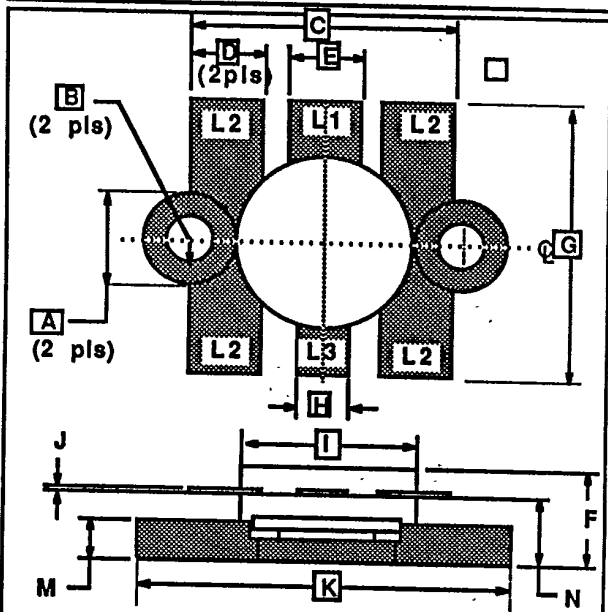


GENERAL DESCRIPTION

The VTV-300 is a silicon NPN transistor designed for broadcast applications. It has been designed for high efficiency, high linearity, Class A operation in VHF (Band III) television transmitters and transposers. The device utilizes gold metallization and silicon diffused resistors to ensure ruggedness and high reliability.

VTV-300
30 WATTS - 25 VOLTS
175-225 MHz

VHF - TV LINEAR



DIM	Millimeter	TOL	Inches	TOL
A	6.35 DIA	.13	.250 DIA	.005
B	3.17 DIA	.13	.125 DIA	.005
C	18.41	.13	.725	.005
D	5.46	.13	.215	.005
E	5.21	.13	.205	.005
F	6.73	REF	.265	REF
G	21.59	.38	.850	.015
H	3.94	.13	.155	.005
I	12.70 DIA	.13	.500 DIA	.005
J	0.13	.02	.005	.001
K	24.76	.13	.975	.005
M	2.41	.13	.095	.005
N	4.32	.13	.170	.005

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature 146 W

Maximum Voltage and Current

BVces Collector to Emitter Voltage 45 V

BVebo Emitter to Base Voltage 4.0 V

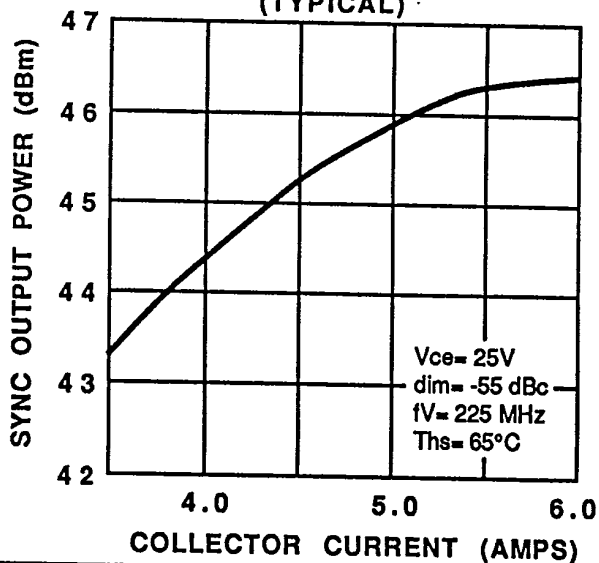
Ic Collector Current 14 A

Maximum Temperatures

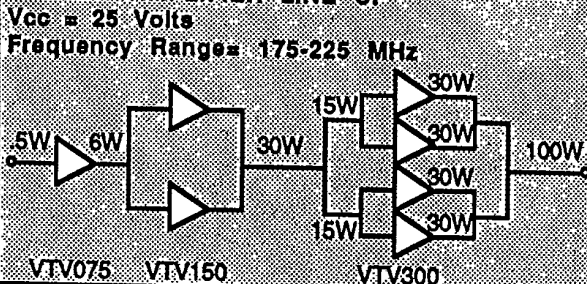
Storage Temperature -65 to +150 °C

Operating Junction Temperature +200 °C

SYNC OUTPUT POWER VS COLLECTOR CURRENT (TYPICAL)



