Technical Data *Green Products*
Data Sheet N0066 Rev. -

SB540 SCHOTTKY RECTIFIER

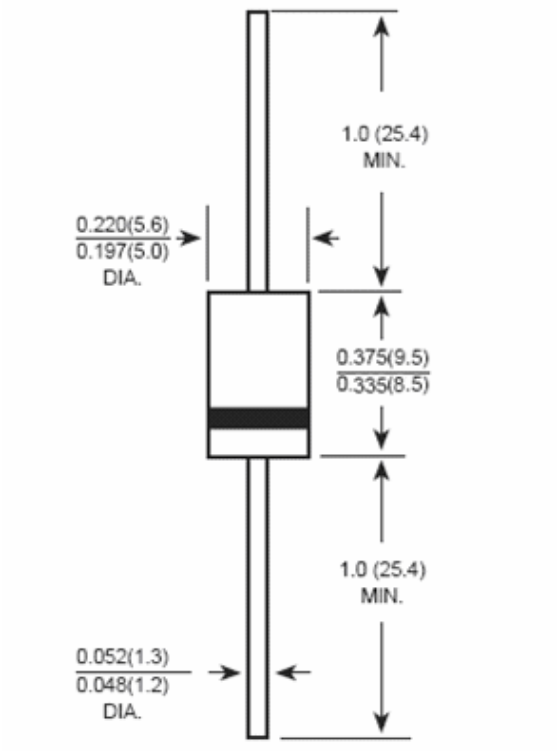
Applications:

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Disk drives
- Battery charging

Features:

- Small foot print, surface mountable
- Very low forward Voltage Drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green Products in Compliance the ROHS Directive
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Dimensions: In Inches / mm



DO-201AD

Technical Data ***Green Products***
Data Sheet N0066 Rev. -

Marking Diagram:

Where XXXXX is YYWWL

SB = Device Type
5 = Forward Current (5A)
40 = Reverse Voltage (40V)
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
SB540	DO-201AD (Pb-Free)	1250 pcs / Tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	40	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @T_C =80°C, rectangular wave form	5	A
Max. Peak Repetitive Forward Current	I_{FRM}	At Rated VR, Square Wave,20KHZ,TC=80℃	10	A
Max. peak one cycle Non-repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	190	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 5A, Pulse, T_J = 25 °C	0.65	V
	V_{F2}	@ 5 A, Pulse, T_J = 125 °C	0.63	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated VR T_J = 25 °C	1.0	mA
	I_{R2}	@V_R = rated VR T_J = 125 °C	30	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	200	pF
Max. Voltage Rate of Change	dv/dt	-	10,000	V/us

* Pulse Width < 300μs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +125	°C
Max. Storage Temperature	T_{stg}	-	-55 to +125	°C
Maximum Thermal Resistance Junction to Lead	$R_{\theta JL}$	-	12	°C/W
Maximum Thermal Resistance, Junction to Ambiebt	$R_{\theta JA}$	-	111	°C/W
Approximate Weight	wt	-	1.02	g
Case Style	DO-201AD			

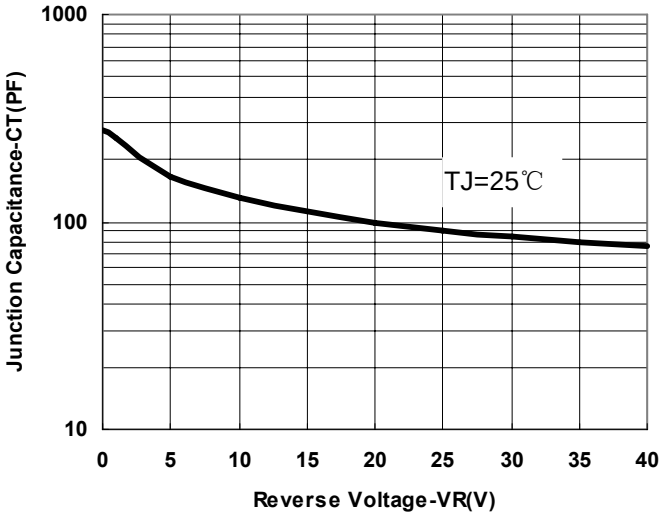


Fig.1-Typical Junction Capacitance

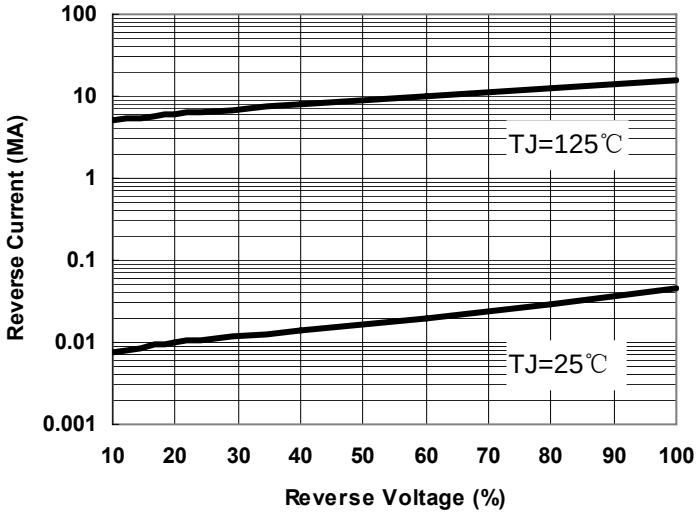


Fig.2-Typical Reverse Characteristics

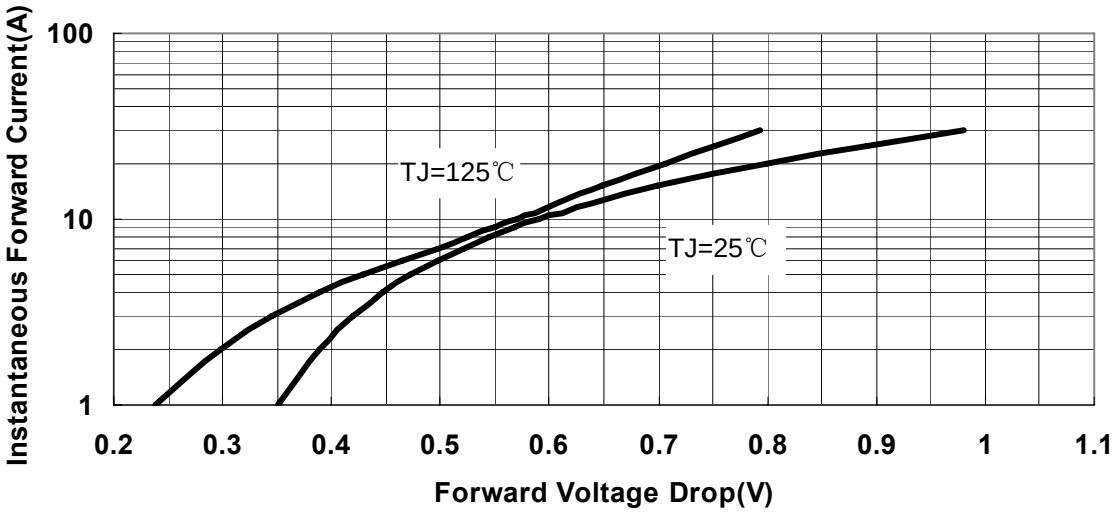


Fig.3-Typical Instantaneous Forward Voltage Characteristics

Technical Data ***Green Products***
Data Sheet N0066 Rev. -

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