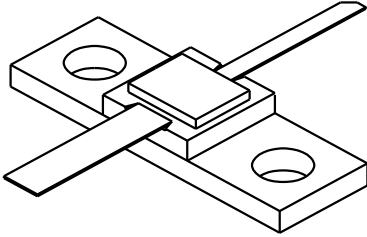


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# 2224-6L

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

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<p><b>GENERAL DESCRIPTION</b></p> <p>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.</p>	<p style="text-align: center;"><b>CASE OUTLINE</b> <b>55LV STYLE 1</b></p> 													
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C <span style="float: right;">22 Watts</span></p> <p><b>Maximum Voltage and Current</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">BVces</td> <td style="width: 45%;">Collector to Emitter Voltage</td> <td style="width: 40%; text-align: right;">40 Volts</td> </tr> <tr> <td>BVebo</td> <td>Emitter to Base Voltage</td> <td style="text-align: right;">3.5 Volts</td> </tr> <tr> <td>Ic</td> <td>Collector Current</td> <td style="text-align: right;">1.25 Amps</td> </tr> </table> <p><b>Maximum Temperatures</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 45%;">Storage Temperature</td> <td style="text-align: right;">- 40 to + 200°C</td> </tr> <tr> <td>Operating Junction Temperature</td> <td style="text-align: right;">+ 200°C</td> </tr> </table>	BVces	Collector to Emitter Voltage	40 Volts	BVebo	Emitter to Base Voltage	3.5 Volts	Ic	Collector Current	1.25 Amps	Storage Temperature	- 40 to + 200°C	Operating Junction Temperature	+ 200°C	
BVces	Collector to Emitter Voltage	40 Volts												
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Storage Temperature	- 40 to + 200°C													
Operating Junction Temperature	+ 200°C													

## ELECTRICAL CHARACTERISTICS @ 25 °C

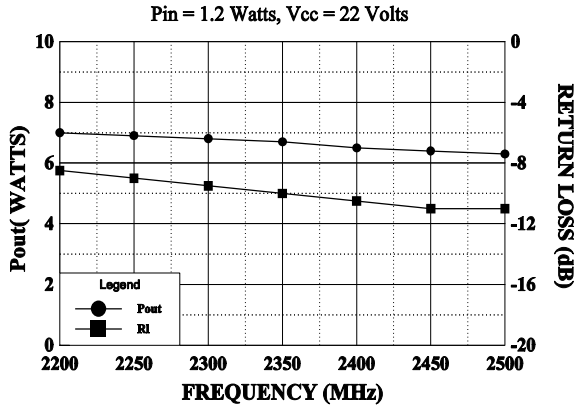
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>Pout</b>	Power Out	F = 2200-2400 MHz	6.0			Watts
<b>Pin</b>	Power Input	Vcc = 22 Volts			1.2	Watts
<b>Pg</b>	Power Gain		7.0			dB
$\eta_c$	Efficiency			40		%
<b>VSWR</b>	Load Mismatch Tolerance	Pout = 6.0 Watts			10:1	

