

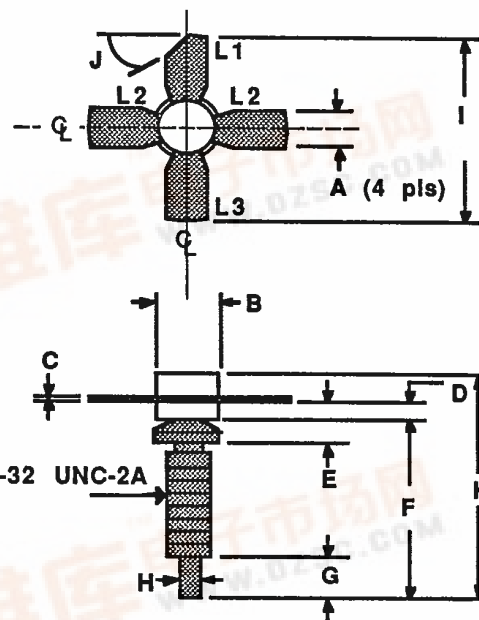
GENERAL DESCRIPTION

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

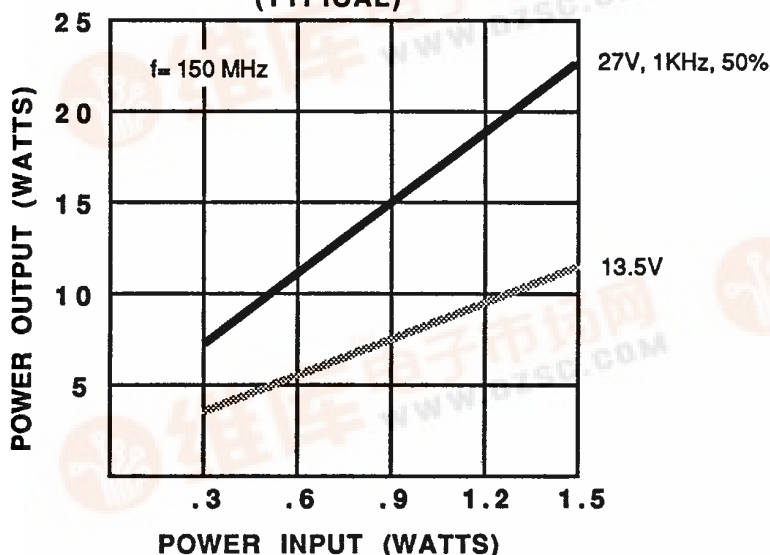
Ic Collector Current 2.5 A

Maximum Temperatures

Storage Temperature -65 to +150 °C

Operating Junction Temperature +200 °C

POWER OUTPUT VS POWER INPUT (TYPICAL)

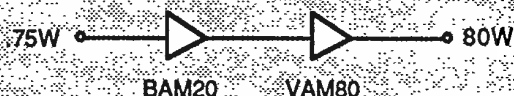


L1 : C	DIM	Millimeter	TOL	Inches	TOL
L2 : E	A	5.71	.13	.225	.005
L3 : B	B	9.52 DIA	.13	.375 DIA	.005
	C	0.13	.02	.005	.001
	D	1.78	.13	.070	.005
	E	4.06	.13	.160	.005
	F	14.59	.25	.585	.010
	G	3.30	.13	.130	.005
	H	1.52	.13	.060	.005
	I	25.40	.25	1.000	.010
	J	45°	5°	45°	5°
	K	19.00	REF	.748	REF

