S25-50

25 WATTS - 12.5 VOLTS 1.5-30 MHz

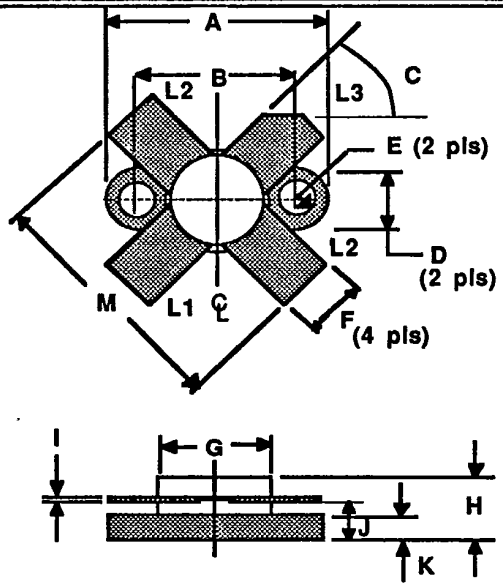
HF COMMUNICATIONS

GENERAL DESCRIPTION

The S25-50 is especifically recommended as an HF, SSB output or driver from a 50 volts supply. This superbly linear device is ruggedized and emitter ballasted, and may be operated class A, AB or C in output or driver stages.

ABSOLUTE MAXIMUM RATINGS

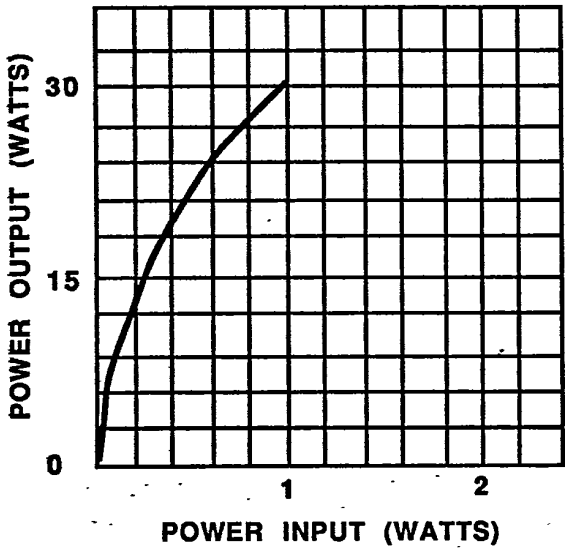
Maximum Power Dissipation @ 25°C Case Temperature		
Total Power Dissipation		80 W
Maximum Voltage and Current		
BVces	Collector to Emitter Voltage	110 V
BVebo	Emitter to Base Voltage	4.0 V
Ic	Collector Current	5.0 A
Maximum Temperatures		
Storage Temperature		-65 to +150 °C
Operating JunctionTemperature		+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	28.45	.25	1.120	.010

POWER OUTPUT VS POWER INPUT (TYPICAL)



490 Race Street, San Jose, CA 95126 Phone (408) 294-4200, TWX (910) 338-2172
Ewenny Rd., Bridgend, Mid Glamorgan, CF31 3LQ, United Kingdom, Phone (0656) 68021

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Printed in USA

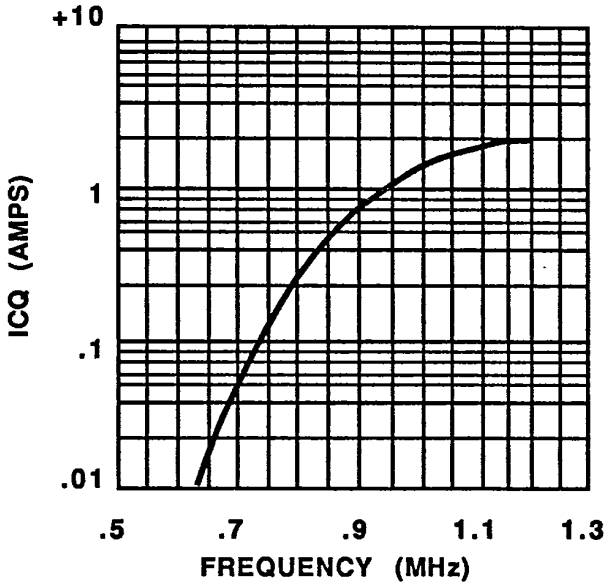
S25-50-2

ELECTRICAL CHARACTERISTICS[1]

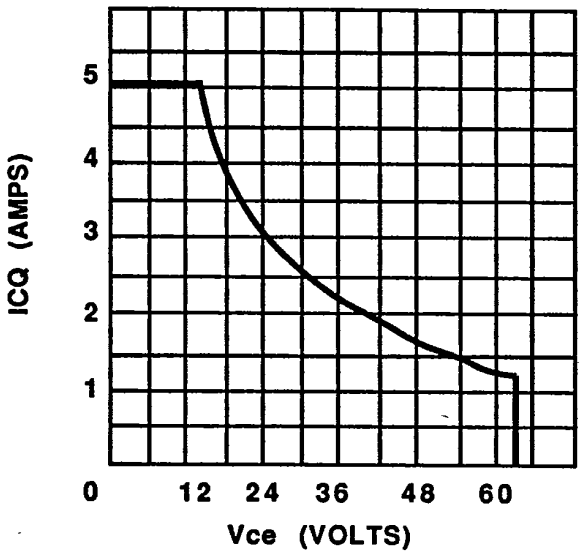
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Pout	Power Output (PEP)	f=30 MHz Vcc= 50V	25			Watts
Pin	Power Input (PEP)				1.0	Watts
Pg	Power Gain			15		dB
η_c	Collector Efficiency			55		%
VSWR	Output VSWR Capability				∞:1	
BVebo	Breakdown Voltage (Emitter to Base)	Ic= 0A, Ie= 10 mA	4.0			Volts
BVces	Breakdown Voltage (Collector to Emitter)	Vbe= 0A, Ic= 100mA	110			Volts
BVceo	Breakdown Voltage (Collector to Emitter)	Ib= 0A, Ic= 100mA	65			Volts
BVcbo	Breakdown Voltage (Collector - Base)	Ie= 0A, Icb= 100 mA				Volts
Ices	Collector Leakage Current	Ie= 0A, Vce= 50V				mA
IMD	3rd Order Products	Pin Conditions		-35	-33	dBc
Cob	Capacitance- Collector to Base	f= 1MHz, Vcb= 50V	55			pF
h_{FE}	DC-Current Gain	Vce= 5V, Ic= 500mA	10		100	
θ_{jc}	Thermal Resistance				2.2	°C/W

