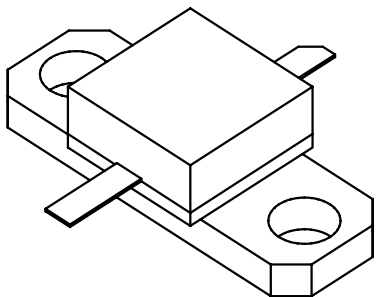


| | |
|--|--|
| <p>GENERAL DESCRIPTION</p> <p>The 1014-2 is a COMMON BASE transistor capable of providing 2 Watts of Class C, RF Output Power over the band 1000-1400 MHz. This transistor is designed for Microwave Broadband Class C amplifier applications. It includes Input prematching and utilizes gold metalization and diffused ballasting to provide high reliability and supreme ruggedness.</p> | <p style="text-align: center;">CASE OUTLINE 55LT, STYLE 1</p>  |
| <p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 9.7 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 50 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 0.5 A</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to +150°C Operating Junction Temperature +200°C</p> | |

ELECTRICAL CHARACTERISTICS @ 25 °C

| SYMBOL | CHARACTERISTICS | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|-------------------------|-------------------------|-------------------|-----|-----|------|-------|
| Pout | Power Out | F = 1000-1400 MHz | 2 | | | Watt |
| Pin | Power Input | Vcb = 28 Volts | | | 0.35 | Watt |
| Pg | Power Gain | | 7.5 | | | dB |
| η_c | Collector Efficiency | As Above | | 45 | | % |
| VSWR₁ | Load Mismatch Tolerance | Pout = 2 Watts | | | 10:1 | |

| | | | | | | |
|-----------------------|--------------------------------|-------------------------|-----|--|-----|-------|
| BVces | Collector to Emitter Breakdown | Ic = 20 mA | 50 | | | Volts |
| BVebo | Emitter to Base Breakdown | Ie = 5 mA | 3.5 | | | Volts |
| Icbo | Collector to Base Current | Vcb = 28 Volts | | | 0.5 | mA |
| h_{FE} | Current Gain | Vce = 28 V, Ic = 100 mA | 10 | | 100 | |
| Cob | Output Capacitance | Vcb = 25 V, f = 1 MHz | | | 4.5 | pF |
| θ_{jc} | Thermal Resistance | Tc = 25°C | | | 18 | °C/W |

Rev B, Jan 2009

Microsemi reserves the right to change, without notice, the specifications and information contained herein. Visit our web site at www.microsemi.com or contact our factory direct.