CW Power Transistor 3.5W, 2.3 GHz



M/A-COM Products Released - Rev. 07.07

Released -

Outline Drawing

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

.820" [20.83] .570" [14.48] .050" [1.27] 100"±.010" [2.54±0.25] 2X .120" [3.05] .252' . [6.40] +.100"±.010" [2.54±0.25] Ŧ .120" [3.05] -- 2X .130" [3.30] - ø.230" [5.84] .157"±.010" [3.99±0.25] 2X .004"±.001" [0.10±0.03] .060 . [1.52] .127"±.010" [3.23±0.25]

UNLESS OTHERWISE NOTED, TOLERANCES ARE INCHES $\pm.005"$ [MILLIMETERS $\pm0.13 \text{MM}$]

ABSOLUTE MAXIMUM RATING AT 25°C

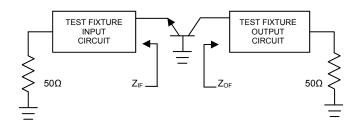
| Parameter | Symbol | Rating | Units |
|---------------------------|------------------|--------------|-------|
| Collector-Emitter Voltage | V _{CES} | 60 | V |
| Emitter-Base Voltage | V _{EBO} | 3.0 | V |
| Collector Current | Ιc | 0.4 | А |
| Power Dissipation | PD | 11 | W |
| Junction Temperature | TJ | 200 | °C |
| Storage Temperature | T _{STG} | -65 to + 200 | °C |
| Thermal Resistance | θ _{JC} | 15 | °C/W |

ELECTRICAL SPECIFICATIONS AT 25°C

| Parameter | Symbol | Min | Max | Units | Test Conditions |
|-------------------------------------|-------------------|-----|------|-------|--|
| Collector-Emitter Breakdown Voltage | BV _{CES} | 60 | - | V | I _C = 10mA |
| Collector-Emitter Leakage Current | I _{CES} | - | 1.0 | mA | V _{CE} = 28V |
| Input Power | P _{IN} | - | 0.48 | w | V _{CE} = 28V, P _{out} = 3.0 W, F = 2.3 GHz |
| Power Gain | G _P | 8 | - | dB | V _{CE} = 28V, P _{out} = 3.0 W, F = 2.3 GHz |
| Collector Efficiency | ŋC | 30 | - | % | V _{CE} = 28V, P _{out} = 3.0 W, F =2.3 GHz |
| Input Return Loss | RL | 6 | - | dB | V _{CE} = 28V, P _{out} = 3.0 W, F = 2.3 GHz |
| Load Mismatch Tolerance | VSWR-T | - | 3:1 | - | V _{CE} = 28V, P _{out} = 3.0 W, F = 2.3 GHz |

TEST FIXTURE IMPEDANCES

| F (GHz) | Z _{IN} (Ω) | Z _{LOAD} (Ω) |
|---------|---------------------|-----------------------|
| 2.30 | 6.5-j23.0 | 6.3+j5.4 |



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TEST FIXTURE DIMENSIONS



2.000″

2.024 "

1.475″

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1.475 1.425 1.056 1.024 .976″ 765″ 766 **TEST FIXTURE ASSEMBLY** GROUND SHIM CAPACITOR, 50 uF 50 \ MALLORY 0 Ø л SMA CONNECTOR DMNI SPECTRA 2052-5636-02 ₹ Æ CHIP CAPACITERS 39pF ATC100A 2 PLACES $\langle \rangle$ HEATSINK, ALUMINUM 73050255-03

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