CHz TECHNOLOGY
RF-MICROWAVE SILICON POWER TRANSISTORS

2224-6L

6 Watts, 22 Volts, Class C
Microwave 2200-2400 MHz

GENERAL DESCRIPTION

The 2224-6L is a COMMON BASE transistor capable of providing 6 Watts, Class C output power over the band 2200-2400 MHz. The transistor includes input prematching for full Broadband capability. Gold metalization and diffused ballasting are used 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 22 Watts

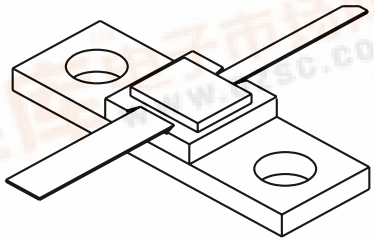
Maximum Voltage and Current

BVces	Collector to Emitter Voltage	40 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	1.25 Amps

Maximum Temperatures

Storage Temperature	- 40 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
Pout	Power Out	F = 2200-2400 MHz	6.0			Watts
Pin	Power Input	Vcc = 22 Volts			1.2	Watts
Pg	Power Gain		7.0			dB
ηc	Efficiency			40		%
VSWR	Load Mismatch Tolerance	Pout = 6.0 Watts			10:1	

BVces	Collector to Emitter Breakdown	Ic = 10 mA	40			Volts
BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
Hfe	Current Gain	Vce = 5 V, Ic = 1 A	20		120	
Cob	Output Capacitance	Vcb = 22 F = 1 MHz		7		pF
θjc	Thermal Resistance	Tc = 25°C			8.0	°C/W

Initial Issue December 15, 1994

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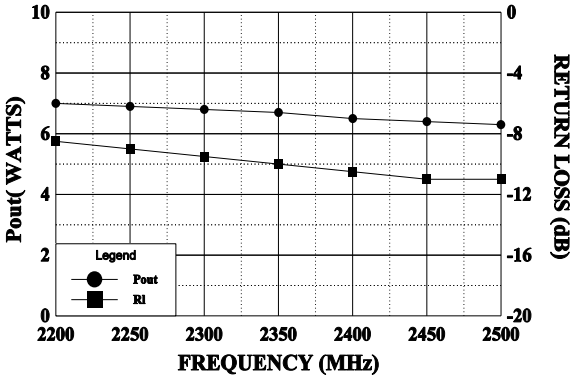
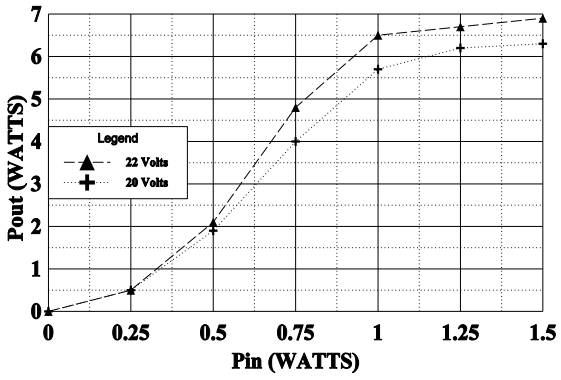
BROADBAND POWER OUT & RETURN LOSS

