

VAM 40

40 Watts, 27 Volts, Class AB
Defcom 100 - 150 MHz

GENERAL DESCRIPTION

The VAM 40 is a COMMON EMITTER, specifically designed for collector modulated operation in the VHF AM applications in the 100-150 MHz range.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 50 Watts

Maximum Voltage and Current

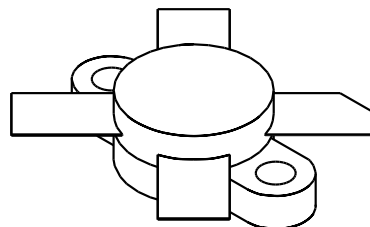
BVces Collector to Emitter Voltage 60 Volts
BVebo Emitter to Base Voltage 4.0 Volts
Ic Collector Current 5.0 A

Maximum Temperatures

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

CASE OUTLINE

55HT, Style 2



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 150 MHz	40			Watts
Pin	Power Input	Vcc = 27V, 1 KHz, 50%		3.2	4.0	Watts
Pg	Power Gain		10	11		dB
Pout	Power Output	F = 150 MHz	10			Watts
Pin	Power Input	Vcc = 13.5 Volts			2.0	Watts
Pg	Power Gain			8.0		dB
ηc	Efficiency	F = 150 MHz, Po=10 W		65		%
VSWR	Load Mismatch Tolerance	Vcc = 13.5 Volts			30:1	

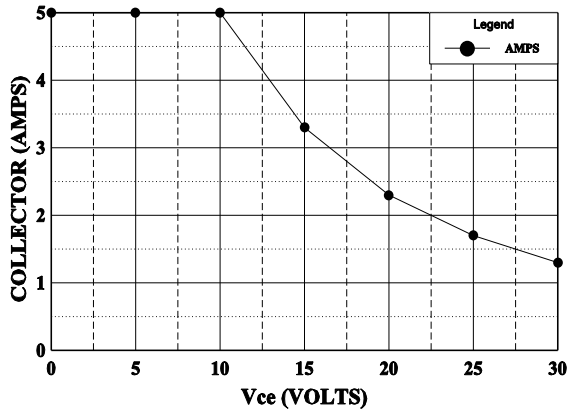
BVebo	Emitter to Base Breakdown	Ie = 5 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	Ic = 20 mA	60			Volts
BVceo	Collector to Emitter Breakdown	Ie = 50 mA	32			Volts
Ices	Collector Leakage Current	Vce = 5 Volts			30	mA
Cob	Output Capacitance	Vcb = 28 V, F = 1 MHz			25	pF
hFE	DC - Current Gain	Vce = 5 V, Ic = 500 MA	10		100	
θjc	Thermal Resistance				3.5	°C/W

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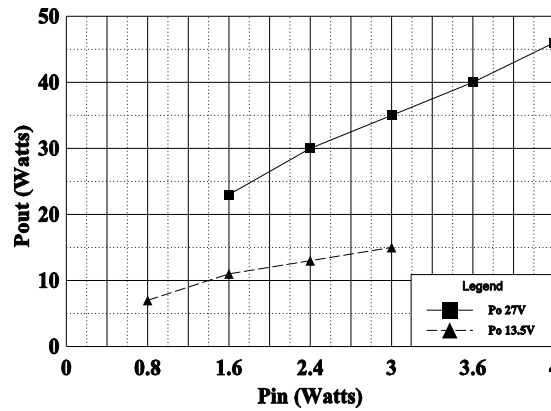
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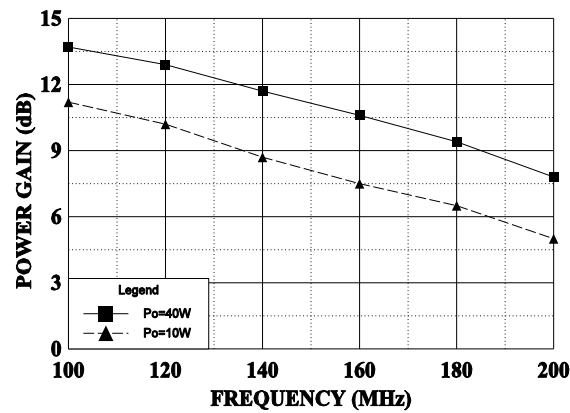
DC SAFE OPERATING AREA



