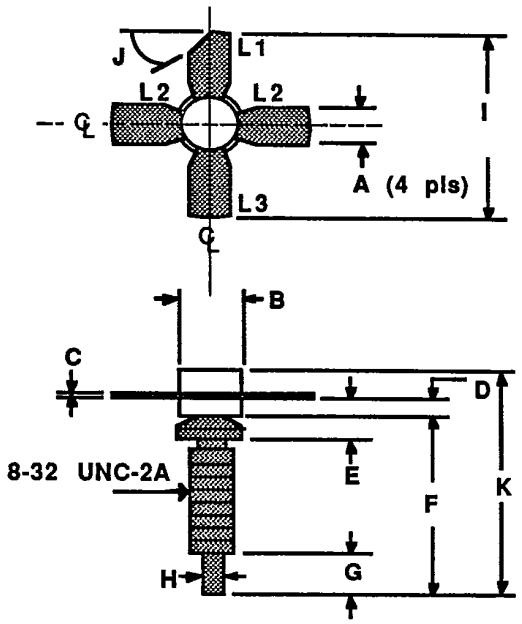
BAM20
20 WATTS - 27 VOLTS
100-150 MHz
VHF BIPOLAR

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.

ABSOLUTE MAXIMUM RATINGS

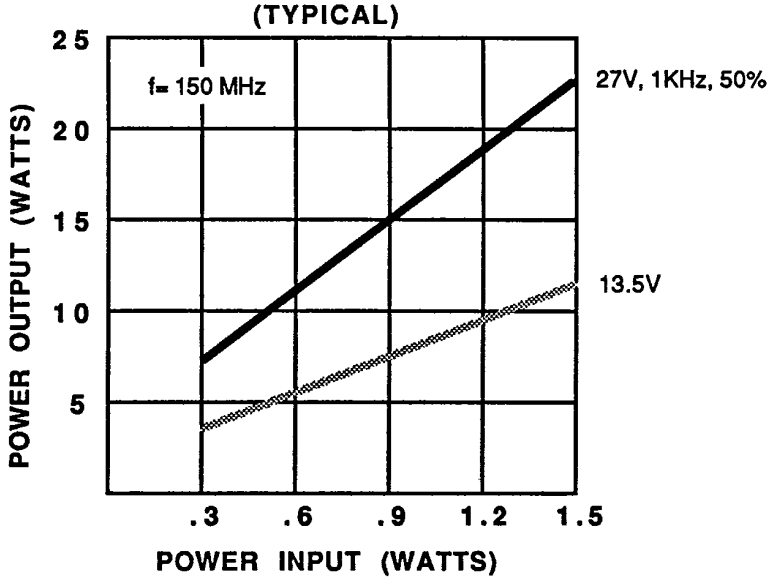
Maximum Power Dissipation @ 25°C Case Temperature	25 W
Maximum Voltage and Current	
BVces Collector to Emitter Voltage	60 V
BVebo Emitter to Base Voltage	4.0 V
Ic Collector Current	2.5 A
Maximum Temperatures	
Storage Temperature	-65 to +150 °C
Operating JunctionTemperature	+200 °C



L1 : C
L2 : E
L3 : B

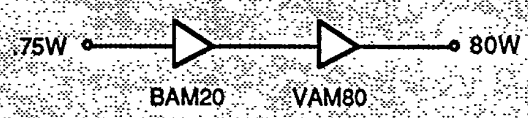
DIM	Millimeter	TOL	Inches	TOL
A	5.71	.13	.225	.005
B	9.52 DIA	.13	.375 DIA	.005
C	0.13	.02	.005	.001
D	1.78	.13	.070	.005
E	4.06	.13	.160	.005
F	14.59	.25	.585	.010
G	3.30	.13	.130	.005
H	1.52	.13	.060	.005
I	25.40	.25	1.000	.010
J	45°	5°	45°	5°
K	19.00	REF	.748	REF

POWER OUTPUT VS POWER INPUT (TYPICAL)



TYPICAL AMPLIFIER LINE UP

Vcc= 27 Volts
Frequency Range= 100-150 MHz



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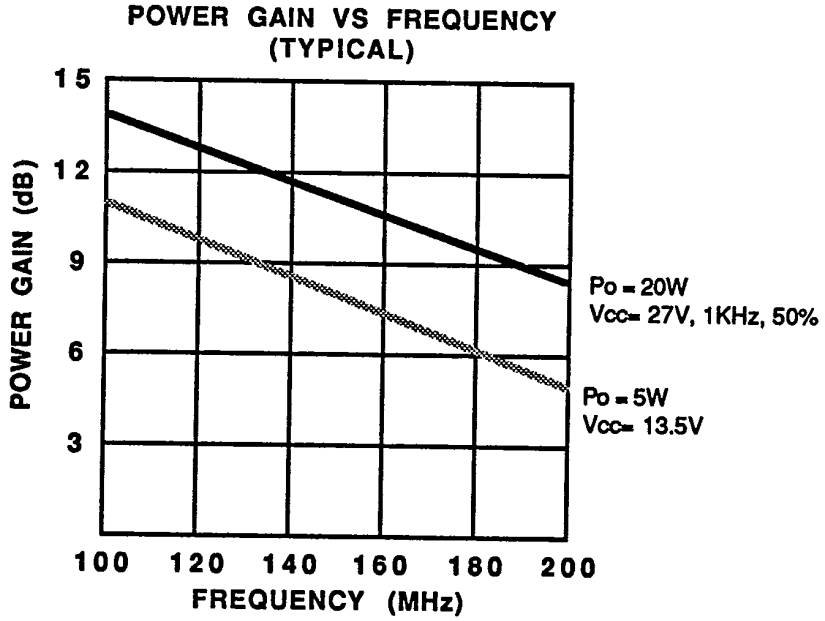
ELECTRICAL CHARACTERISTICS[1]

