S100-28

100 WATTS - 28 VOLTS 30 MHz

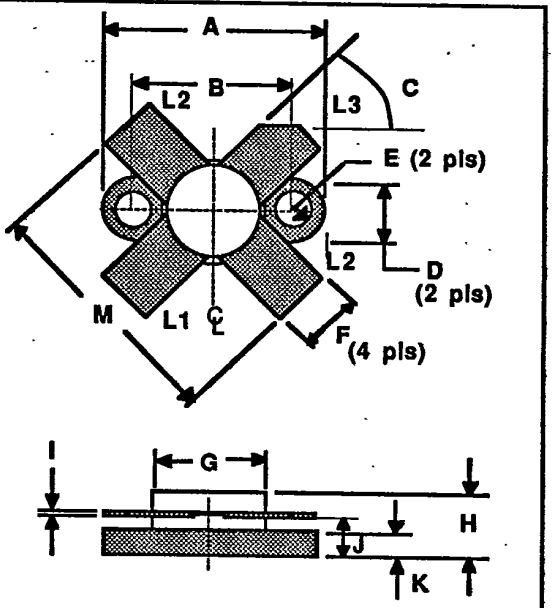
HF COMMUNICATIONS

GENERAL DESCRIPTION

The S100-28 is specifically designed for HF linear applications. It's safe operating area and guaranteed ruggedness make it ideal for linear high power applications.

ABSOLUTE MAXIMUM RATINGS

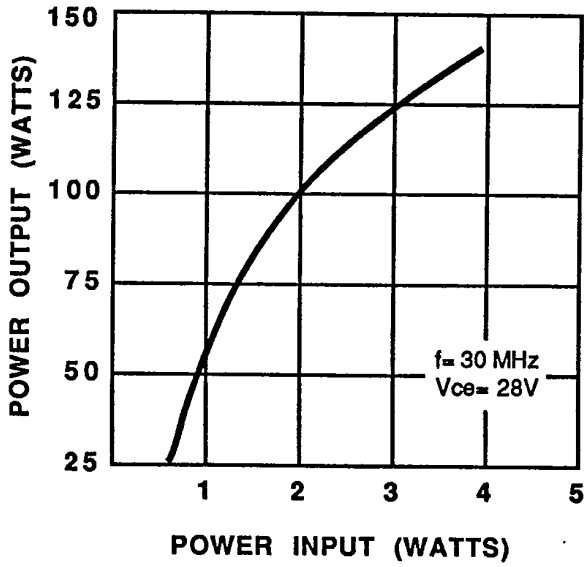
Maximum Power Dissipation @ 25°C Case Temperature		250 W
Maximum Voltage and Current		
BVces	Collector to Emitter Voltage	70 V
BVebo	Emitter to Base Voltage	4.0 V
Ic	Collector Current	20 A
Maximum Temperatures		
Storage Temperature		-65 to +150°C
Operating JunctionTemperature		+200°C



L1 : B
L2 : E
L3 : C

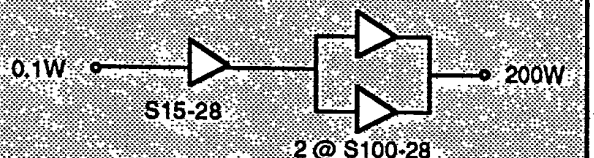
DIM	Millimeter	TOL	Inches	TOL
A	24.76	.13	.975	.005
B	18.42	.13	.725	.005
C	45°	5°	45°	5°
D	6.35	.13	.250	.005
E	3.17 DIA	.13	.125 DIA	.005
F	5.71	.13	.225	.005
G	12.70 DIA	.13	.500 DIA	.005
H	6.65	REF	.262	REF
I	0.13	.02	.005	.001
J	4.24	.13	.167	.005
K	3.17	.13	.125	.005
M	28.90	.25	1.140	.010