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

ICQ vs VBE (TYPICAL)

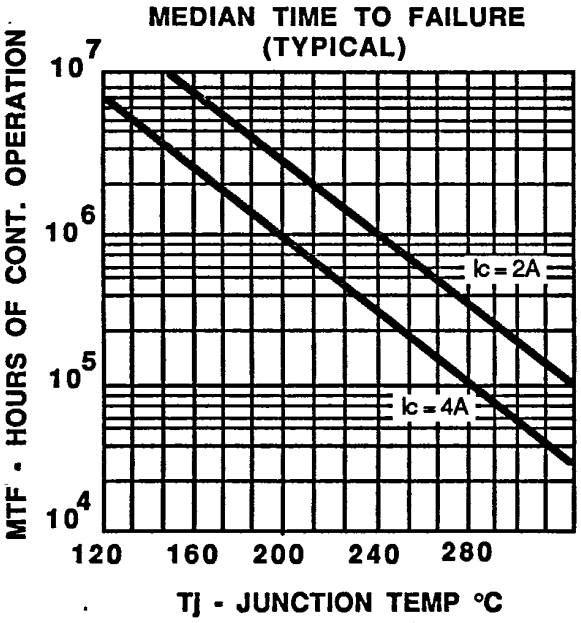


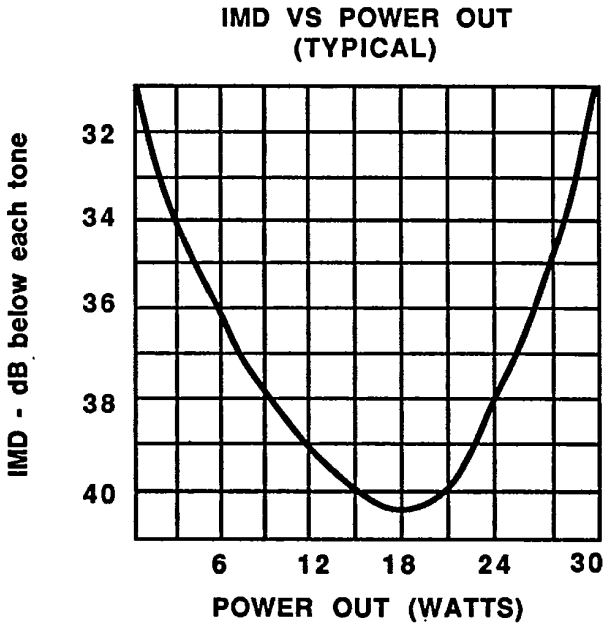
DC SAFE OPERATING AREA (TYPICAL)

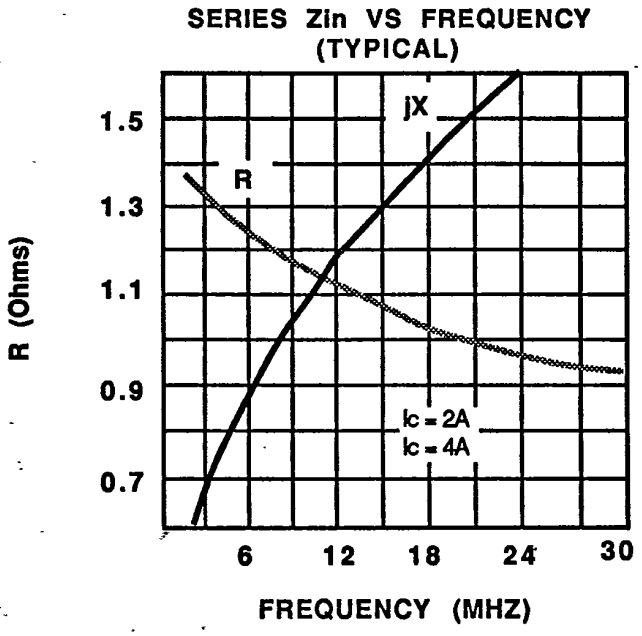


SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

S25-50-3


MEDIAN TIME TO FAILURE
(TYPICAL)
MTF - HOURS OF CONT. OPERATION
10^7
10^6
10^5
10^4
Ic = 2A
Ic = 4A
120
160
200
240
280
Tj - JUNCTION TEMP °C


IMD VS POWER OUT
(TYPICAL)
IMD - dB below each tone
32
34
36
38
40
6
12
18
24
30
POWER OUT (WATTS)


SERIES Zin VS FREQUENCY
(TYPICAL)
R (Ohms)
1.5
1.3
1.1
0.9
0.7
jX
R
Ic = 2A
Ic = 4A
6
12
18
24
30
FREQUENCY (MHZ)