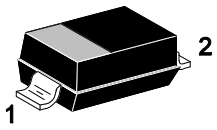
S-LMBR0540T1G

Surface Mount Schottky Power Rectifier



SOD123

Cathode Anode

1. FEATURES

- Guardring for Stress Protection
- Very Low Forward Voltage
- Epoxy Meets UL 94 V−0 @ 0.125 in
- Package Designed for Optimal Automated Board Assembly
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-LMBR0540T1G	B4	3000/Tape&Reel
S-LMBR0540T3G	B4	10000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Peak Repetitive Reverse Voltage	VRRM	40	V
Working Peak Reverse Voltage	VRWM	40	V
DC Blocking Voltage	VR	40	V
Average Rectified Forward Current (At Rated VR , TC = 115°C)	IO	0.5	A
Peak Repetitive Forward Current (At Rated VR , Square Wave, 20 kHz, TC = 115°C)	IFRM	1	A
NonRepetitive Peak Surge Current(Surge Applied at Rated Load Conditions Halfwave,Single Phase, 60 Hz)	IFSM	5.5	A
Storage/Operating Case Temperature Range	TSTG,TO	–55 ~ +150	℃
Junction Temperature	TJ	–55 ~ +150	℃
Voltage Rate of Change(Rated VR , TJ = 25°C)	dv/dt	1000	V/μS

4. THERMAL CHARACTERISTICS

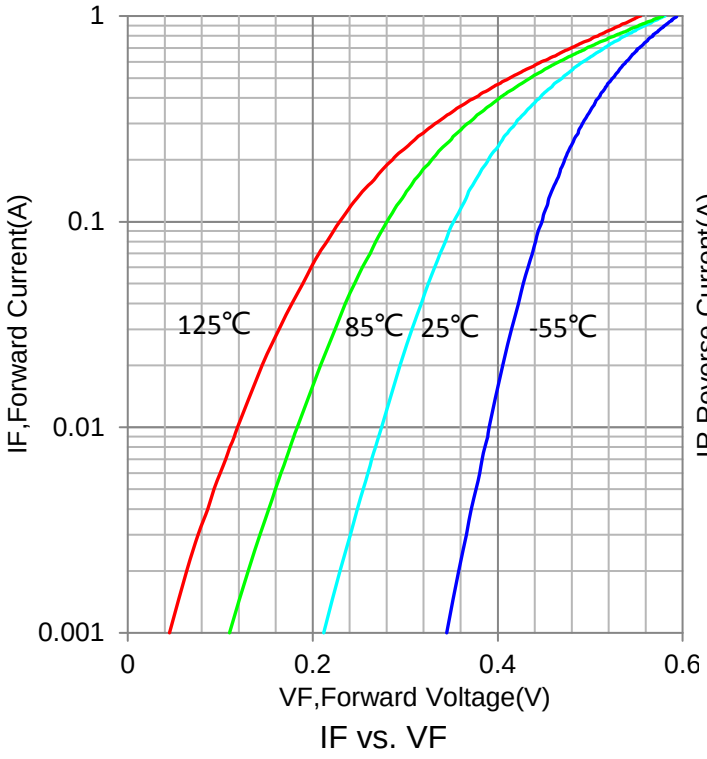
Parameter	Symbol	Limits	Unit
Thermal Resistance − Junction−to−Lead (Note 1)	RθJL	118	℃/W
Thermal Resistance − Junction−to−Ambient (Note 2)	RθJA	206	

5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

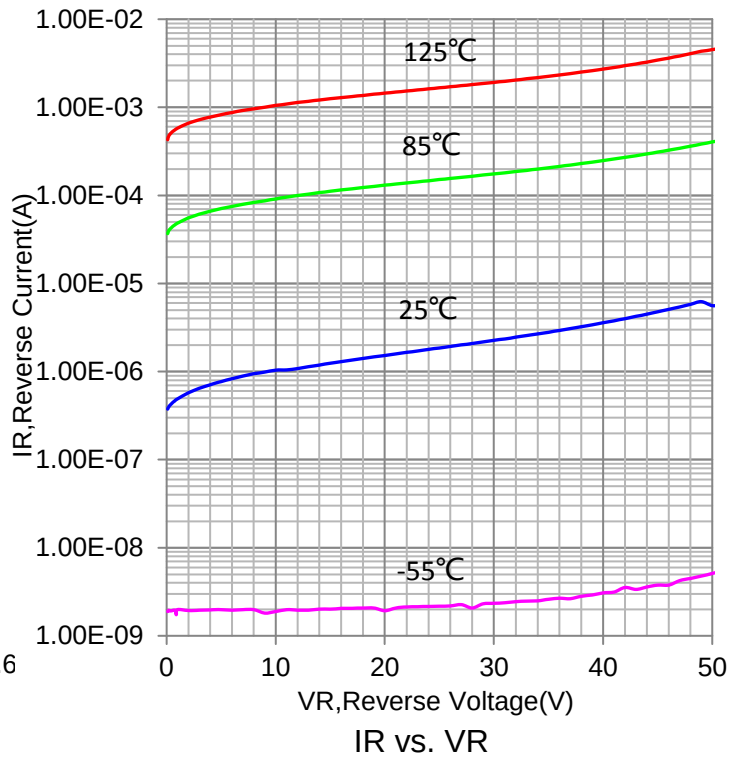
Characteristic	Symbol	TJ = 25°C	TJ = 100°C	Unit
Maximum Instantaneous Forward Voltage (Note 3) (IF = 0.5 A) (IF = 1 A)	VF	 0.55 0.65	 0.53 0.63	V
Maximum Instantaneous Reverse Current (Note 3) (VR = 40 V) (VR = 20 V)	IR	 20 10	 13000 5000	μA