TYPICAL AMPLIFIER LINE UP



490 Race Street, San Jose, CA 95126
 Ewenny Rd., Bridgend, Mid Glamorgan, CF31 3LQ, United Kingdom, Phone (0656) 68021

Phone (408) 294-4200, TWX (910) 338-2172

REV A AUG 1987
 Printed in USA

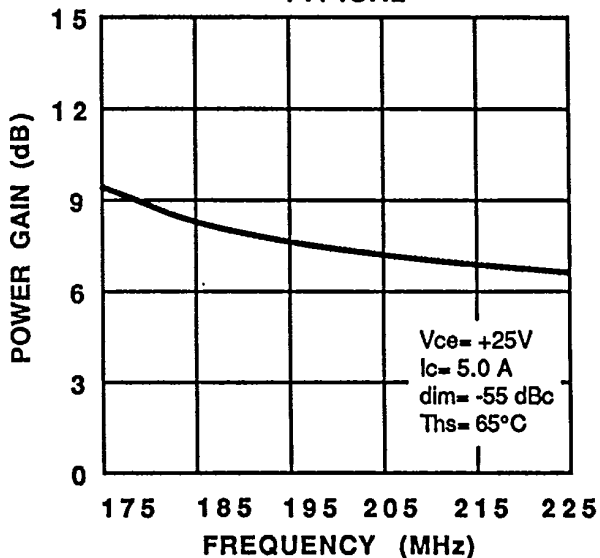
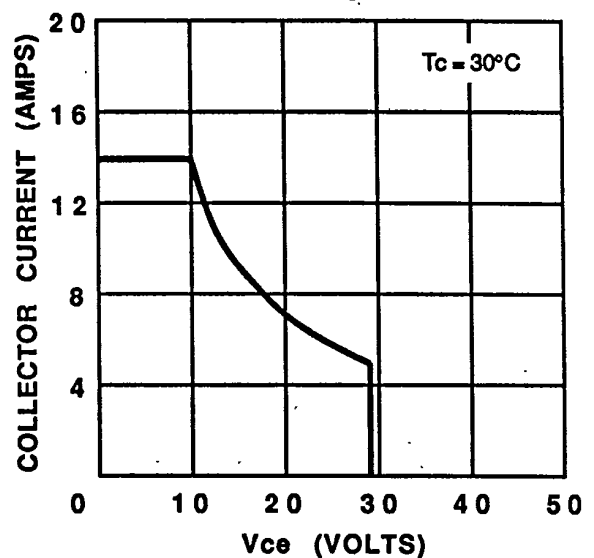
VTV-300-2

ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output Sync ²	f _{vision} = 225 MHz V _{cc} = 25 V I _c = 5.0 A d _{im} = -55dBc I _c = 0A, I _e = 10 mA	30	35		P _{sync} Watts
P _{in}	Power Input			5		P _{sync} Watts
P _g	Power Gain		6	7		dB
η _c	Collector Efficiency			30		%
BV _{ebo}	Breakdown Voltage (Emitter to Base)		4.0			Volts
BV _{ces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 100mA	45			Volts
BV _{ceo}	Breakdown Voltage (Collector to Emitter)	I _b = 0A, I _c = 25mA	28			Volts
f _t	Transition Frequency	V _{ce} = 25V, I _c = 25V		1.05		MHz
C _{ob}	Capacitance- Collector to Base	V _{cb} = 25V, I _e = 0, f = 1.0MHz		135		pF
h _{fe}	DC-Current Gain	I _c = 1.0A, V _{ce} = 5V	10	40		
θ _{jc}	Thermal Resistance	IR Scan, P _d = 90W, T _{hs} = 45°C		1.0	1.2	°C/W

