SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

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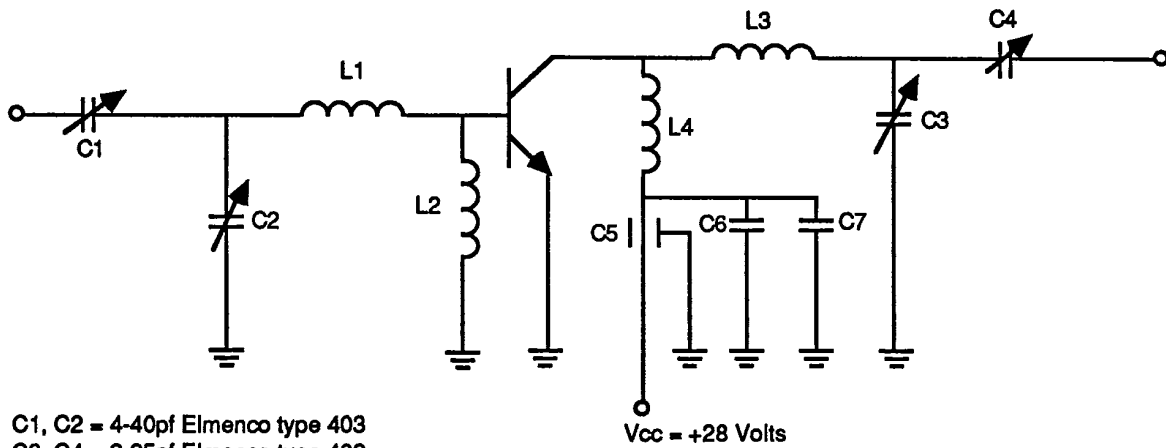
SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)



150 MHz TEST AMPLIFIER



- C1, C2 = 4-40pf Elmenco type 403
- C3, C4 = 2-25pf Elmenco type 402
- C5 = .001uf
- C6 = .1uf
- C7 = 10uf
- L1 = 1/2 turn #16, 3/8" I.D.
- L2 = 1/0uf RFC
- L3 = 3 turns #16, 3/8" I.D.
- L4 = 6 turns #16, 3/8" I.D.

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