Microsemi

RF PRODUCTS DIVISION

MS2552

RF & MICROWAVE TRANSISTORS

PRODUCT PREVIEW

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°C)

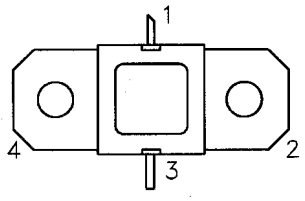
Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation* ($T_C \leq 100°C$)	880	W
I_C	Device Current*	24	A
V_{CC}	Collector-Supply Voltage*	55	V
T_J	Junction Temperature (Pulsed RF Operation)	250	°C
T_{STG}	Storage Temperature	-65 to +150	°C

THERMAL DATA

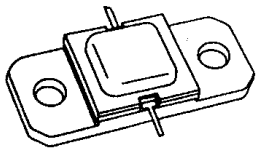
$R_{TH(j-c)}$	Junction-Case Thermal Resistance	0.17	°C/W

Applies only to rated RF amplifier operation

PIN CONNECTION



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



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

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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)

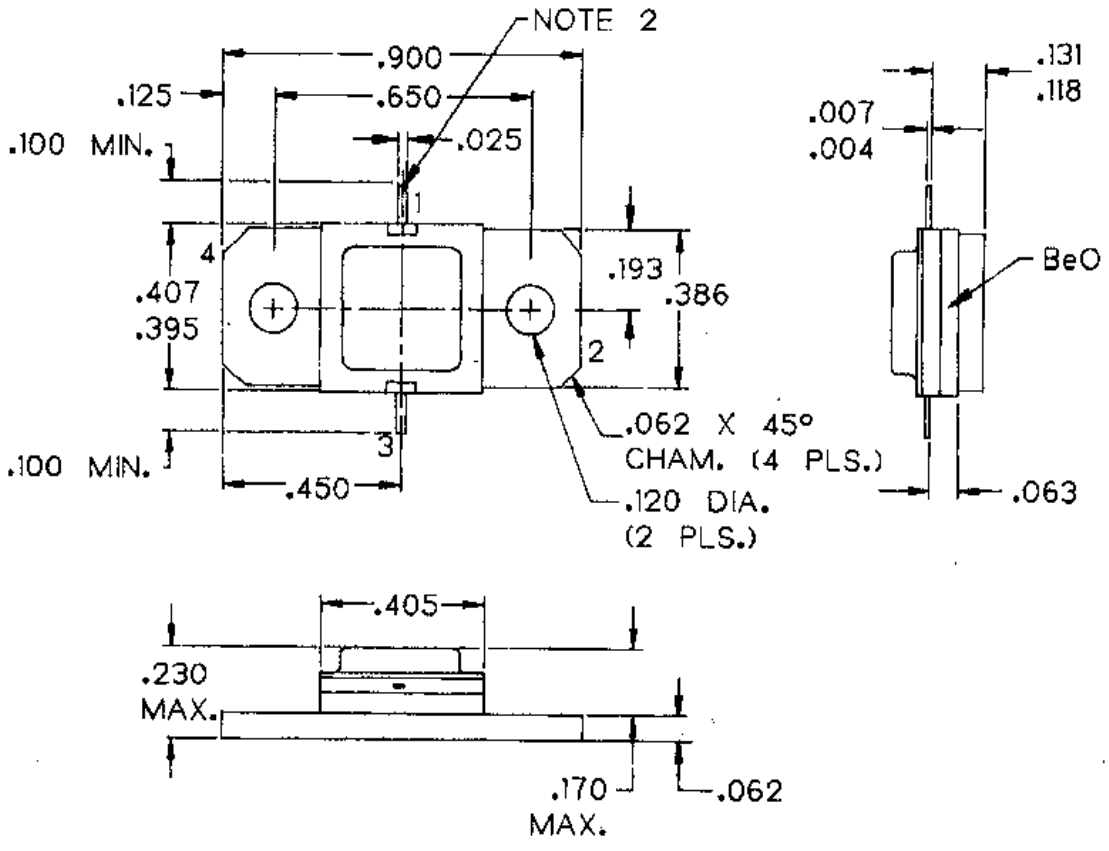
Symbol	Test Conditions			MS2575			Units
				Min.	Typ.	Max.	
P_{OUT}	f = 1025 – 1150 MHz	P_{IN} = 70 W	V_{CC} = 50 V	325	360	——	W
ηc	f = 1025 – 1150 MHz	P_{IN} = 70 W	V_{CC} = 50 V	40	41	——	%
G_P	f = 1025 – 1150 MHz	P_{IN} = 70 W	V_{CC} = 50 V	6.7	7.1	——	dB

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

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Ref.: Dwg. No.: J113214F



NOTES:
1. ALL TOLERANCE ± .010 EXCEPT WHERE NOTED; DIMENSIONS IN INCHES.
2. COLLECTOR LEAD SLANT CUT.

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