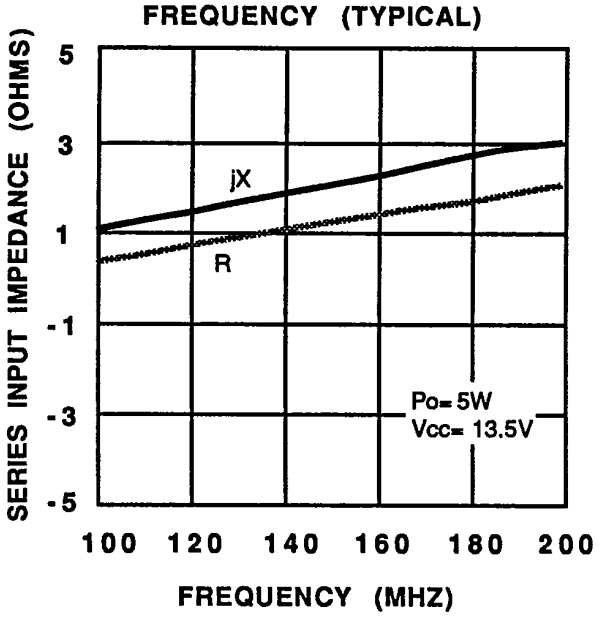
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Pout	Power Output	f= 150 MHz Vcc= 13.5V	5			Watts
Pin	Power Input				.75	Watts
Pout	Power Output	f= 150 MHz Vcc= 27V, 1KHz, 50%	20			Watts
Pin	Power Input				1.5	Watts
η_c	Collector Efficiency			65		%
VSWR	Load Mismatch Tolerance	f= 150 MHz, Vcc= 13.5V, Pout= 5W			30:1	
BVebo	Breakdown Voltage (Emitter to Base)	Ic= 0A, Ie= 5mA	4.0			Volts
BVces	Breakdown Voltage (Collector to Emitter)	Vbe= 0A, Ic= 20mA	60			Volts
BVceo	Breakdown Voltage (Collector to Emitter)	Ib= 0A, Ic= 50mA	30			Volts
Zin	Series Input Impedance	At Rated Power Out		1.7+j2.4		
Zl	Series Load Impedance	At Rated Power Out		17+16.5		
Ccb	Capacitance- Collector to Base	Vcb= 28V, f= 1.0 MHz			13	pF
h_{FE}	DC-Current Gain	Vc= 5V, Ic= 500mA	10		100	
θ_{jc}	Thermal Resistance				7.0	°C/W

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

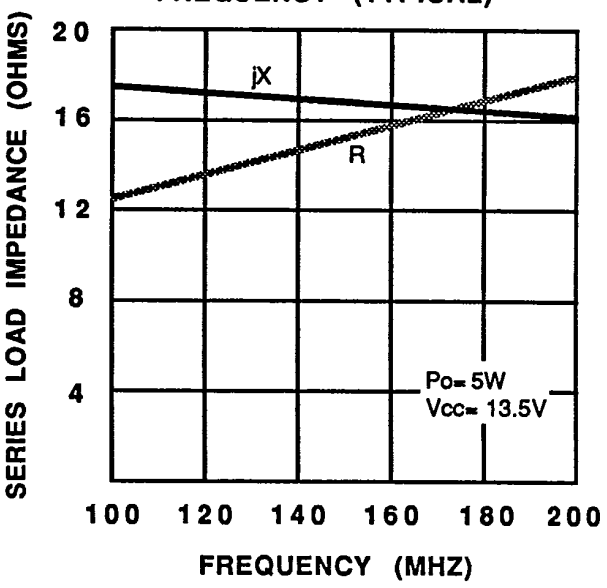


222

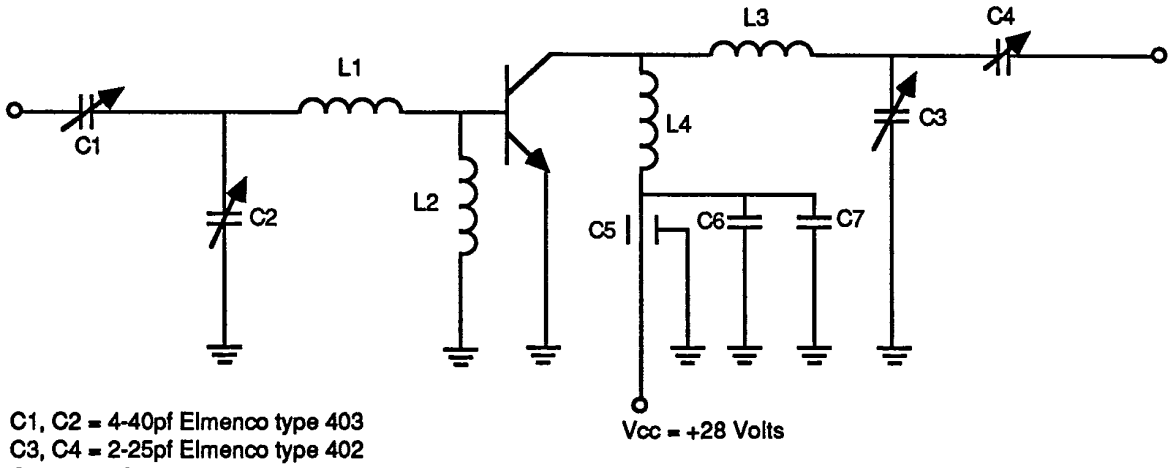
SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



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.