

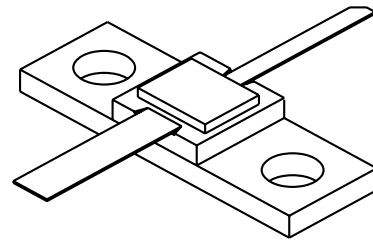
# 2225-4L

3.5 Watts, 24 Volts, Class C  
Microwave 2200-2500 MHz

## GENERAL DESCRIPTION

The 2225-4L is a COMMON BASE transistor capable of providing 3.5 Watts, Class C output power over the band 2200-2500 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.

## CASE OUTLINE 55LV, STYLE 1



## ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 10 Watts

### Maximum Voltage and Current

|       |                              |           |
|-------|------------------------------|-----------|
| BVces | Collector to Emitter Voltage | 40 Volts  |
| BVebo | Emitter to Base Voltage      | 3.5 Volts |
| Ic    | Collector Current            | 0.6 Amps  |

### Maximum Temperatures

|                                |                 |
|--------------------------------|-----------------|
| Storage Temperature            | - 65 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 = 2200-2500 MHz | 3.5 |     |      | Watts |
| <b>Pin</b>  | Power Input             | Vcc = 24 Volts    |     |     | 0.5  | Watts |
| <b>Pg</b>   | Power Gain              |                   | 8.5 |     |      | dB    |
| <b>ηc</b>   | Efficiency              |                   |     | 40  |      | %     |
| <b>VSWR</b> | Load Mismatch Tolerance | Pout = 3.5Watts   |     |     | 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 = 5V, Ic = 200 mA | 20  |   | 120  |       |
| <b>Cob</b>   | Output Capacitance             | Vcb = 24 F = 1 MHz    |     | 7 |      | pF    |
| <b>θjc</b>   | Thermal Resistance             | Tc = 25°C             |     |   | 17.0 | °C/W  |

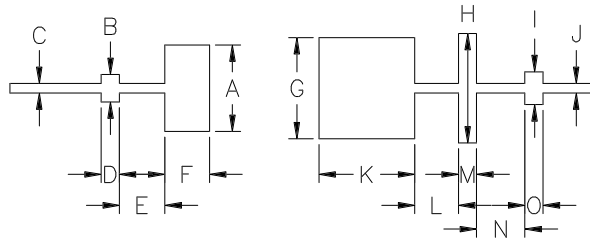
Initial Issue July, 1994

GHz TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. GHz RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.

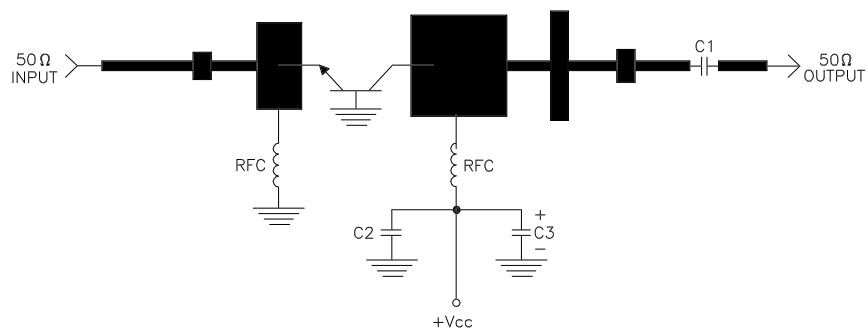
REVISIONS

| ZONE | REV | DESCRIPTION | DATE | APPROVED |
|------|-----|-------------|------|----------|
|------|-----|-------------|------|----------|

| DIM | INCHES |
|-----|--------|
| A   | .475   |
| B   | .150   |
| C   | .053   |
| D   | .100   |
| E   | .250   |
| F   | .245   |
| G   | .555   |
| H   | .600   |
| I   | .180   |
| J   | .053   |
| K   | .525   |
| L   | .240   |
| M   | .100   |
| N   | .265   |
| O   | .100   |



2225-4L 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<br>OPJR2 | DWG NO.<br>2225-4L | REV<br>A |
| SCALE<br>1/1  | SHEET              |          |