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

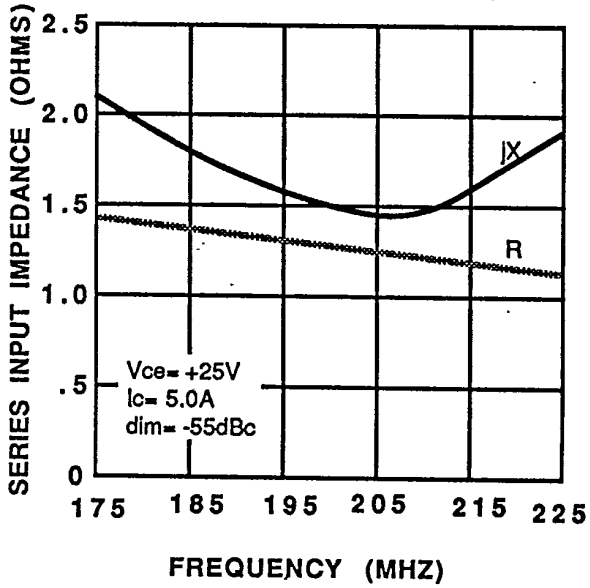
Note 2: European three tone test method: vision carrier -8 dB, sound carrier -7 dB, sideband signal -16 dB, 0 dB corresponds to peak sync level.

POWER GAIN VS FREQUENCY
TYPICALDC SAFE OPERATING ARE
TYPICAL

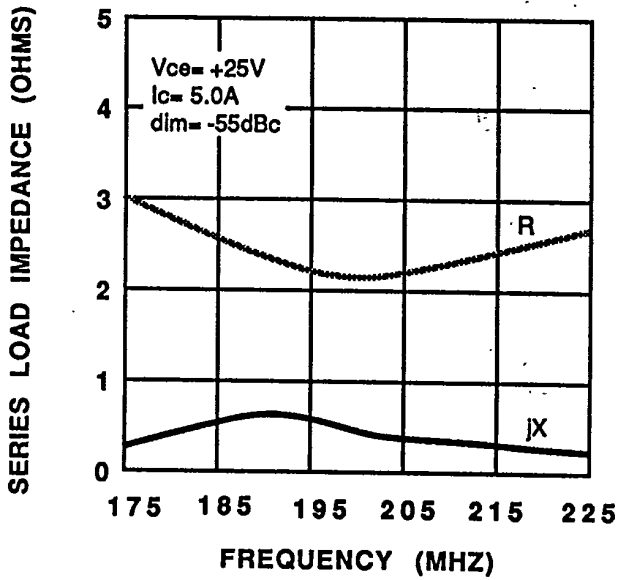
SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

VTV-300-3

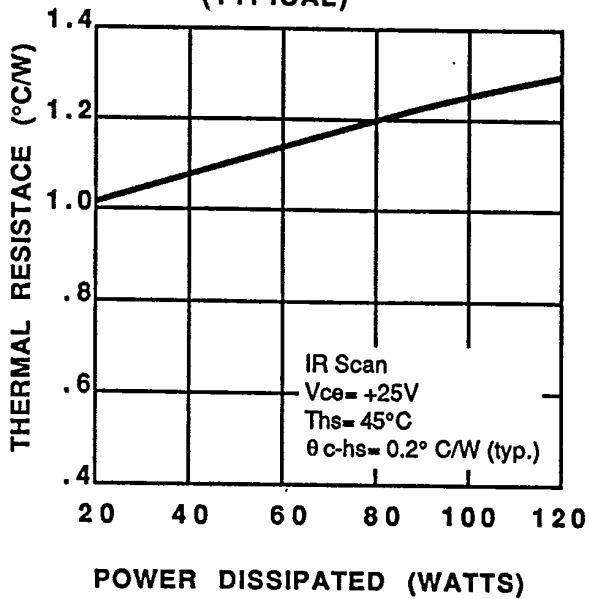
SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