1. Mounted with minimum recommended pad size, PC Board FR4.
2. 1 inch square pad size (1 X 0.5 inch for each lead) on FR4 board.
3. Pulse Test: Pulse Width ≤ 250 μs, Duty Cycle ≤ 2.0%.

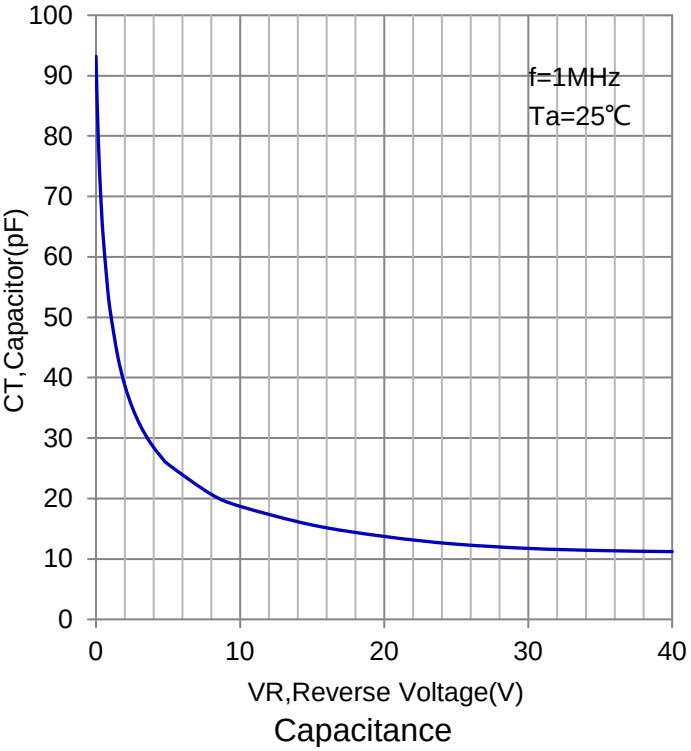
6.ELECTRICAL CHARACTERISTICS CURVES



IF vs. VF

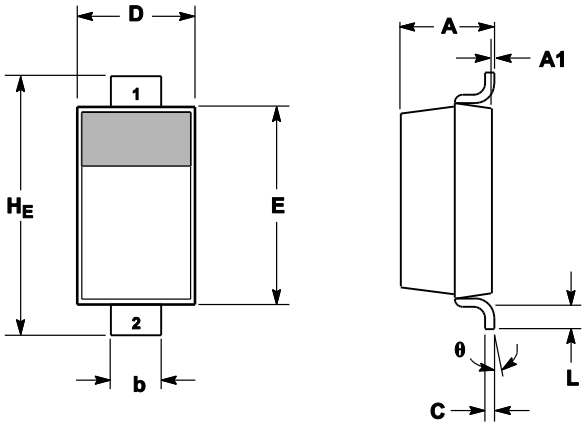


IR vs. VR



Capacitance

7.OUTLINE AND DIMENSIONS

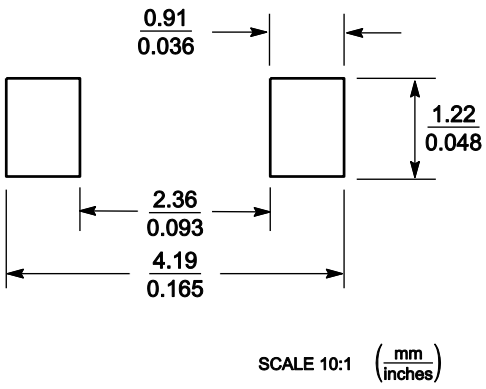


Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUI THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.94	1.17	1.35	0.037	0.046	0.053
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.51	0.61	0.71	0.020	0.024	0.028
c	---	---	0.15	---	---	0.006
D	1.40	1.60	1.80	0.055	0.063	0.071
E	2.54	2.69	2.84	0.100	0.106	0.112
H_E	3.56	3.68	3.86	0.140	0.145	0.152
L	0.25	---	---	0.010	---	---
θ	0°	---	10°	0°	---	10°

8.SOLDERING FOOTPRINT



DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.

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