

**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, consult MICROSEMI's website: <http://www.microsemi.com>

**KEY FEATURES**

- Refractory/Gold Metallization
- Emitter Ballasted
- Ruggedized VSWR  $\infty$  :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

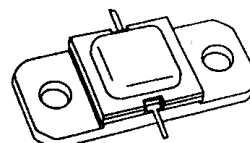
**ABSOLUTE MAXIMUM RATINGS (T<sub>CASE</sub> = 25°C)**

Symbol	Parameter	Value	Unit
$P_{DISS}$	Power Dissipation* (T <sub>C</sub> ≤ 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**

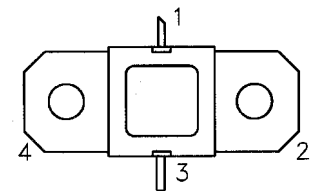
$R_{TH(j-c)}$	Junction-Case Thermal Resistance	0.17	°C/W
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Applies only to rated RF amplifier operation



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

**PIN CONNECTION**



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

**STATIC ELECTRICAL SPECIFICATIONS (T<sub>CASE</sub> = 25°C)**

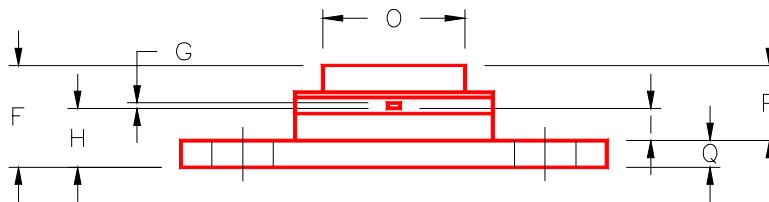
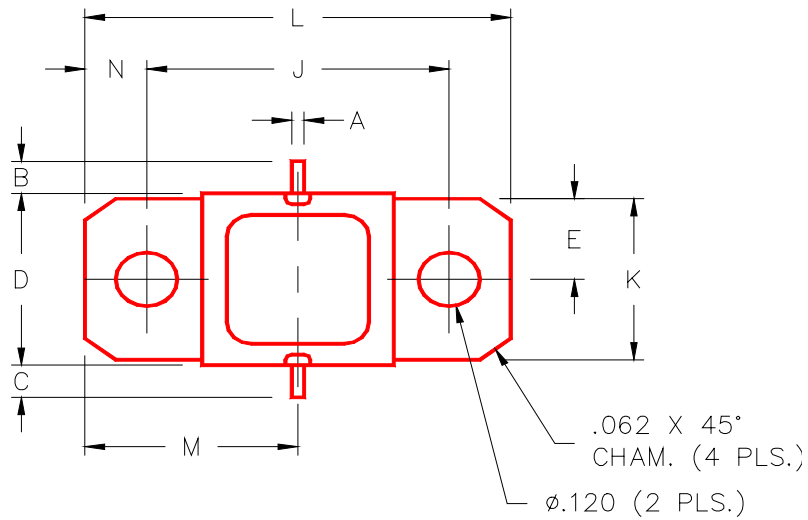
Symbol	Test Conditions		MS2552			Units
			Min.	Typ.	Max.	
<b>BV<sub>CBO</sub></b>	<b>I<sub>C</sub> = 10 mA</b>	<b>I<sub>E</sub> = 0 mA</b>	65	—	—	V
<b>BV<sub>EBO</sub></b>	<b>I<sub>E</sub> = 1 mA</b>	<b>I<sub>C</sub> = 0 V</b>	3.5	—	—	V
<b>BV<sub>CER</sub></b>	<b>I<sub>C</sub> = 25 mA</b>	<b>R<sub>BE</sub> = 10 Ω</b>	65	—	—	V
<b>I<sub>CES</sub></b>	<b>V<sub>BE</sub> = 0 V</b>	<b>v<sub>CE</sub> = 50 V</b>	—	—	25	mA
<b>h<sub>FE</sub></b>	<b>V<sub>CE</sub> = 5 V</b>	<b>I<sub>C</sub> = 1 A</b>	15	—	120	—

**DYMANIC ELECTRICAL SPECIFICATIONS (T<sub>CASE</sub> = 25°C)**

Symbol	Test Conditions				MS2575			Units
					Min.	Typ.	Max.	
<b>P<sub>OUT</sub></b>	<b>f = 1025 – 1150 MHz</b>	<b>P<sub>IN</sub> = 70 W</b>	<b>V<sub>CC</sub> = 50 V</b>		325	360	—	W
<b>η<sub>c</sub></b>	<b>f = 1025 – 1150 MHz</b>	<b>P<sub>IN</sub> = 70 W</b>	<b>V<sub>CC</sub> = 50 V</b>		40	41	—	%
<b>G<sub>p</sub></b>	<b>f = 1025 – 1150 MHz</b>	<b>P<sub>IN</sub> = 70 W</b>	<b>V<sub>CC</sub> = 50 V</b>		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				



MS2552

RF & MICROWAVE TRANSISTORS

PRODUCT PREVIEW

www.Microsemi.com

NOTES