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

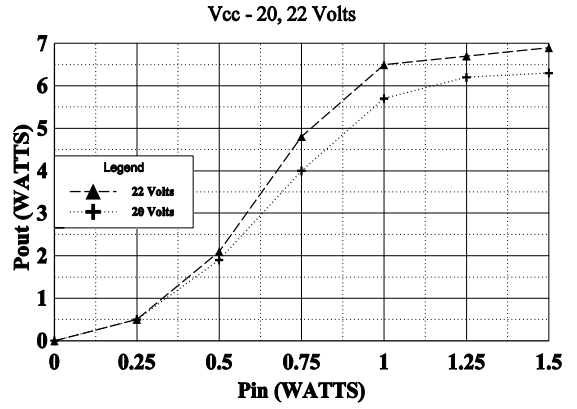
Initial Issue December 15, 1994

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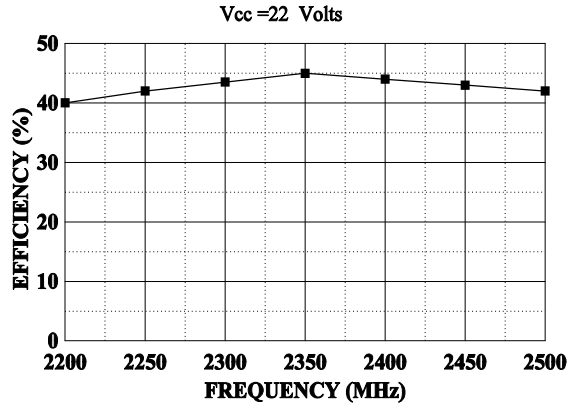
**BROADBAND POWER OUT & RETURN LOSS**



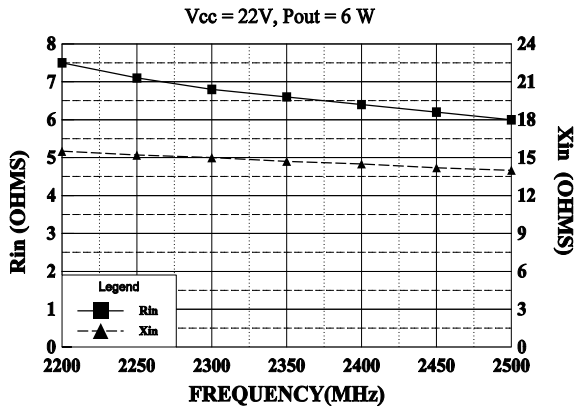
**POWER OUTPUT vs POWER INPUT**



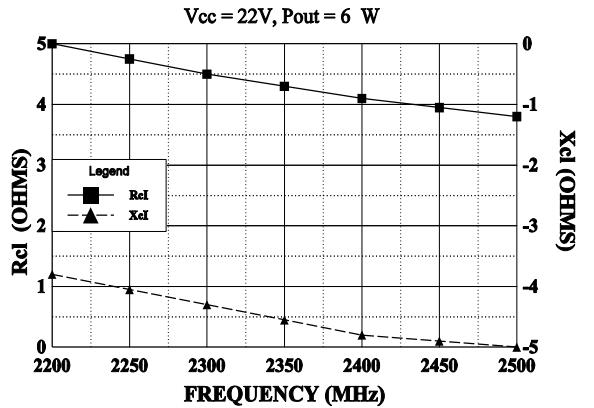
**EFFICIENCY vs FREQUENCY**



**INPUT IMPEDANCE**

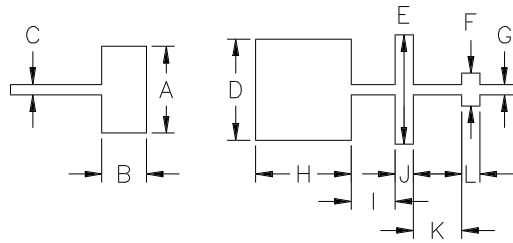


**LOAD IMPEDANCE**



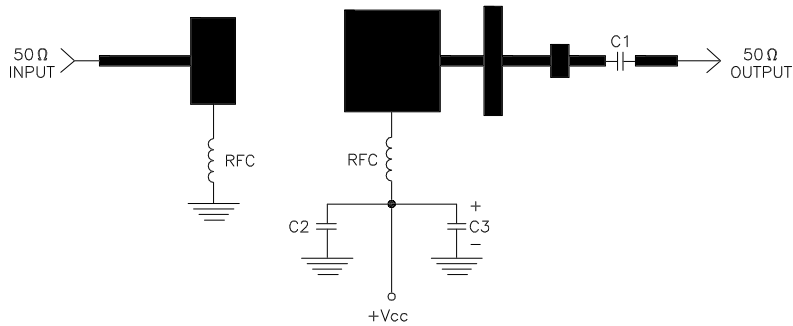
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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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 OPJR2	DWG NO. 2224-6L	REV A
SCALE 1/1	SHEET	