GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

VAM 40

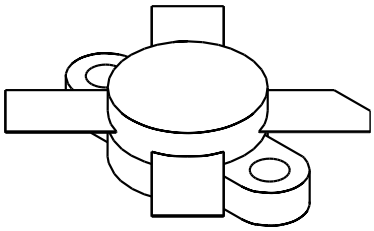
40 Watts, 27 Volts, Class AB
Defcom 100 - 150 MHz

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.

CASE OUTLINE

55HT, Style 2



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC	50 Watts
Maximum Voltage and Current	
BVces Collector to Emiter Voltage	60 Volts
BVebo Emitter to Base Voltage	4.0 Volts
Ic Collector Current	5.0 A
Maximum Temperatures	
Storage Temperature	- 65 to +150ºC
Operating Junction Temperature	+200ºC

ELECTRICAL CHARACTERISTICS @ 25 ºC

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
η**c**	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
h_{FE}	DC - Current Gain	Vce =5 V, Ic = 500 MA	10		100	
θ**jc**	Thermal Resistance				3.5	ºC/W

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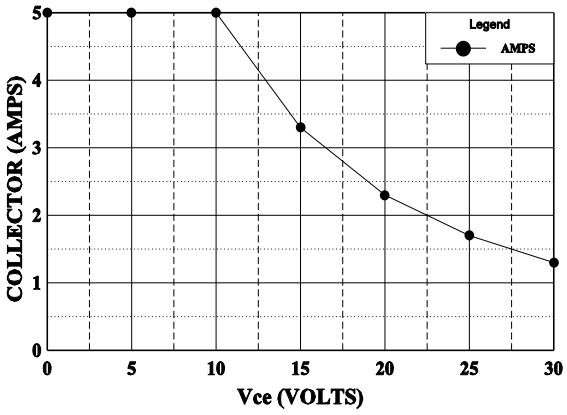
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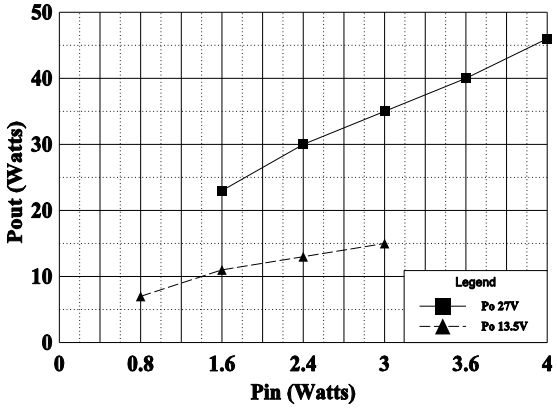
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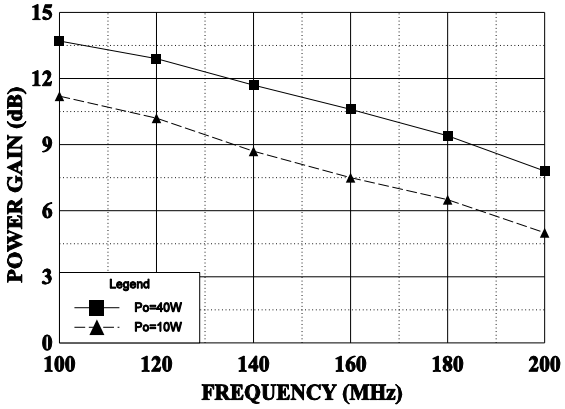
DC SAFE OPERATING AREA



