

DESCRIPTION

The MS2575 is a medium power Class C transistor designed specifically for pulsed L-Band avionics applications.

Low RF thermal resistance and computerized automatic wire bonding techniques ensure high reliability and product consistency.

The MS2575 is housed in the IMPACT™ package with internal input matching.

IMPORTANT: For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

KEY FEATURES

- Refractory/Gold Metallization
- Emitter Site Ballasted
- ∞ :1 VSWR Capability
- Low Thermal Resistance
- Input Matching
- Overlay Geometry
- Metal/Ceramic Hermetic Package
- P_{OUT} = 35 W Min.
- G_p = 10.7 dB Gain

APPLICATIONS/BENEFITS

- Avionics Applications

ABSOLUTE MAXIMUM RATINGS (T_{CASE} = 25°C)

| Symbol | Parameter | Value | Unit |
|-------------------|--|-------------|------|
| P _{DISS} | Power Dissipation (T _C ≤ 100°C) | 150 | W |
| I _C | Device Current* | 3.0 | A |
| V _{CC} | Collector-Supply Voltage* | 55 | V |
| T _J | Junction Temperature (Pulsed RF Operation) | 250 | °C |
| T _{STG} | Storage Temperature | -65 to +150 | °C |

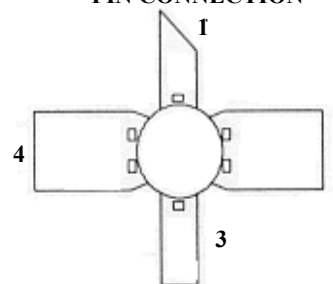
THERMAL DATA

| | | | |
|----------------------|----------------------------------|-----|------|
| R _{TH(j-c)} | Junction-Case Thermal Resistance | 1.0 | °C/W |
|----------------------|----------------------------------|-----|------|

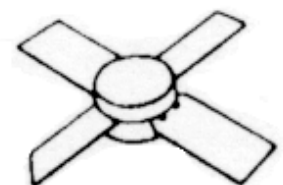
Applies only to rated RF amplifier operation

Note: Thermal Resistance determined by Infra-Red Scanning of Hot Spot Junction Temperature at rated RF operating conditions.

PIN CONNECTION



- 1. COLLECTOR
- 2. BASE
- 3. EMITTER
- 4. BASE



**.280 4LSL (M115)
hermetically sealed**

STATIC ELECTRICAL SPECIFICATIONS (T_{CASE} = 25°C)