Pin = 1.2 Watts, Vcc = 22 Volts



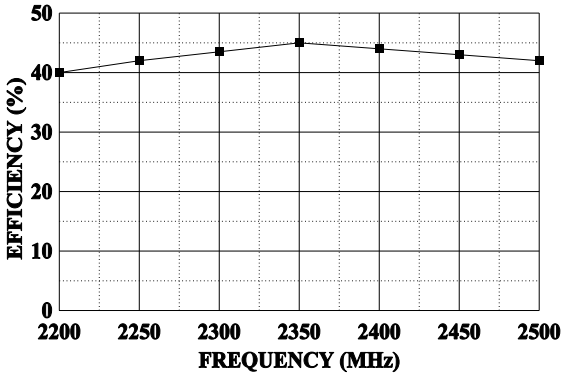
POWER OUTPUT vs POWER INPUT

Vcc - 20, 22 Volts



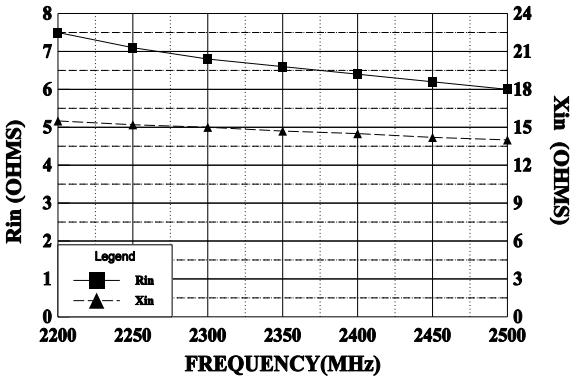
EFFICIENCY vs FREQUENCY

Vcc =22 Volts



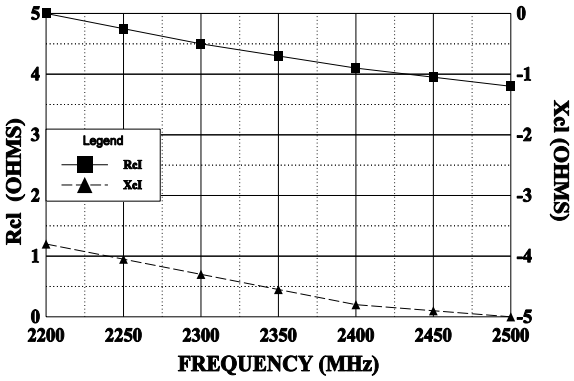
INPUT IMPEDANCE

Vcc = 22V, Pout = 6 W



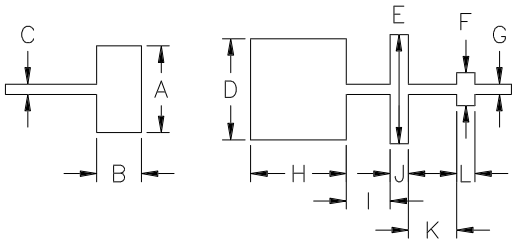
LOAD IMPEDANCE

Vcc = 22V, Pout = 6 W



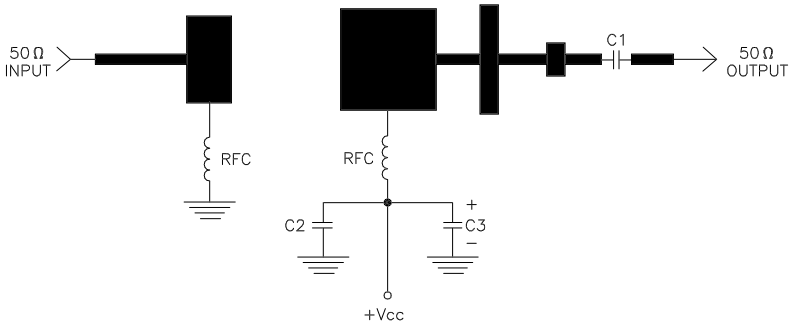
August 1996

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



DIM	INCHES
A	.475
B	.245
C	.053
D	.555
E	.600
F	.180
G	.053
H	.525
I	.240
J	.100
K	.265
L	.100

2224-6L TEST CIRCUIT



DIELECTRIC = 20 MIL THICK TFE Er = 2.43
C1, C2 = 62pF CHIP ATC "B"
C3 = 10 MFD @ 35V
RFC = 4 turns #22 wire 1/16" I.D.

	CAGE	DWG NO.	REV
GHz TECHNOLOGY	0PJR2	2224-6L	A
		SCALE 1/1	SHEET