

DESCRIPTION

The MS2393 is a gold metallized, silicon NPN power transistor. The MS2393 is designed for applications requiring high peak power and low duty cycles such as IFF, DME and TACAN. The MS2393 is packaged in a metal/ceramic package with internal input/output matching, resulting in improved broadband performance and low thermal resistance.

IMPORTANT: For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

KEY FEATURES

- Designed For High Power Pulse IFF, DME, and TACAN Applications
- 200 W (typ.) IFF 1030 – 1090 MHz
- 150 W (min.) DME 1025 – 1150 MHz
- 140 W (typ.) TACAN 960 – 1215 MHz
- 8.2 dB Gain
- Refractory Gold Metallization
- Ballasting And Low Thermal Resistance For Reliability And Ruggedness
- 30:1 Load VSWR Capability At Specified Operating Conditions
- Input And Output Matched Common Base Configuration

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

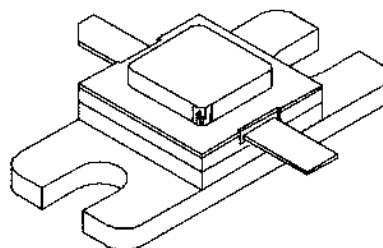
Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	65	V
V _{CES}	Collector-Emitter Voltage	65	V
V _{EBO}	Emitter-Base Voltage	3.5	V
I _C	Device Current	11	A
P _{DISS}	Power Dissipation	583	W
T _J	Junction Temperature	+200	°C
T _{STG}	Storage Temperature	-65 to +150	°C

THERMAL DATA

R _{TH(j-c)}	Junction-Case Thermal Resistance	0.30	°C/W
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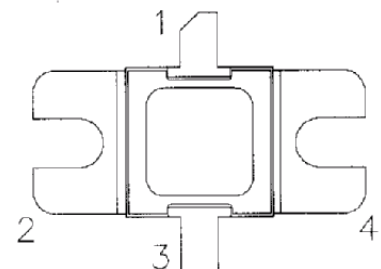
APPLICATIONS/BENEFITS

- Avionics Applications



.400 SQ. 2LFL (M138)
hermetically sealed

PIN CONNECTION



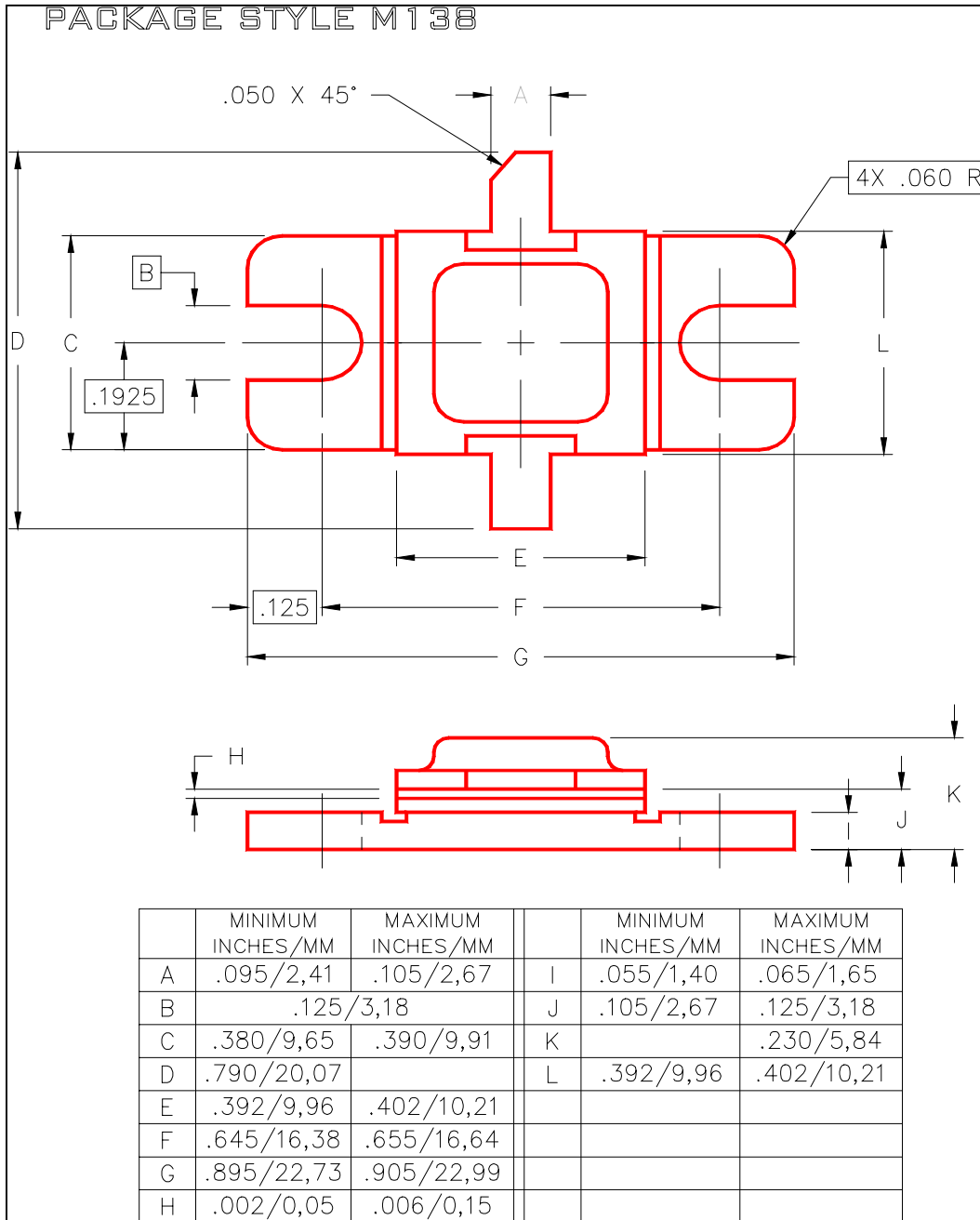
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|--------------|------------|
| 1. Collector | 3. Emitter |
| 2. Base | 4. Base |

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

Symbol	Test Conditions	MS2393			Units
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 10 mA I_E = 0 mA	65	—	—	V
BV_{CES}	I_C = 25 mA V_{BE} = 0 V	65	—	—	V
BV_{EBO}	I_E = 5 mA I_C = 0 mA	3.5	—	—	V
I_{CES}	V_{CE} = 50 V I_E = 0 mA	—	—	10	mA
h_{FE}	V_{CE} = 5 V I_C = 300 mA	5	—	—	—

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

Symbol	Test Conditions	MS2393			Units
		Min.	Typ.	Max.	
P_{OUT}	f = 1025 – 1150 MHz P_{IN} = 25 W V_{CE} = 50 V	150	—	—	W
G_p	f = 1025 – 1150 MHz P_{IN} = 25 W V_{CE} = 50 V	8.2	—	—	dB
Condition	Pulse Width = 10μS, Duty Cycle = 1%				





MS2393

RF & MICROWAVE TRANSISTORS

PRODUCT PREVIEW

www.Microsemi.com

NOTES