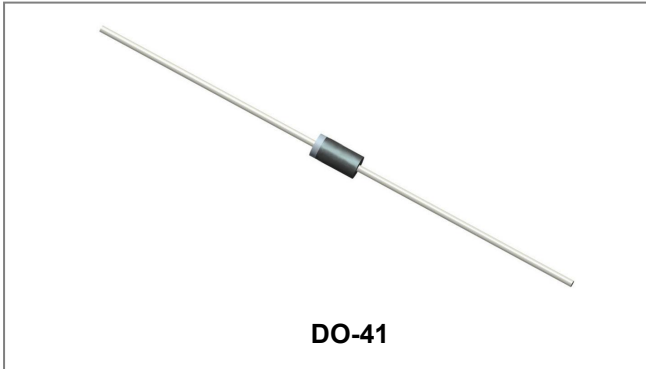


## SB1200 SCHOTTKY RECTIFIER



### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Applications

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

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	200	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=105^\circ\text{C}$ , rectangular wave form	1	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse, $T_C=25^\circ\text{C}$	20	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 1A, Pulse, $T_J = 25^\circ\text{C}$	0.84	0.92	V
	$V_{F2}$	@ 1A, Pulse, $T_J = 125^\circ\text{C}$	0.70	0.76	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 25^\circ\text{C}$	0.00001	0.5	mA
	$I_{R2}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 100^\circ\text{C}$	0.002	1.0	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	17	20	pF
Voltage Rate of Change	$dv/dt$	-	-	10,000	V/us

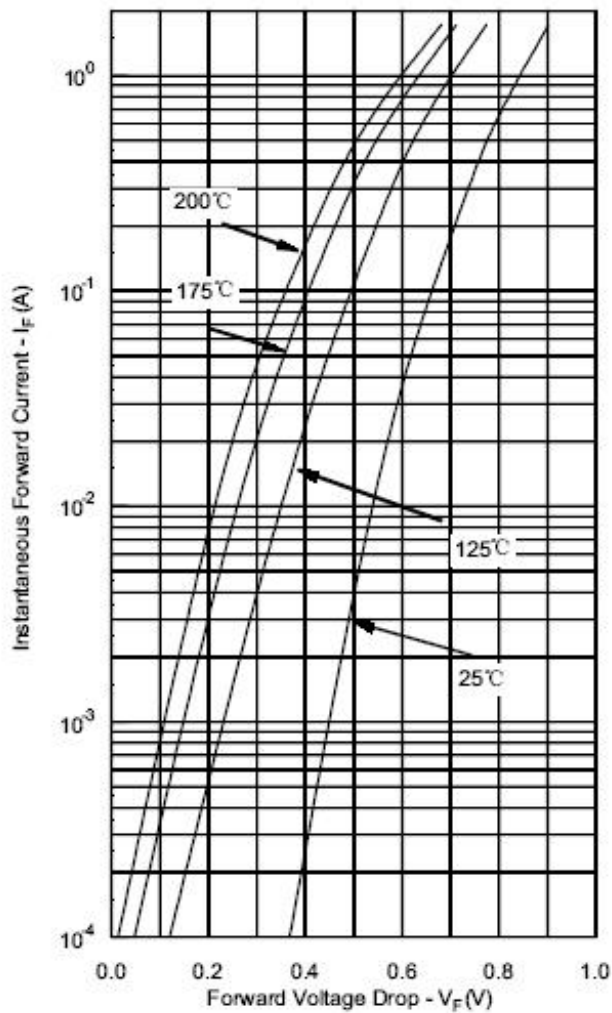
\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

