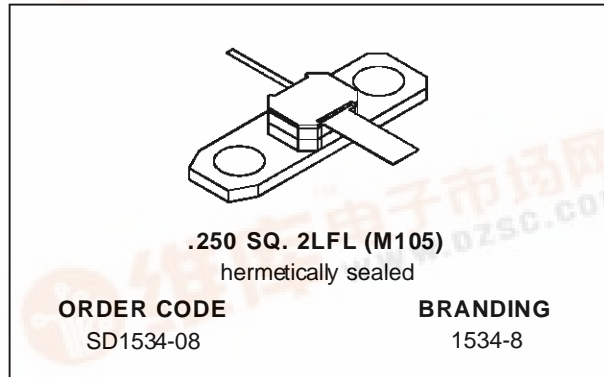




SD1534-08

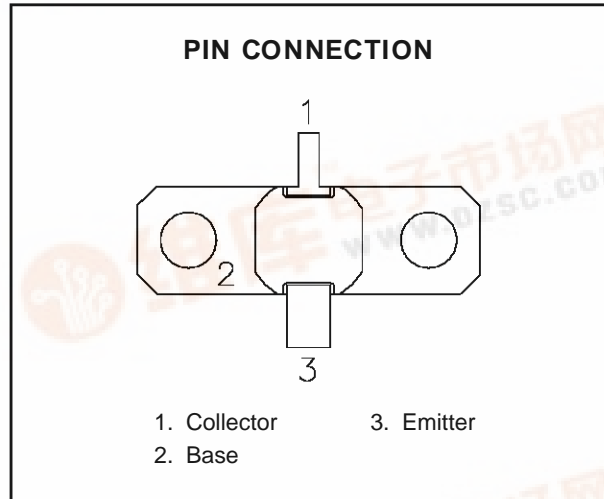
**RF & MICROWAVE TRANSISTORS
AVIONICS APPLICATIONS**

- DESIGNED FOR HIGH POWER PULSED IFF, DME, TACAN APPLICATIONS
- 80 WATTS (typ.) IFF 1030 - 1090 MHz
- 75 WATTS (min.) DME 1025 - 1150 MHz
- 50 WATTS (typ.) TACAN 960 - 1215 MHz
- 8.0 dB MIN. GAIN
- REFRACTORY GOLD METALLIZATION
- EMITTER BALLASTING AND LOW THERMAL RESISTANCE FOR RELIABILITY AND RUGGEDNESS
- INFINITE LOAD VSWR CAPABILITY AT SPECIFIED OPERATING CONDITIONS
- INPUT MATCHED, COMMON BASE CONFIGURATION



DESCRIPTION

The SD1534-08 is a gold metallized silicon, NPN power transistor designed for applications requiring high peak power and low duty cycles such as IFF, DME and TACAN. The SD1534-08 is packaged in the .280" input matched hermetic stripline flange package resulting in improved broadband performance and a 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	5.5	A
P _{DISS}	Power Dissipation	218.7	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	0.8	°C/W
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SD1534-08**ELECTRICAL SPECIFICATIONS** ($T_{\text{case}} = 25^{\circ}\text{C}$)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 10\text{mA}$	$I_E = 0\text{mA}$	65	—	—	V
BV_{CES}	$I_C = 25\text{mA}$	$V_{BE} = 0\text{V}$	65	—	—	V
BV_{EBO}	$I_E = 10\text{mA}$	$I_C = 0\text{mA}$	3.5	—	—	V
I_{CES}	$V_{CE} = 50\text{V}$	$I_E = 0\text{mA}$	—	—	5	mA
h_{FE}	$V_{CE} = 5\text{V}$	$I_C = 100\text{mA}$	10	—	200	—

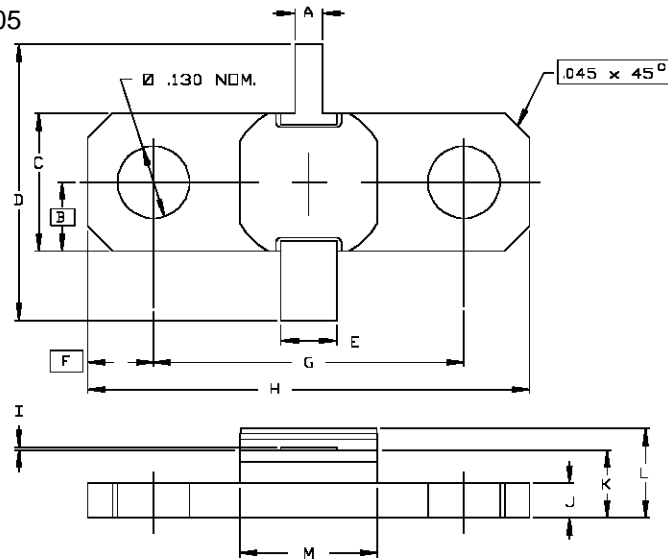
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 1025 - 1150\text{MHz}$	$P_{IN} = 13.5\text{ W}$	$V_{CE} = 50\text{ V}$	75	—	—	W
G_P	$f = 1025 - 1150\text{MHz}$	$P_{IN} = 13.5\text{ W}$	$V_{CE} = 50\text{ V}$	7.5	—	—	dB

Note: Pulse Width = $10\mu\text{Sec}$, Duty Cycle = 1%
This device is suitable for use under other pulse width/duty cycle conditions.
Please contact the factory for specific applications assistance.

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0105



SGS-THOMSON MICROELECTRONIC			CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.045/1,14	.055/1,40	K	.112/2,84	.132/3,35
B	.125/3,18		L		.175/4,45
C	.245/6,22	.255/6,48	M	.245/6,22	.257/6,53
D	1.235/31,37				
E	.095/2,41	.105/2,67			
F	.120/3,05				
G	.557/14,15	.567/14,40			
H	.795/20,19	.805/20,45			
I	.002/0,05	.006/0,15			
J	.057/1,45	.067/1,70			

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