



2223-1.7

1.7 Watts - 24 Volts, Class C
Microwave 2200 - 2300 MHz

GENERAL DESCRIPTION

The 2223-1.7 is a COMMON BASE transistor capable of providing 1.7 Watts of Class C, RF output power over the band 2200 - 2300 MHz. This transistor is designed for Microwave Broadband Class C amplifier applications. It includes input prematching and utilizes Gold metalization and diffused ballasting to provide high reliability and supreme ruggedness. The transistor uses a fully hermetic High Temperature Solder sealed package.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 7 Watts

Maximum Voltage and Current

BVces Collector to Emitter Voltage 45 Volts

BVebo Emitter to Base Voltage 3.5 Volts

Ic Collector Current .25 Amps

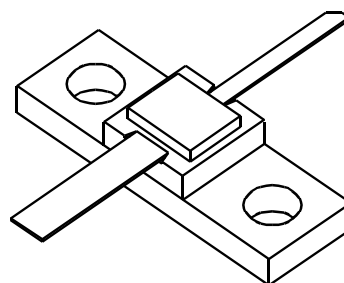
Maximum Temperatures

Storage Temperature - 65 to + 200°C

Operating Junction Temperature + 200°C

CASE OUTLINE

55LV, STYLE 1



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Output	F =2.2 - 2.3 GHz	1.7			Watts
P_{in}	Power Input	V _{cc} = 24 Volts			.25	Watts
P_g	Power Gain		8.3			dB
η_c	Efficiency			35		%
VSWR	Load Mismatch Tolerance				10:1	

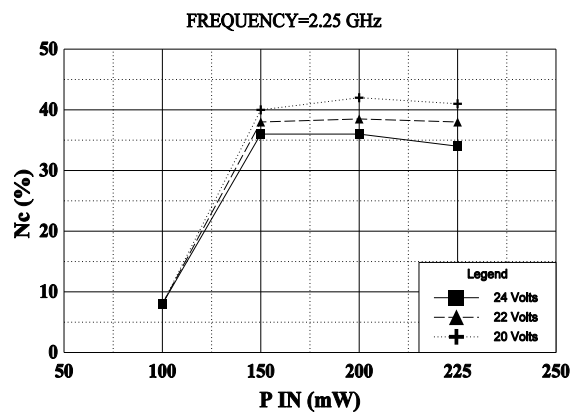
BVces	Collector to Base Breakdown	I _c = 10 mA	40			Volts
BVebo	Emitter to Base Breakdown	I _e = 2 mA	3.5			Volts
H_{fe}	Current Gain	V _{ce} = 5 V, I _c = 160mA	10		100	
C_{ob}	Output Capacitance	V _{cb} = 28V, 1MHz				pF
θ_{jc}	Thermal Resistance	T _c = 25 °C			24	°C/W

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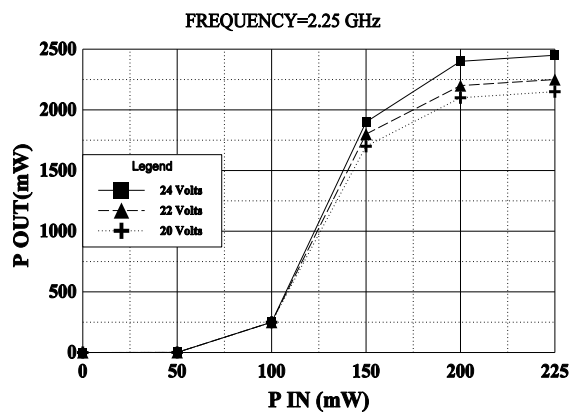
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GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

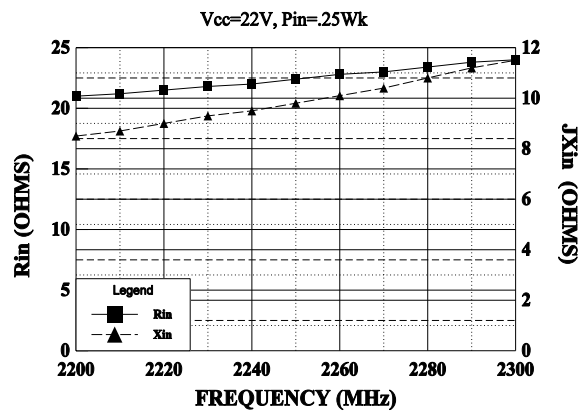
EFFICIENCY VS POWER IN



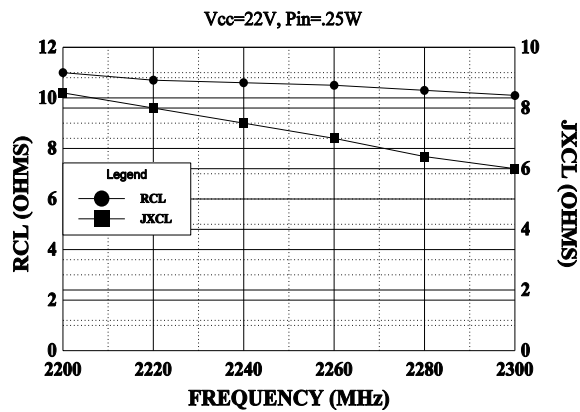
POWER OUTPUT VS POWER INPUT



INPUT IMPEDANCE

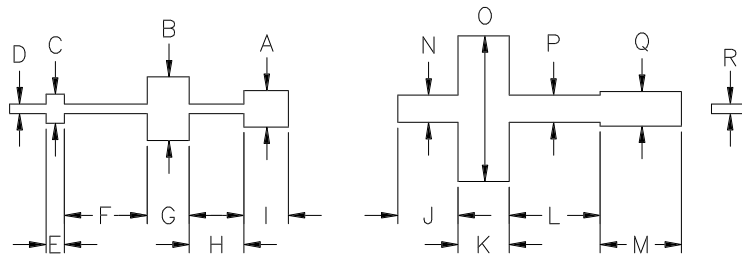


LOAD IMPEDANCE



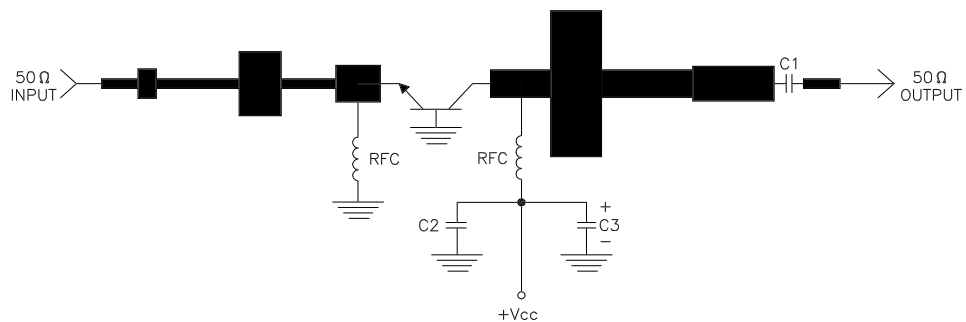
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.200
B	.350
C	.160
D	.053
E	.100
F	.455
G	.230
H	.300
I	.245
J	.330
K	.270
L	.500
M	.445
N	.150
O	.800
P	.150
Q	.190
R	.053

2223-1.7 TEST CIRCUIT



DIELECTRIC = 19.4 MIL THICK TFE Er = 2.43
C1, C2 = 62pF CHIP ATC "A"
C3 = 10MFD @ 35V
RFC = 4 turns #22 wire on 1/16" dia.



CAGE OPJR2	DWG NO. 2223-1.7	REV A
SCALE 1/1	SHEET	