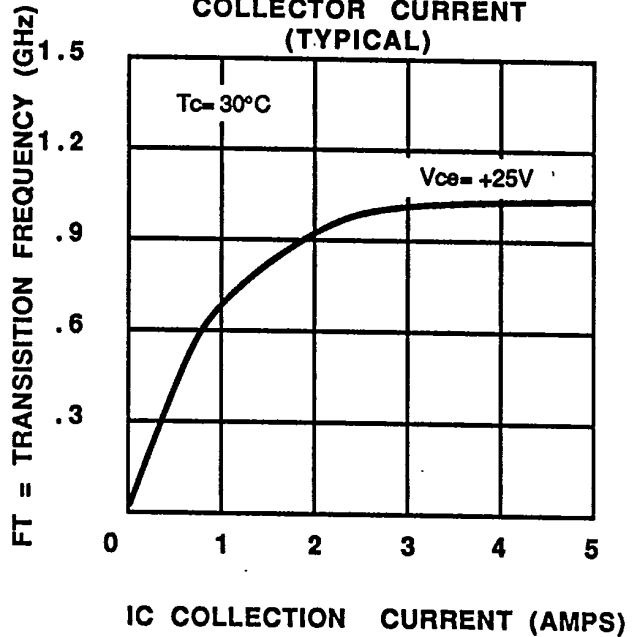
SERIES LOAD IMPEDANCE VS FREQUENCY (TYPICAL)



THERMAL RESISTANCE VS POWER DISSIPATED (TYPICAL)



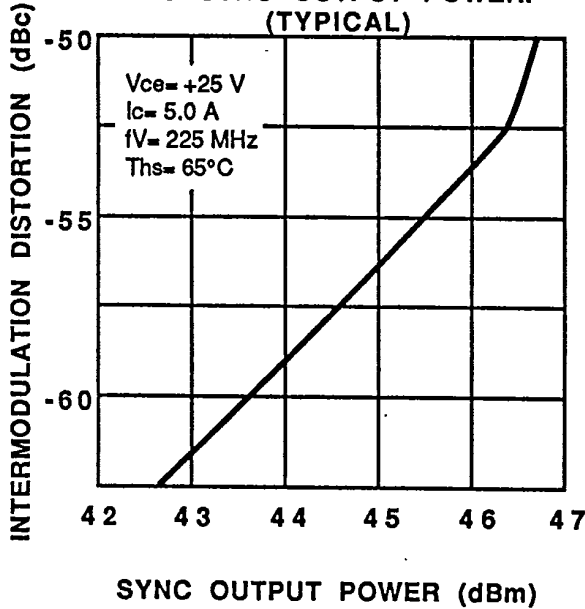
TRANSITION FREQUENCY VS COLLECTOR CURRENT (TYPICAL)



