

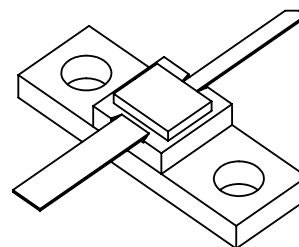
1014-6A

6 Watts, 28 Volts, Class C
Microwave 1000 - 1400 MHz

GENERAL DESCRIPTION

The 1014-6A is an internally matched, COMMON BASE transistor capable of providing 6 watts of CW RF Output power across the 1000-1400 MHz band. This transistor is specifically designed for microwave broadband applications. It utilizes gold metalization and diffused ballasting to provide high reliability and superior ruggedness.

CASE OUTLINE 55LV-1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation

Device Dissipation @ 25°C 19 W

Maximum Voltage and Current

Collector to Base Voltage (BV_{ces}) 50 V

Emitter to Base Voltage (BV_{ebo}) 3.5 V

Collector Current (I_c) 1.0 A

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 |
|------------------|-------------------------|--|-----|-----|------|-------|
| P _{out} | Power Output | F = 1150 MHz V _{cc} = 35 Volts Pulse width = 20 μs LTDF = 1% | 6.0 | | | W |
| P _{in} | Power Input | | | | 1.2 | W |
| P _g | Power Gain | | 7.0 | 7.5 | | dB |
| η _c | Collector Efficiency | | | 40 | | % |
| VSWR | Load Mismatch Tolerance | | | | 10:1 | |

FUNCTIONAL CHARACTERISTICS @ 25°C

| | | | | | | |
|------------------------------|--------------------------------|---|-----|-----|-----|------|
| BV _{ebo} | Emitter to Base Breakdown | I _e = 3.0 mA | 3.5 | | | V |
| BV _{ces} | Collector to Emitter Breakdown | I _c = 25 mA | 50 | | | V |
| I _{cbo} | Collector Leakage Current | V _{cb} = 28 V | | 1.0 | | mA |
| C _{ob} | Capacitance | V _{cb} = 28 V, f = 1 MHz | | 6.5 | | pF |
| h _{FE} | DC – Current Gain | V _{ce} = 5V, I _c = 100 mA | 20 | | 100 | |
| θ _{jc} ¹ | Thermal Resistance | | | | 9.0 | °C/W |