

CW Power Transistor, 3.5W 2.3 GHz

PH2323-3

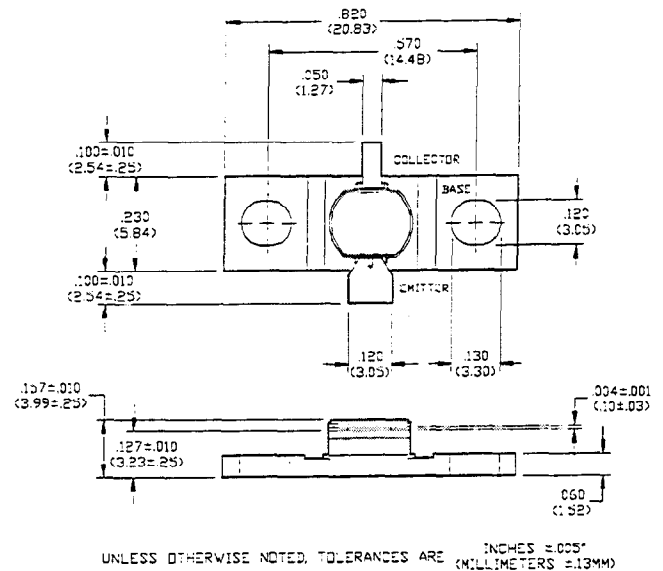
V2.00

Features

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

Absolute Maximum Ratings at 25°C

| Parameter | Symbol | Rating | Units |
|---------------------------|---------------|-------------|-------|
| Collector-Emitter Voltage | V_{CES} | 60 | V |
| Emitter-Base Voltage | V_{EBO} | 3.0 | V |
| Collector Current | I_C | 0.4 | A |
| Power Dissipation | P_D | 11 | W |
| Junction Temperature | T_J | 200 | °C |
| Storage Temperature | T_{STG} | -65 to +200 | °C |
| Thermal Resistance | θ_{JC} | 15 | °C/W |

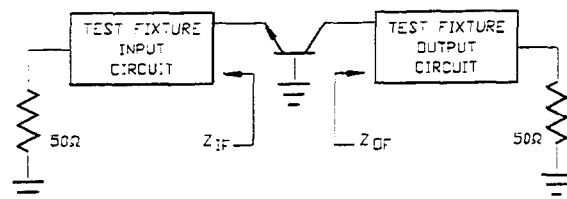


Electrical Characteristics at 25°C

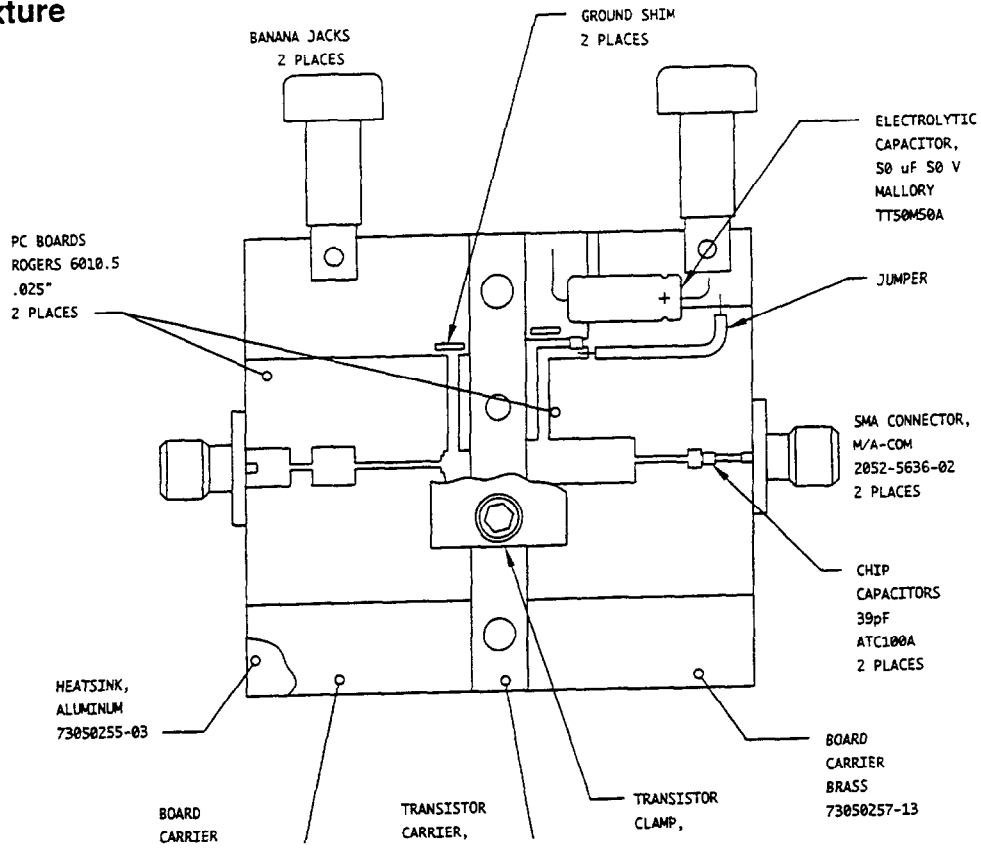
| Parameter | Symbol | Min | Max | Units | Test Conditions |
|-------------------------------------|------------|-----|------|-------|---|
| Collector-Emitter Breakdown Voltage | BV_{CES} | 60 | - | V | $I_C=5$ mA |
| Collector-Emitter Leakage Current | I_{CES} | - | 1.0 | mA | $V_{CE}=28$ V |
| Input Power | P_{IN} | - | 0.48 | W | $V_{CC}=28$ V, $P_{OUT}=3.0$ W, $F=2.3$ GHz |
| Power Gain | G_P | 8 | - | dB | $V_{CC}=28$ V, $P_{OUT}=3.0$ W, $F=2.3$ GHz |
| Collector Efficiency | η_C | 30 | - | % | $V_{CC}=28$ V, $P_{OUT}=3.0$ W, $F=2.3$ GHz |
| Input Return Loss | RL | 6 | - | dB | $V_{CC}=28$ V, $P_{OUT}=3.0$ W, $F=2.3$ GHz |
| Load Mismatch Tolerance | VSWR-T | - | 3:1 | - | $V_{CC}=28$ V, $P_{OUT}=3.0$ W, $F=2.3$ GHz |

Test Fixture Impedances

| F(GHz) | $Z_{IF}(\Omega)$ | $Z_{OF}(\Omega)$ |
|--------|------------------|------------------|
| 2.30 | 6.5 - j23.0 | 6.3 + j5.4 |



RF vTest Fixture



Test Fixture PC Board Dimensions