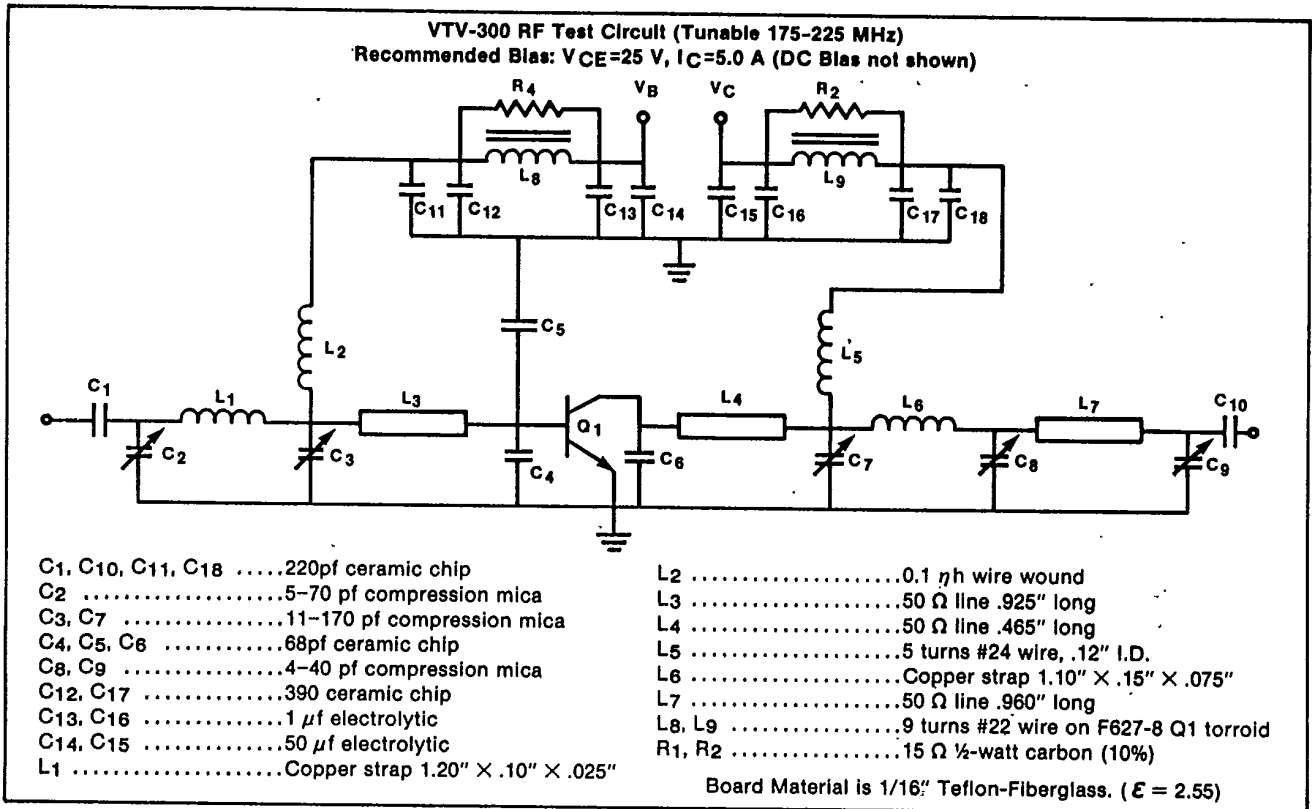
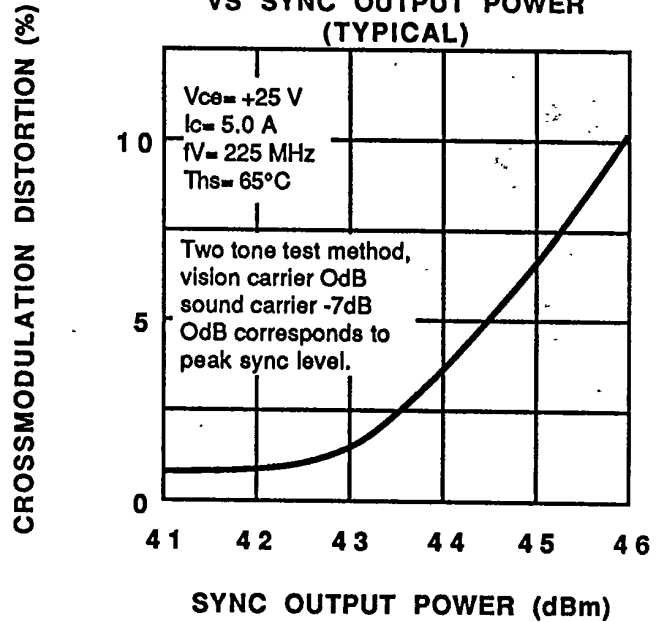
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VTV-300-4

INTERMODULATION DISTORTION VS SYNC OUTPUT POWER. (TYPICAL)



CROSSMODULATION DISTORTION VS SYNC OUTPUT POWER (TYPICAL)



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