POWER OUTPUT vs POWER INPUT

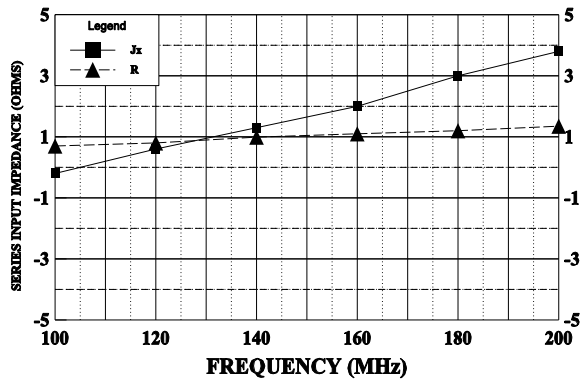


POWER GAIN VS FREQUENCY



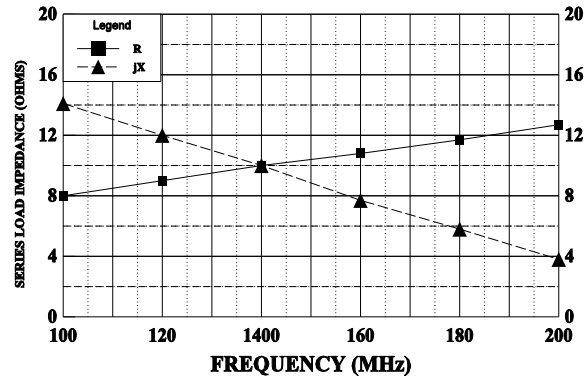
SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 27V, Po=40W

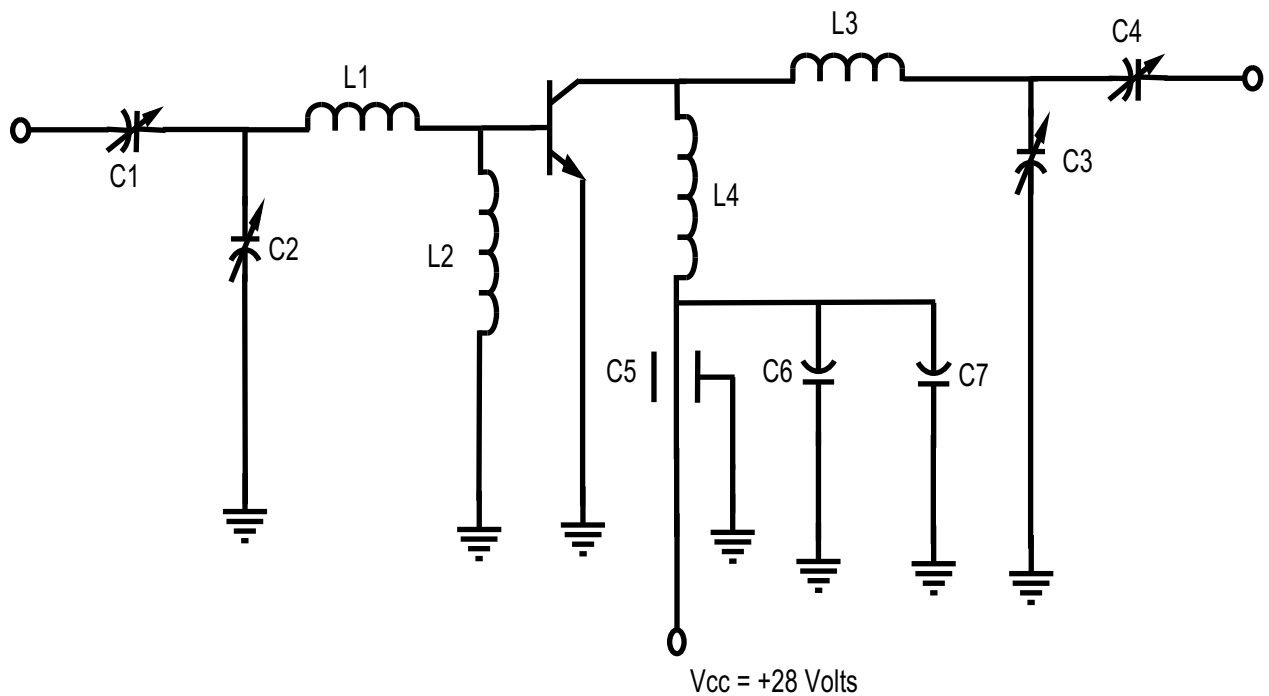


SERIES LOAD IMPEDANCE vs FREQUENCY

Po=40W Vcc=27V



150 MHz TEST AMPLIFIER



C1, C2 4-40 pf Elmenco type 403
 C3, C4 2-25 pf Elmenco type 402
 C5001 f
 C61 f
 C7 10 f
 L1 1/2 turn #16, 3/8" I.D.
 L2 1/4 turn RFC
 L3 3 turns #16, 3/8" I.D.
 L4 6 turns #16, 3/8" I.D.