

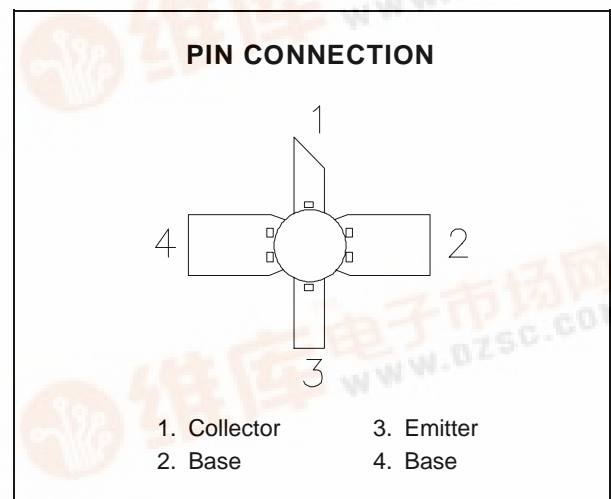
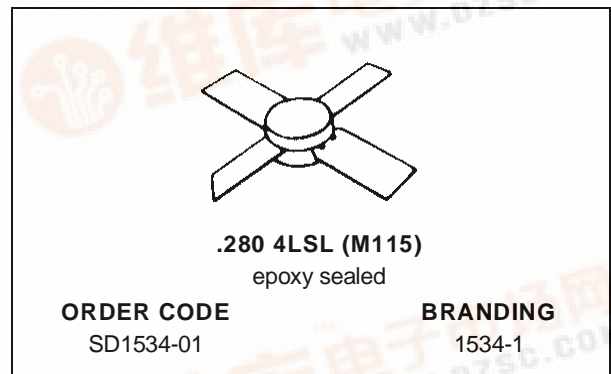

**SD1534-01**

## 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 SD1534-01 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 SD1534-01 is packaged in the .280" input matched stripline package resulting in improved broadband performance and a low thermal resistance.



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

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	$^{\circ}C$
$T_{STG}$	Storage Temperature	- 65 to +150	$^{\circ}C$

### THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	0.8	$^{\circ}C/W$
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## SD1534-01

### ELECTRICAL SPECIFICATIONS ( $T_{case} = 25^{\circ}C$ )

#### STATIC

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

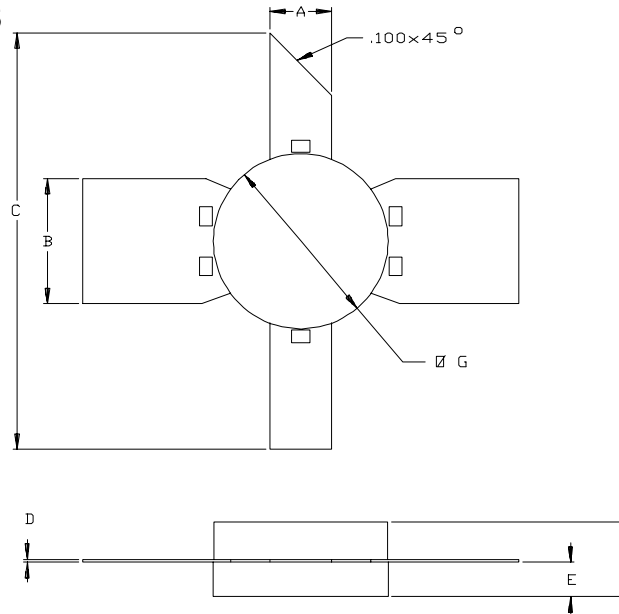
#### DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
$P_{OUT}$	$f = 1025 - 1150MHz$	$P_{IN} = 13.0W$	$V_{CE} = 50 V$	75	—	—	W
$G_P$	$f = 1025 - 1150MHz$	$P_{IN} = 13.0W$	$V_{CE} = 50 V$	7.6	—	—	dB

Note: Pulse Width = 10 $\mu$ 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.12-0115



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.095/2,41	.105/2,67
B	.195/4,95	.205/5,21
C	1.000/25,40	
D	.004/0,10	.007/0,18
E	.050/1,27	.065/1,65
F		.145/3,68
G	.275/6,99	.285/7,21

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