

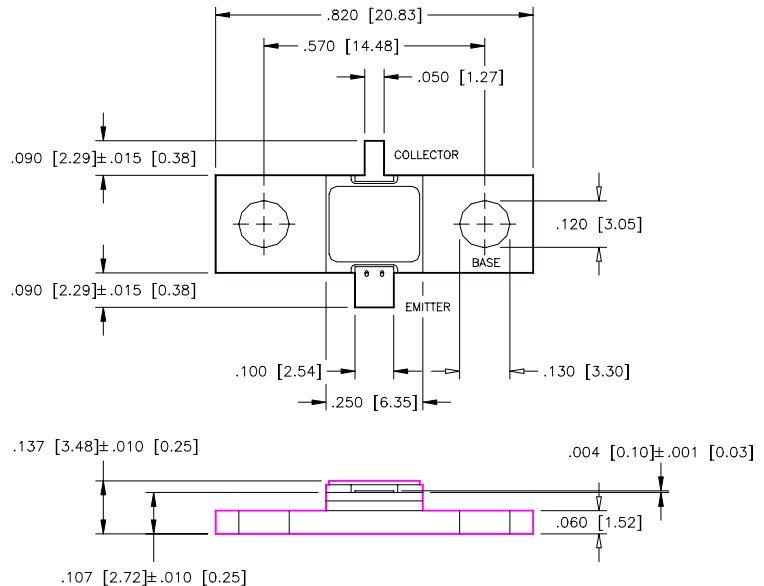
## FEATURES

- Designed for Pulsed Avionics Applications
- NPN Silicon Microwave Power Transistor
- Common Base Configuration
- Broadband Class C Operation
- Diffused Emitter Ballasting Resistors
- Gold Metalization System
- Internal Input and Output Impedance Matching
- Hermetic Metal/Ceramic Package

## ABSOLUTE MAXIMUM RATINGS AT 25°C

| Parameter                 | Symbol    | Rating      | Units |
|---------------------------|-----------|-------------|-------|
| Collector-Emitter Voltage | $V_{CES}$ | 70          | V     |
| Emitter-Base Voltage      | $V_{EBO}$ | 3.0         | V     |
| Collector Current         | $I_C$     | 1           | A     |
| Total Power Dissipation   | $P_D$     | 32          | W     |
| Storage Temperature       | $T_{STG}$ | -65 to +200 | °C    |
| Junction Temperature      | $T_J$     | 200         | °C    |

## OUTLINE DRAWING



UNLESS OTHERWISE NOTED, TOLERANCES ARE  
INCHES ±.005" [MILLIMETERS ±0.13MM]

## ELECTRICAL CHARACTERISTICS AT 25°C

| Parameter                           | Symbol       | Min | Max   | Units | Test Conditions                                   |
|-------------------------------------|--------------|-----|-------|-------|---------------------------------------------------|
| Collector-Emitter Breakdown Voltage | $BV_{CES}$   | 70  | -     | V     | $I_C=12.5$ mA                                     |
| Collector-Emitter Leakage Current   | $I_{CES}$    | -   | 2.5   | mA    | $V_{CE}=40$ V                                     |
| Thermal Resistance                  | $R_{TH(JC)}$ | -   | 3     | °C/W  | $V_{CC}=45$ V, $P_{out}=15$ W, $F=1.03, 1.09$ GHz |
| Output Power                        | $P_{OUT}$    | 15  | -     | W     | $V_{CC}=45$ V, $P_{IN}=2$ W, $F=1.03, 1.09$ GHz   |
| Power Gain                          | $G_P$        | 9.0 | -     | dB    | $V_{CC}=45$ V, $P_{out}=15$ W, $F=1.03, 1.09$ GHz |
| Collector Efficiency                | $\eta_C$     | 40  | -     | %     | $V_{CC}=45$ V, $P_{out}=15$ W, $F=1.03, 1.09$ GHz |
| Input Return Loss                   | RL           | 8   | -     | dB    | $V_{CC}=45$ V, $P_{out}=15$ W, $F=1.03, 1.09$ GHz |
| Load Mismatch Tolerance             | VSWR-T       | -   | 3:1   | -     | $V_{CC}=45$ V, $P_{out}=15$ W, $F=1.03, 1.09$ GHz |
| Load Mismatch Stability             | VSWR-S       | -   | 1.5:1 | -     | $V_{CC}=45$ V, $P_{out}=15$ W, $F=1.03, 1.09$ GHz |

## BROADBAND TEST FIXTURE IMPEDANCE

| F (MHz) | $Z_{IF} (\Omega)$ | $Z_{OF} (\Omega)$ |
|---------|-------------------|-------------------|
| 1030    | $1.7 - j4.5$      | $5.9 + j14.5$     |
| 1090    | $1.6 - j4.1$      | $8.3 + j17.7$     |

