Microsemi

RF PRODUCTS DIVISION

MS2575

RF & MICROWAVE TRANSISTORS

PRODUCT PREVIEW

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 IMPAC™ 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 ($T_C \le 100$°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

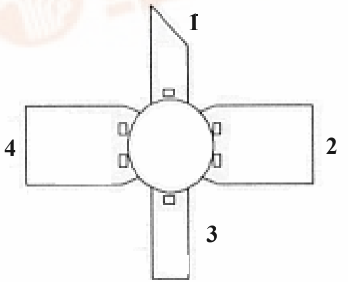
THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	1.0	°C/W

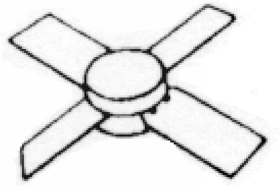
Applies only to rated RF amplifier operation

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

PIN CONNECTION



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



.280 4LSL (M115)
hermetically sealed

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

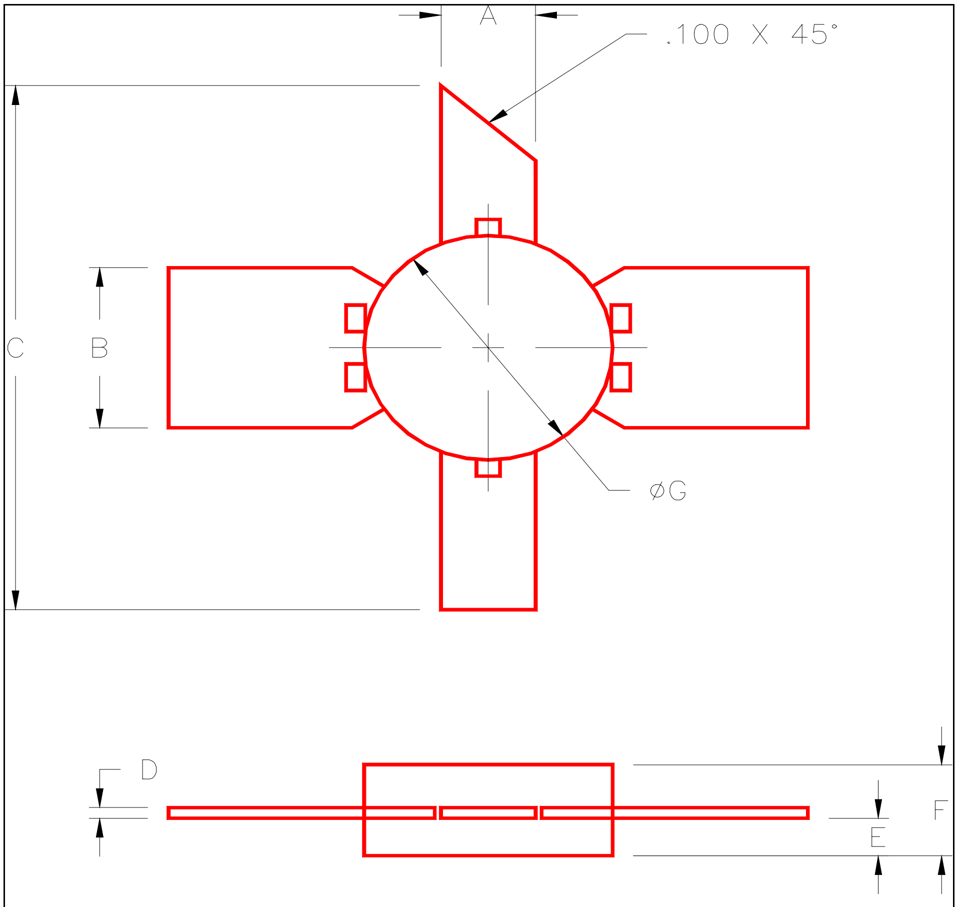
Symbol	Test Conditions	MS2575			Units
		Min.	Typ.	Max.	
BV_{CBO}	**I_C** = 10 mA **I_E** = 0 mA	65	—	—	V
BV_{EBO}	**I_E** = 1 mA **I_C** = 0 V	3.5	—	—	V
BV_{CER}	**I_C** = 10 mA **R_{BE}** = 10 Ω	65	—	—	V
I_{CES}	**V_{BE}** = 0 V **v_{CE}** = 50 V	—	—	5	mA
h_{FE}	**V_{CE}** = 5 V **I_C** = 500 mA	15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



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM			MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.095/2,41	.105/2,67				
B	.195/4,95	.205/5,21				
C	1.000/25,40					
D	.004/0,10	.007/0,18				
E	.050/1,27	.065/1,65				
F	.120/3,05	.135/3,43				
G	.275/6,99	.285/7,21				