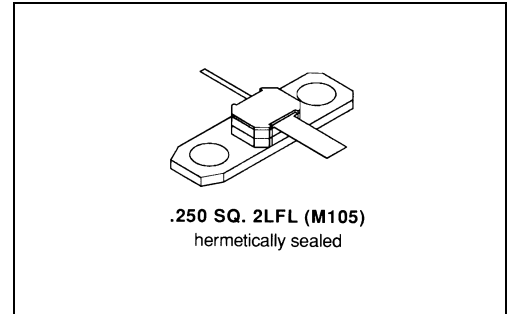


MS2344

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

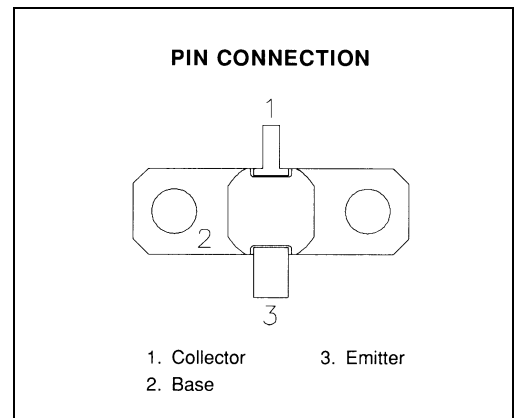
Features

- 1025 - 1150 MHz
- GOLD METALIZATION
- $P_{OUT} = 25$ WATTS
- $G_P = 9.0$ dB MINIMUM
- INTERNAL INPUT MATCHING
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- COMMON BASE CONFIGURATION



DESCRIPTION:

The MS2344 is a gold metalized silicon, NPN power transistor designed for applications requiring high peak power and low duty cycles such as IFF, DME, and TACAN. The MS2344 utilizes internal impedance matching for improved broadband performance and low thermal resistance.



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	2.6	A
P _{DISS}	Power Dissipation	87.5	W
T _J	Junction Temperature	200	°C
T _{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

R _{TH(J-C)}	Thermal Resistance Junction-case	2.0	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions		Value			Unit
			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 = 1 mA	I _C = 0 mA	3.5	---	---	V
I _{cbo}	V _{CE} = 50 V	I _E = 0 mA	---	---	5	mA
H _{fe}	V _{CE} = 5 V	I _C = 250 mA	10	---	100	---

DYNAMIC

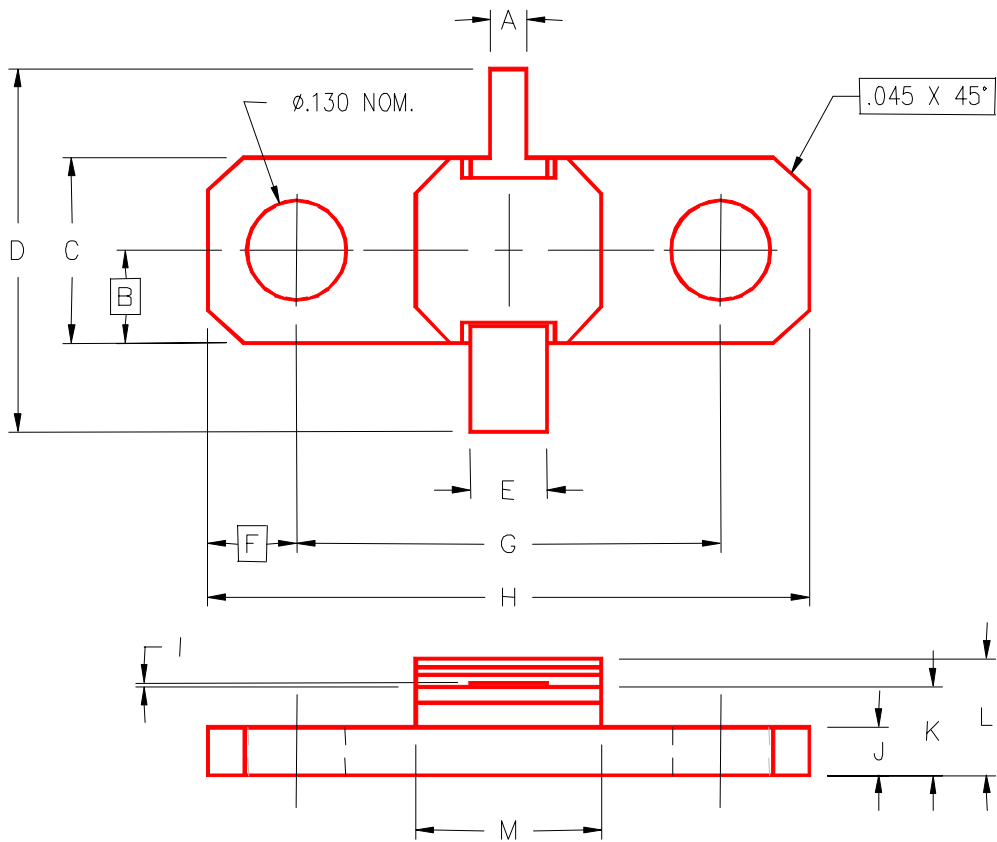
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 1025 - 1150 MHz	P _{IN} = 5.0 W	V _{CE} = 50V	35	---	---	W
G _p	f = 1025 - 1150 MHz	P _{IN} = 5.0 W	V _{CE} = 50V	9.0	---	---	dB
η _c	f = 1025 - 1150 MHz	P _{IN} = 5.0 W	V _{CE} = 50V	30	---	---	%
Conditions	Pulse Width = 10 μs Duty Cycle = 1%						

IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
1025 MHz	6.8 + j5.0	4.0 + j6.1
1090 MHz	7.1 + j4.5	3.7 + j7.2
1150 MHz	10.0 + j2.5	4.9 + j6.3

PACKAGE MECHANICAL DATA

PACKAGE STYLE M105



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.045/1,14	.055/1,40	I	.002/0,05	.006/0,15
B	.125/3,18		J	.057/1,45	.067/1,70
C	.245/6,22	.255/6,48	K	.112/2,84	.132/3,35
D	1.235/31,37		L	.175/4,45	
E	.095/2,41	.105/2,67	M	.245/6,48	.405/10,29
F	.120/3,05				
G	.557/14,15	.567/14,40			
H	.795/20,19	.805/20,45			