POWER OUTPUT VS POWER INPUT (TYPICAL)



TYPICAL AMPLIFIER LINE UP

Vcc= 50 Volts
Frequency Range= 30 MHz



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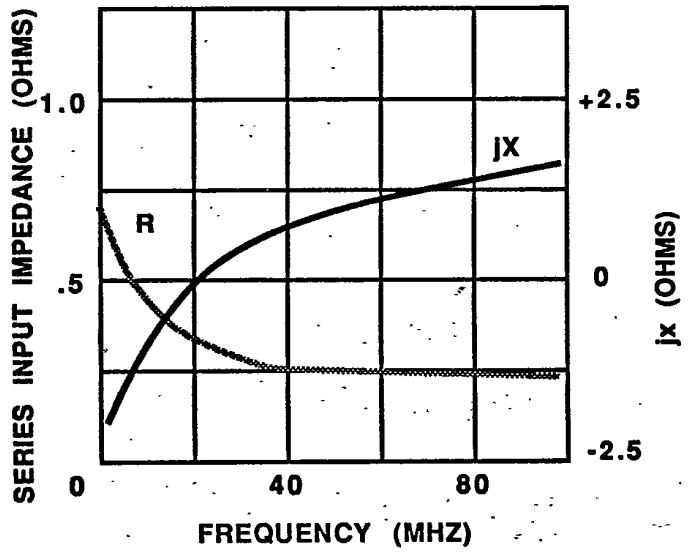
ELECTRICAL CHARACTERISTICS[1]

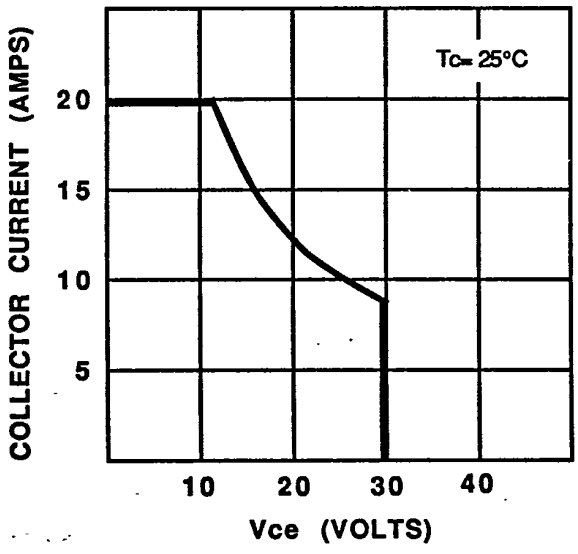
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Pout	Power Output	f= 30 MHz Vcc= 28V	100			Watts
Pin	Power Input				2.5	Watts
Pg	Power Gain		16			dB
η_c	Collector Efficiency		65			%
VSWR	Load Mismatch Tolerance				∞:1	
BVebo	Breakdown Voltage (Emitter to Base)	Ie= 5mA	4.0			Volts
BVces	Breakdown Voltage (Collector to Emitter)	Ic= 100mA	70			Volts
BVceo	Breakdown Voltage (Collector to Emitter)	Ic= 50mA	33			Volts
IMD	Intermodulation Distortion	Pout= 100W (PEP)			-32	dBc
Ices	Collector Leakage Current	Vc= 28V			30	MHz
Cob	Capacitance- Collector to Base	Vcb= 28V, Ie= 0		270		pF
h_{FE}	DC-Current Gain	Ic= 1A, Vce= 5V	10		100	
θ_{jc}	Thermal Resistance				0.7	°C/W
Zin	Series Input Impedance	At Rated Power Out		0.3 + j0		Ohms
Zl	Series Load Impedance	At Rated Power Out		2.3 + j1.5		Ohms

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

SERIES INPUT IMPEDANCE VS FREQUENCY (TYPICAL)



DC SAFE OPERATING AREA (TYPICAL)



SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

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