POWER OUTPUT vs POWER INPUT

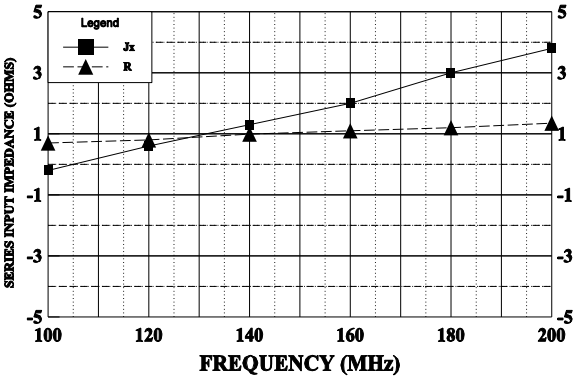


POWER GAIN VS FREQUENCY



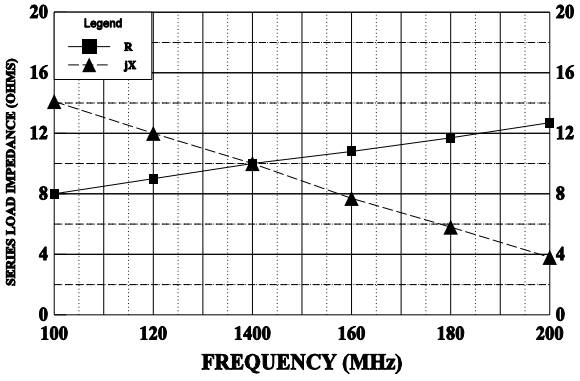
SERIES INPUT IMPEDANCE vs FREQUENCY

Vcc = 27V, Po=40W



SERIES LOAD IMPEDANCE vs FREQUENCY

Po=40W Vcc=27V

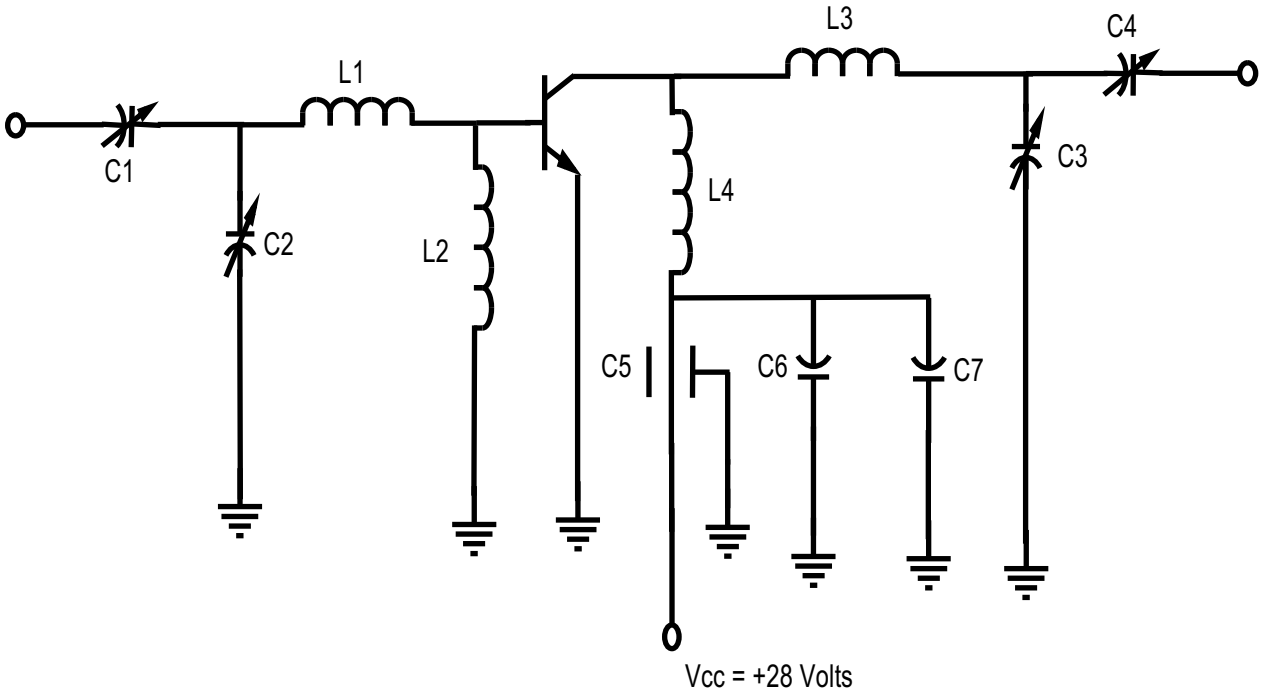


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CHz TECHNOLOGY
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VAM40

150 MHz TEST AMPLIFIER



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

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