

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 ∞ :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

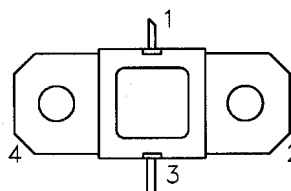
ABSOLUTE MAXIMUM RATINGS ($T_{CASE} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C \leq 100^{\circ}C$)	880	W
I_C	Device Current*	24	A
V_{CC}	Collector-Supply Voltage*	55	V
T_J	Junction Temperature (Pulsed RF Operation)	250	$^{\circ}C$
T_{STG}	Storage Temperature	-65 to +150	$^{\circ}C$

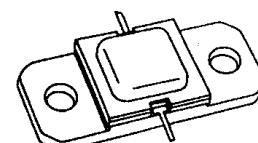
THERMAL DATA

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

PIN CONNECTION


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



.400 x .400 2NLF (S042)
hermetically sealed

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

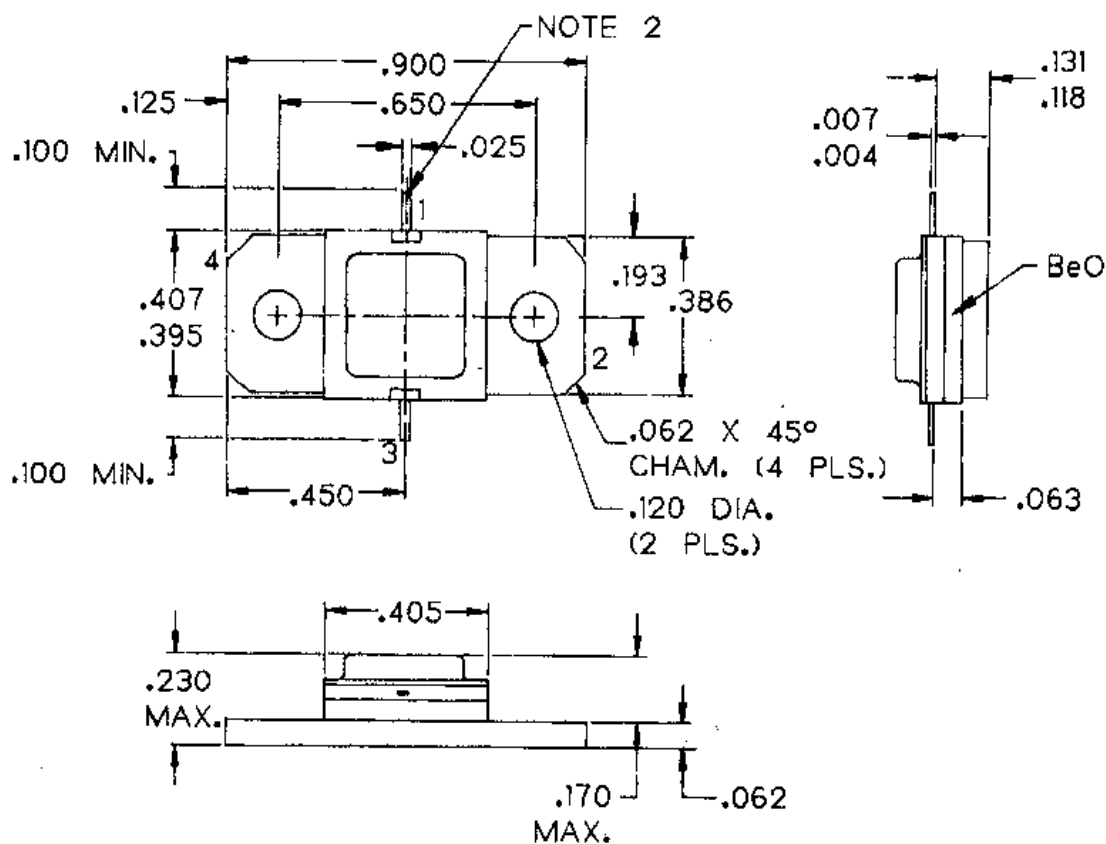
Symbol	Test Conditions	MS2552			Units
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 10 mA I_E = 0 mA	65	—	—	V
BV_{EBO}	I_E = 1 mA I_C = 0 V	3.5	—	—	V
BV_{CER}	I_C = 25 mA R_{BE} = 10 Ω	65	—	—	V
I_{CES}	V_{BE} = 0 V v_{CE} = 50 V	—	—	25	mA
h_{FE}	V_{CE} = 5 V I_C = 1 A	15	—	120	—

DYNAMIC 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%

Ref.: Dwg. No.: J113214F



NOTES:

1. ALL TOLERANCE $\pm .010$ EXCEPT WHERE NOTED;
DIMENSIONS IN INCHES.
2. COLLECTOR LEAD SLANT CUT.



MS2552

RF & MICROWAVE TRANSISTORS

PRODUCT PREVIEW

www.Microsemi.com

NOTES