

DESCRIPTION

The MS2552 device is a high power pulsed transistor specifically designed for DME/TACAN avionics applications.

This device is capable of withstanding an infinite load VSWR at any phase angle under full rated conditions. Low RF thermal resistance and semi-automatic bonding techniques ensure high reliability and product consistency.

The MS2552 is housed in the industry-standard AMPAC™ metal/ceramic hermetic package with internal input/output matching structures.

IMPORTANT: For the most current data, visit: <http://www.advancedpower.com>

KEY FEATURES

- Refractory/Gold Metallization
- Emitter Ballasted
- Ruggedized VSWR ∞ :1 Capability
- Input/Output Matching
- Overlay Geometry
- Metal/Ceramic Hermetic Package
- $P_{OUT} = 325$ W Min.
- $G_p = 6.7$ dB Gain

APPLICATIONS/BENEFITS

- Avionics Applications

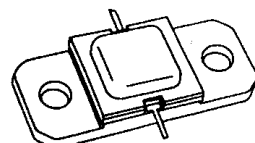
ABSOLUTE MAXIMUM RATINGS (T_{CASE} = 25°C)

| Symbol | Parameter | Value | Unit |
|------------|---|-------------|------|
| P_{DISS} | Power Dissipation* (T _C ≤ 100°C) | 880 | W |
| I_C | Device Current* | 24 | 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 |

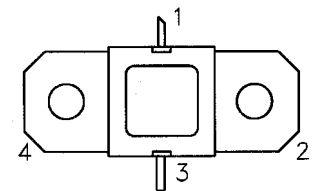
THERMAL DATA

| | | | |
|---------------|----------------------------------|------|------|
| $R_{TH(j-c)}$ | Junction-Case Thermal Resistance | 0.17 | °C/W |
|---------------|----------------------------------|------|------|

Applies only to rated RF amplifier operation



**.400 X .400 2NLFL
hermetically sealed**

PIN CONNECTION


1. Collector 3. Emitter
2. Base 4. Base

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

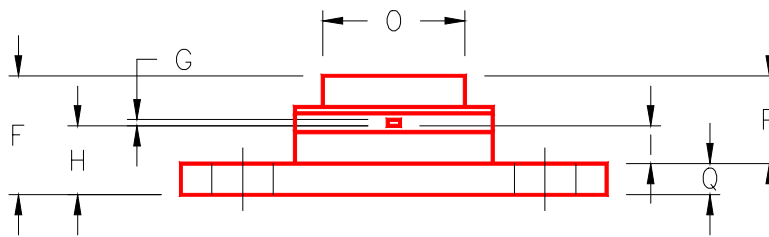
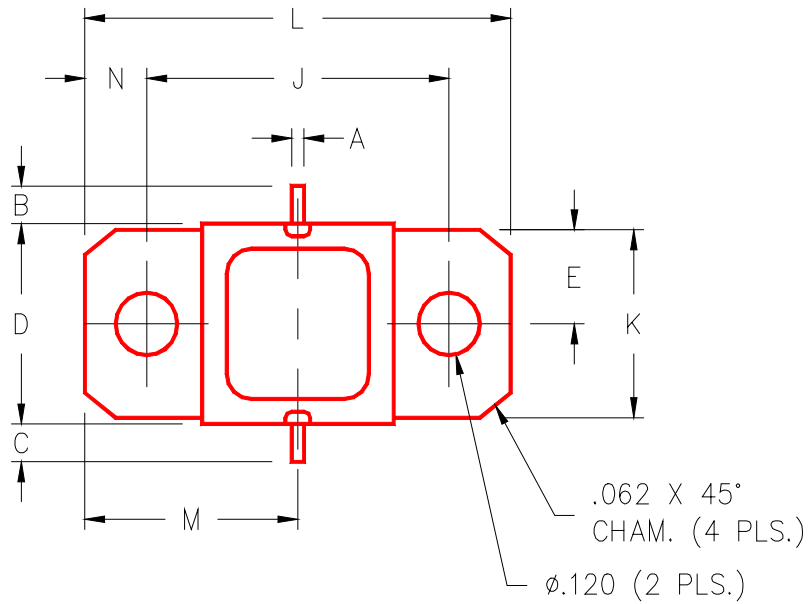
| Symbol | Test Conditions | MS2552 | | | Units |
|-------------------------|---|--------|------|------|-------|
| | | Min. | Typ. | Max. | |
| BV_{CBO} | I_C = 10 mA I_E = 0 mA | 65 | — | — | V |
| BV_{EBO} | I_E = 1 mA I_C = 0 V | 3.5 | — | — | V |
| BV_{CER} | I_C = 25 mA R_{BE} = 10 Ω | 65 | — | — | V |
| I_{CES} | V_{BE} = 0 V v_{CE} = 50 V | — | — | 25 | mA |
| h_{FE} | V_{CE} = 5 V I_C = 1 A | 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} = 70 W V_{CC} = 50 V | 325 | 360 | — | W |
| η_c | f = 1025 – 1150 MHz P_{IN} = 70 W V_{CC} = 50 V | 40 | 41 | — | % |
| G_p | f = 1025 – 1150 MHz P_{IN} = 70 W V_{CC} = 50 V | 6.7 | 7.1 | — | dB |

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

PACKAGE STYLE M218



| | MINIMUM INCHES/MM | MAXIMUM INCHES/MM | | MINIMUM INCHES/MM | MAXIMUM INCHES/MM |
|---|----------------------|----------------------|---|----------------------|----------------------|
| A | .025/0,64 | | J | .650/16,51 | |
| B | .100/2,54 | | K | .386/9,80 | |
| C | .100/2,54 | | L | .900/22,86 | |
| D | .395/10,03 | .407/10,34 | M | .450/11,43 | |
| E | .193/4,90 | | N | .125/3,18 | |
| F | | .230/5,84 | O | .405/10,29 | |
| G | .004/0,10 | .007/0,18 | P | .170/4,32 | |
| H | .118/3,00 | .131/3,33 | Q | .062/1,58 | |
| I | .063/1,60 | | | | |