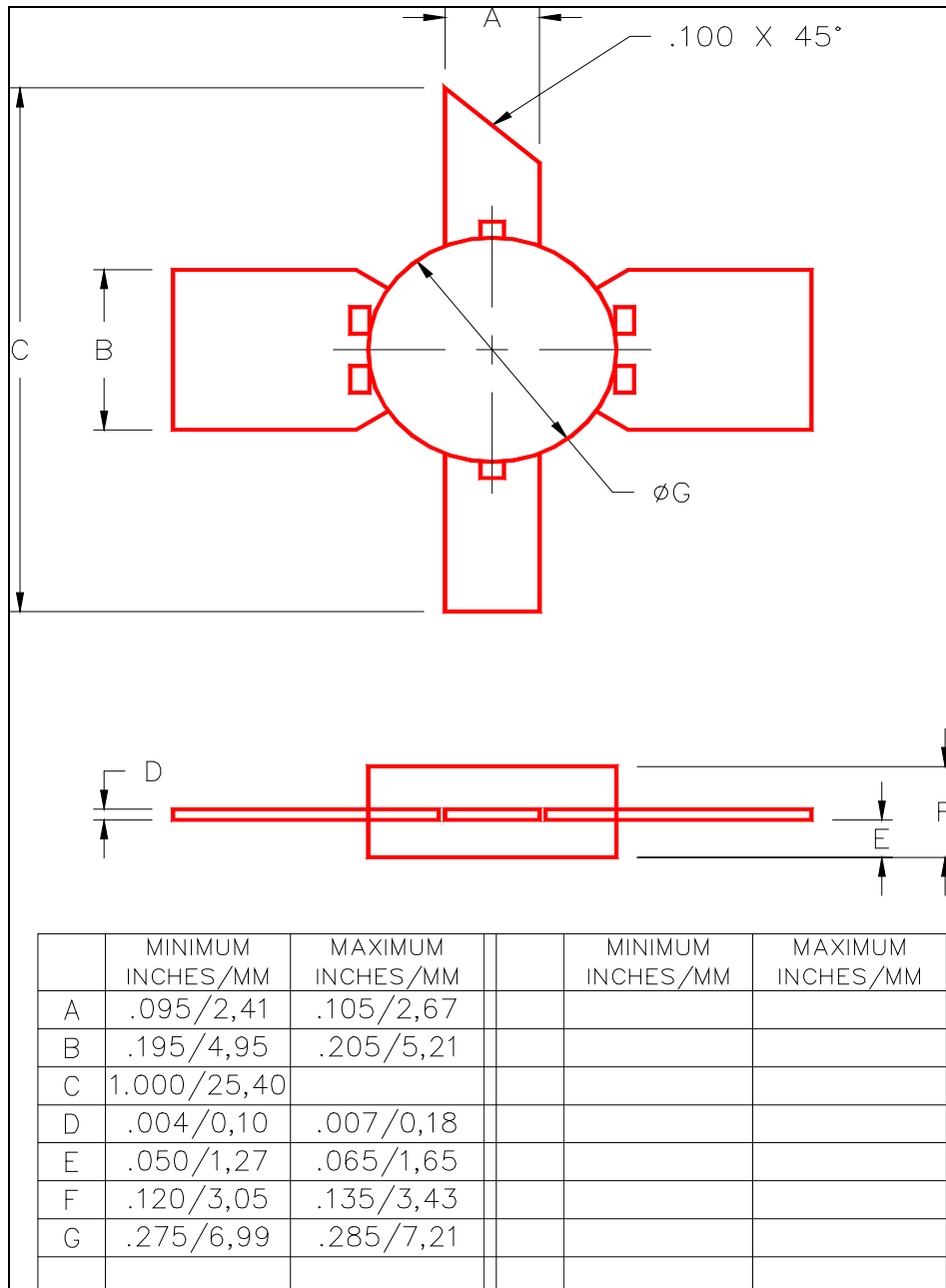
| Symbol | Test Conditions | MS2575 | | | Units |
|-------------------------|---|--------|------|------|-------|
| | | Min. | Typ. | Max. | |
| BV_{CBO} | I_C = 10 mA I_E = 0 mA | 65 | — | — | V |
| BV_{EBO} | I_E = 1 mA I_C = 0 V | 3.5 | — | — | V |
| BV_{CER} | I_C = 10 mA R_{BE} = 10 Ω | 65 | — | — | V |
| I_{CES} | V_{BE} = 0 V v_{CE} = 50 V | — | — | 5 | mA |
| h_{FE} | V_{CE} = 5 V I_C = 500 mA | 15 | — | 120 | — |

DYMANIC ELECTRICAL SPECIFICATIONS (T_{CASE} = 25°C)

| Symbol | Test Conditions | MS2575 | | | Units |
|------------------------|---|--------|------|------|-------|
| | | Min. | Typ. | Max. | |
| P_{OUT} | f = 1025 – 1150 MHz P_{IN} = 3.0 W V_{CC} = 50 V | 35 | 40 | — | W |
| η_c | f = 1025 – 1150 MHz P_{IN} = 3.0 W V_{CC} = 50 V | 10.7 | 11.2 | — | % |
| G_p | f = 1025 – 1150 MHz P_{IN} = 3.0 W V_{CC} = 50 V | 43 | 48 | — | dB |

Note: Pulse width = 10μSec
 Duty Cycle = 1%

PACKAGE STYLE - M115





MS2575

RF & MICROWAVE TRANSISTORS

PRODUCT PREVIEW

www.Microsemi.com

NOTES