TYPICAL AMPLIFIER LINE UP

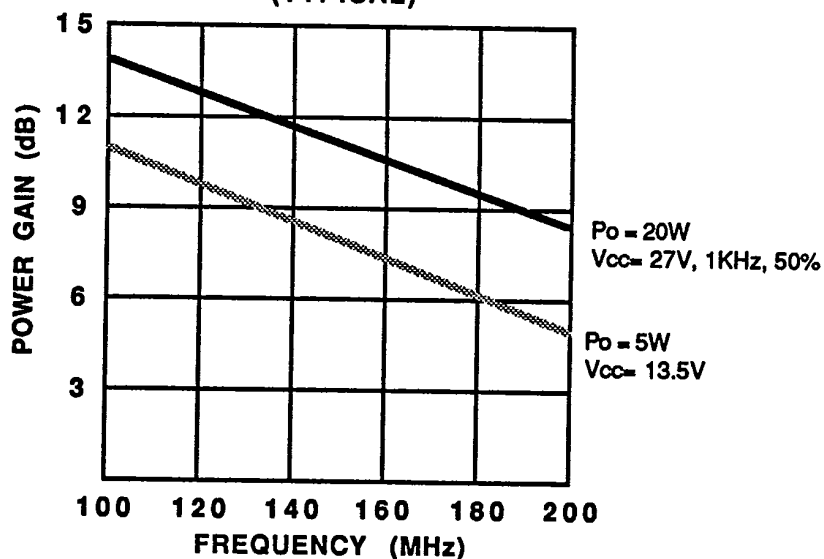
Vcc= 27 Volts

Frequency Range= 100-150 MHz

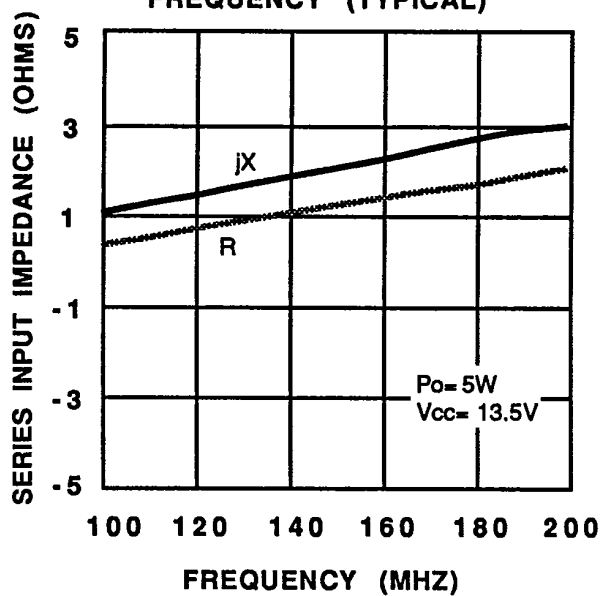
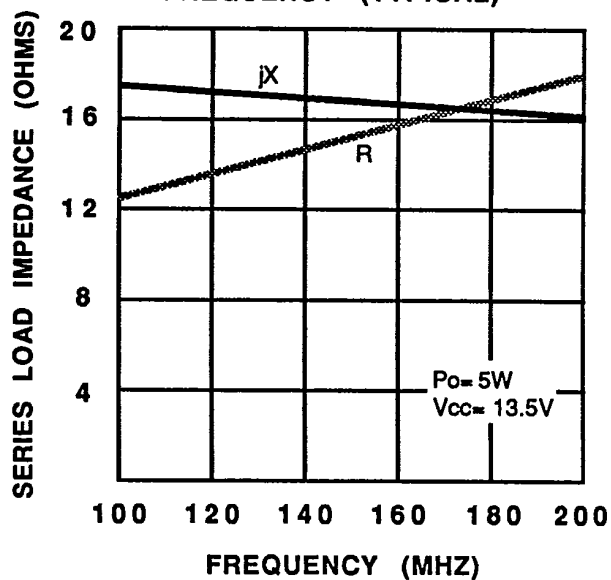


ELECTRICAL CHARACTERISTICS¹

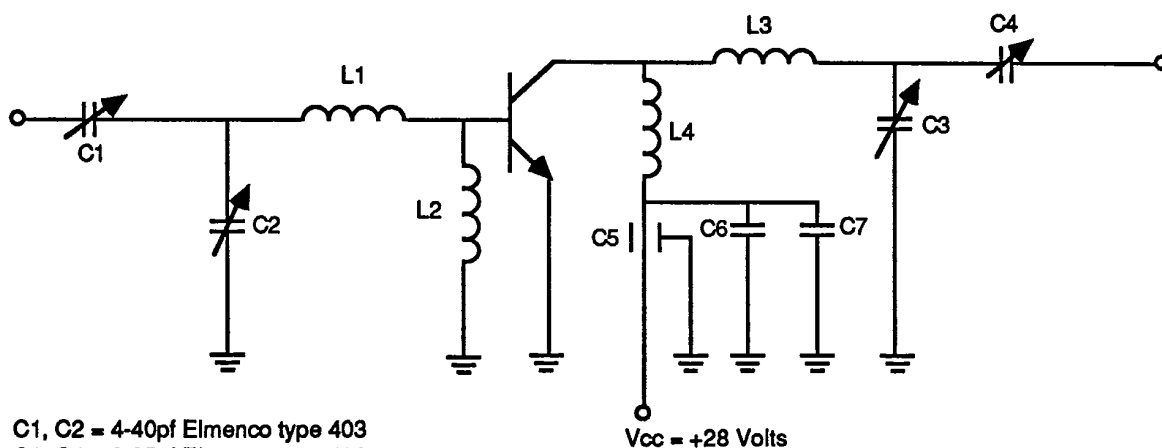
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 150 MHz V _{cc} = 13.5V	5		.75	Watts
P _{in}	Power Input					
P _{out}	Power Output	f = 150 MHz V _{cc} = 27V, 1KHz, 50%	20		1.5	Watts
P _{in}	Power Input					
η_c	Collector Efficiency			65		%
VSWR	Load Mismatch Tolerance	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+16.5		
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

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.