GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

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 @ 25ºC 7 Watts

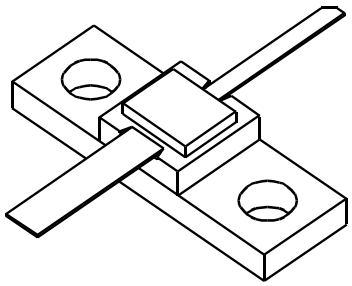
Maximum Voltage and Current

BVces	Collector to Emiter Voltage	45 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	.25 Amps

Maximum Temperatures

Storage Temperature	- 65 to + 200ºC
Operating Junction Temperature	+ 200ºC

CASE OUTLINE
55LV, STYLE 1



ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F =2.2 - 2.3 GHz	1.7			Watts
Pin	Power Input	Vcc = 24 Volts			.25	Watts
Pg	Power Gain		8.3			dB
η**c**	Efficiency			35		%
VSWR	Load Mismatch Tolerance				10:1	

BVces	Collector to Base Breakdown	Ic = 10 mA	40			Volts
BVebo	Emitter to Base Breakdown	Ie = 2 mA	3.5			Volts
Hfe	Current Gain	Vce = 5 V, Ic = 160mA	10		100	
Cob	Output Capacitance	Vcb = 28V, 1MHz				pF
θ**jc**	Thermal Resistance	Tc = 25 ^{o}C			24	^{o}C/W

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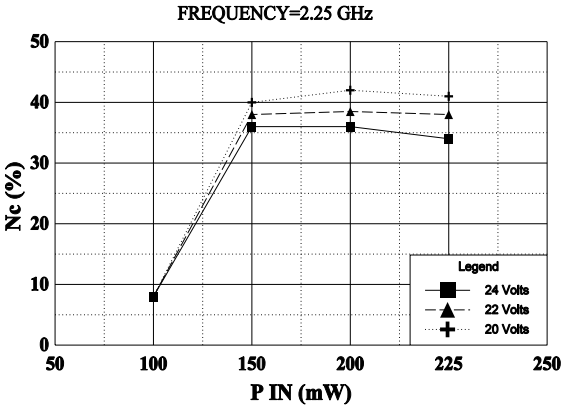
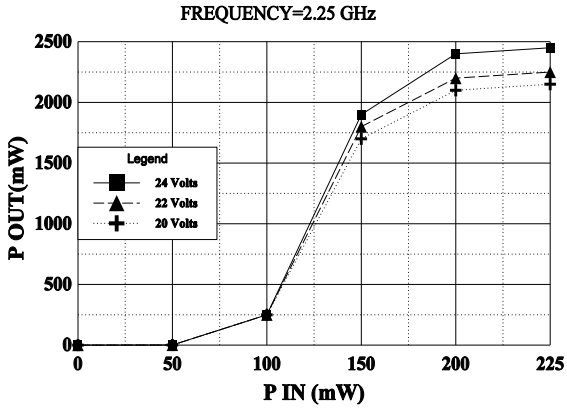
CHz TECHNOLOGY
RF-MICROWAVE SILICON POWER TRANSISTORS

2223-1.7

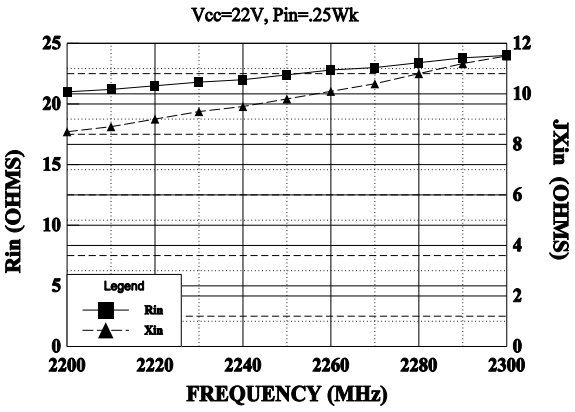
EFFICIENCY VS POWER IN



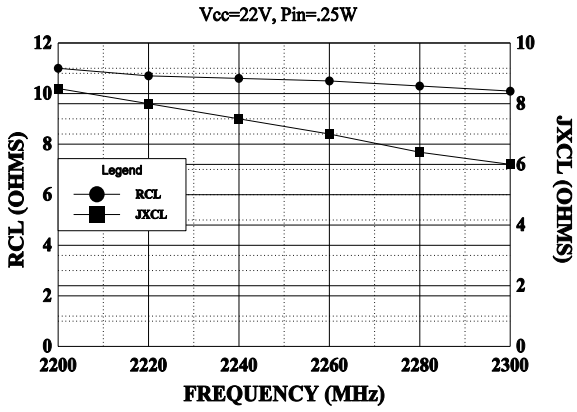
POWER OUTPUT VS POWER INPUT



INPUT IMPEDANCE

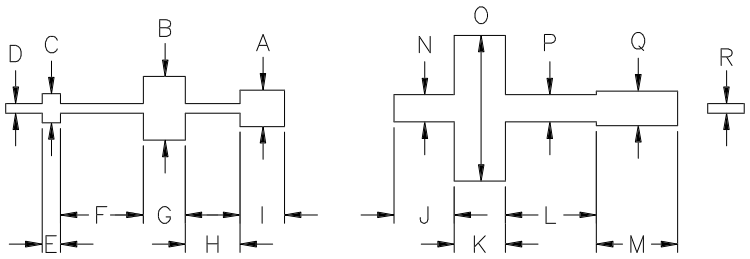


LOAD IMPEDANCE



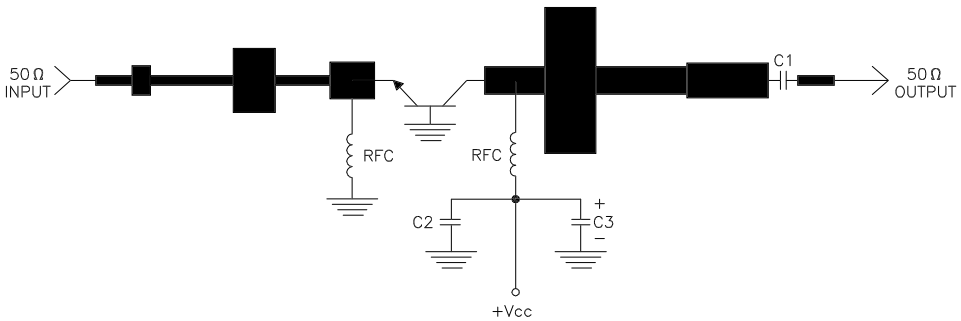
August 1996

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



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	DWG NO.	REV
GHz TECHNOLOGY	0PJR2	2223-1.7	A
		SCALE 1/1	SHEET