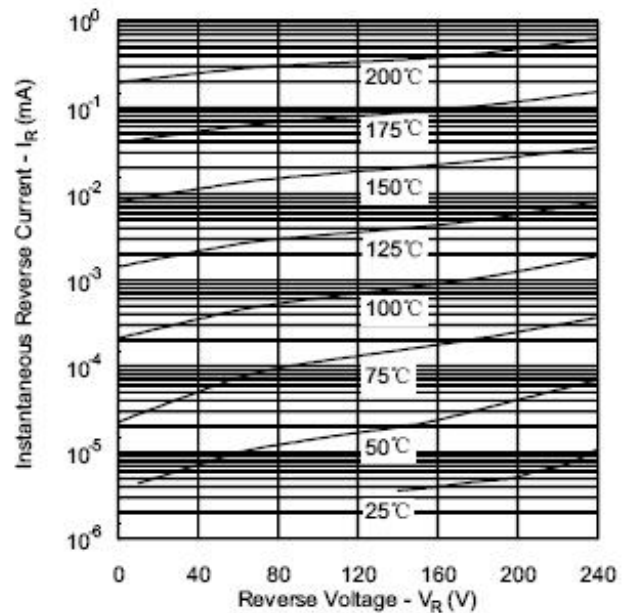
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	°C
Storage Temperature	$T_{stg}$	-	-55 to +150	°C
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	140	°C/W
Approximate Weight	wt	-	0.34	g

**Ratings and Characteristics Curves**

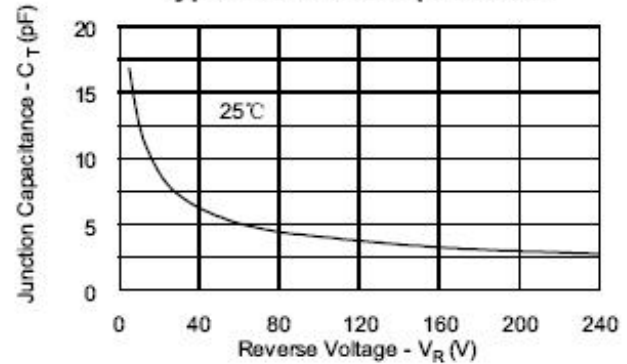
**Typical Forward Characteristics**

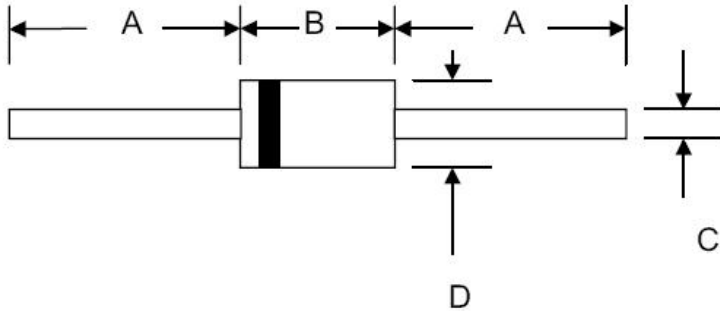


**Typical Reverse Characteristics**



**Typical Junction Capacitance**



**Mechanical Dimensions DO-41**


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	4.06	5.21	0.160	0.205
C	0.71	0.864	0.028	0.034
D	2.00	2.72	0.079	0.107

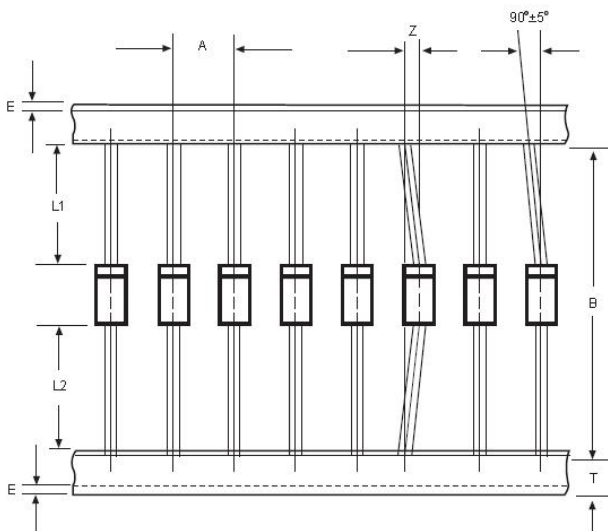
**Ordering Information**

Device	Package	Shipping
SB1200	DO-41 (Pb-Free)	5000pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**


SB1200 = Part Name

**Carrier Tape Specification DO-41**


SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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