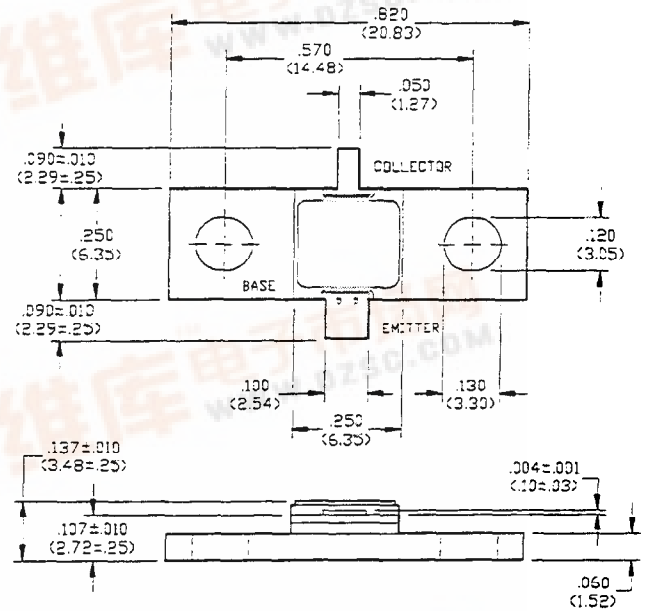




Radar Pulsed Power Transistor, 8W, 100μs Pulse, 10% Duty 1.2 - 1.4 GHz PH1214-8M

Features

- NPN Silicon Microwave Power Transistor
- Common Base Configuration
- Broadband Class C Operation
- Interdigitated Geometry
- Diffused Emitter Ballasting Resistors
- Gold Metalization System
- Internal Input Impedance Matching
- Hermetic Metal/Ceramic Package



UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES = .005" (MILLIMETERS = .13MM)

Absolute Maximum Ratings at 25°C

| Parameter | Symbol | Rating | Units |
|---------------------------|-----------|-------------|-------|
| Collector-Emitter Voltage | V_{CES} | 65 | V |
| Emitter-Base Voltage | V_{EBO} | 3.0 | V |
| Collector Current (Peak) | I_C | 1.5 | A |
| Total Power Dissipation | P_{TOT} | 30 | W |
| Junction Temperature | T_J | 200 | °C |
| Storage Temperature | T_{STG} | -65 to +200 | °C |

Electrical Characteristics at 25°C

| Parameter | Symbol | Min | Max | Units | Test Conditions |
|-------------------------------------|--------------|-----|-------|-------|---|
| Collector-Emitter Breakdown Voltage | BV_{CES} | 65 | - | V | $I_C=16$ mA |
| Collector-Emitter Leakage Current | I_{CES} | - | 2.0 | mA | $V_{CE}=40$ V |
| Thermal Resistance | $R_{TH(JC)}$ | - | 4.9 | °C/W | $V_{CC}=28$ V, $P_{IN}=1.6$ W, $F=1.20, 1.30, 1.40$ GHz |
| Output Power | P_{OUT} | 8.0 | - | W | $V_{CC}=28$ V, $P_{IN}=1.6$ W, $F=1.20, 1.30, 1.40$ GHz |
| Power Gain | G_p | 7.0 | - | dB | $V_{CC}=28$ V, $P_{IN}=1.6$ W, $F=1.20, 1.30, 1.40$ GHz |
| Collector Efficiency | η_c | 45 | - | % | $V_{CC}=28$ V, $P_{IN}=1.6$ W, $F=1.20, 1.30, 1.40$ GHz |
| Input Return Loss | RL | 6 | - | dB | $V_{CC}=28$ V, $P_{IN}=1.6$ W, $F=1.20, 1.30, 1.40$ GHz |
| Load Mismatch Tolerance | VSWR-T | - | 3:1 | - | $V_{CC}=28$ V, $P_{IN}=1.6$ W, $F=1.20, 1.30, 1.40$ GHz |
| Load Mismatch Stability | VSWR-S | - | 1.5:1 | - | $V_{CC}=28$ V, $P_{IN}=1.6$ W, $F=1.20, 1.30, 1.40$ GHz |

Broadband Test Fixture Impedances

| F(GHz) | $Z_{IF}(\Omega)$ | $Z_{OF}(\Omega)$ |
|--------|------------------|------------------|
| 1.20 | TBD | TBD |
| 1.30 | TBD | TBD |
| 1.40 | TBD | TBD |

