GHz TECHNOLOGY
RF-MICROWAVE SILICON POWER TRANSISTORS

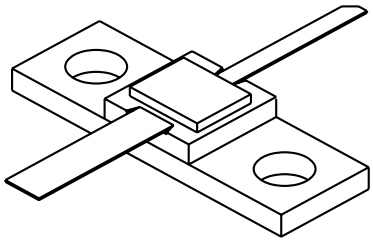
# *2225-4L*

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 @ 25ºC | | 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 + 200ºC |
| Operating Junction Temperature | | + 200ºC |

## ELECTRICAL CHARACTERISTICS @ 25 $^{O}$C

| SYMBOL | CHARACTERISTICS | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|---|---|---|---|---|---|---|
| **Pout** | Power Out | F = 2200-2500 MHz | 3.5 | | | Watts |
| **Pin** | Power Input | Vcc = 24 Volts | | | 0.5 | Watts |
| **Pg** | Power Gain | | 8.5 | | | dB |
| $\eta$**c** | Efficiency | | | 40 | | % |
| **VSWR** | Load Mismatch Tolerance | Pout =3.5Watts | | | 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 = 5V, Ic = 200 mA | 20 | | 120 | |
| **Cob** | Output Capacitance | Vcb = 24 F = 1 MHz | | 7 | | pF |
| $\theta$**jc** | Thermal Resistance | Tc = 25ºC | | | 17.0 | ºC/W |

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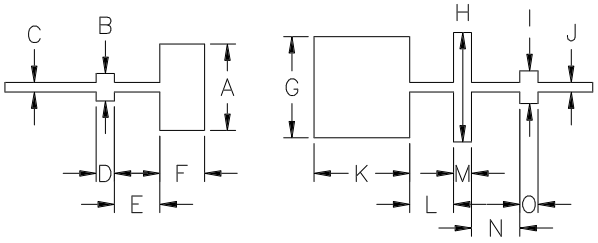
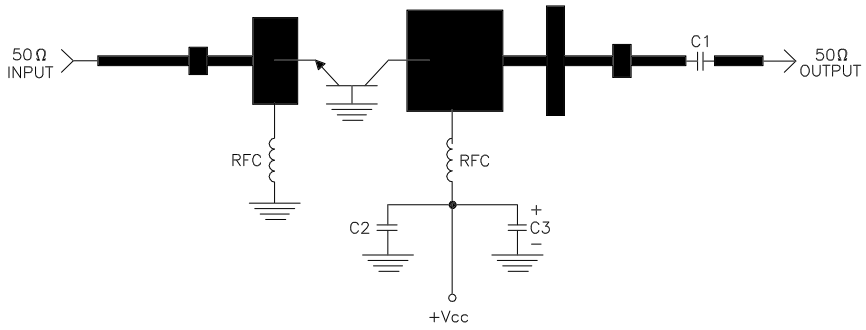
| REVISIONS | | | | |
|---|---|---|---|---|
| ZONE | REV | DESCRIPTION | DATE | APPROVED |




| 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.

| CHz TECHNOLOGY | CAGE | DWG NO. | REV |
|---|---|---|---|
| | 0PJR2 | 2225-4L | A |
| | | SCALE 1/1 | SHEET |