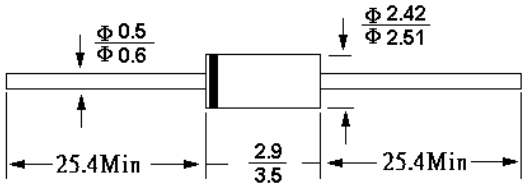
SBO20 THRU SBO120

SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 200 V

Forward Current - 1 A

R-1



Dimensions in mm

Features

- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability

Mechanical Data

- **Case:** Molded plastic, R-1
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbols	SB O20	SB O30	SB O40	SB O50	SB O60	SB O80	SB O110	SB O115	SB O120	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1									A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30									A
Maximum Forward Voltage at 1 A [1]	V_F	0.55			0.7		0.85		0.95		V
Maximum DC Reverse Current T_j = 25℃	I_R	0.2					0.1				mA
at Rated DC Blocking Voltage T_j = 100℃		10			5		-				
T_j = 125℃		-			-		2				
Typical Thermal Resistance	$R_{\theta JA}$	90									℃/W
Junction Temperature	T_j	- 55 to + 125			- 55 to + 150						℃
Storage Temperature Range	T_{stg}	- 55 to + 150									℃

[1] Pulse test: tp = 300μS, 1% duty cycle.

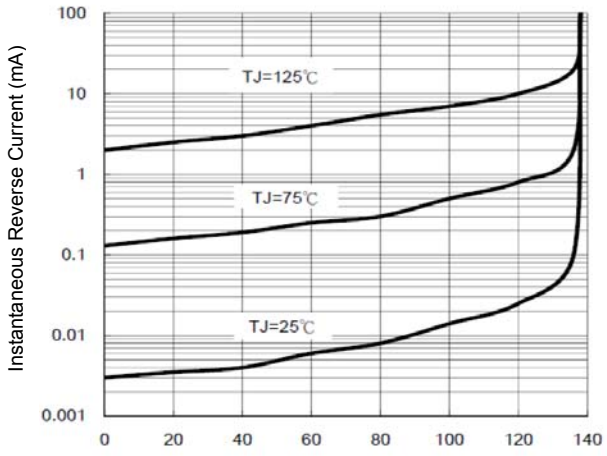


Figure 1. Typical Reverse Characteristics

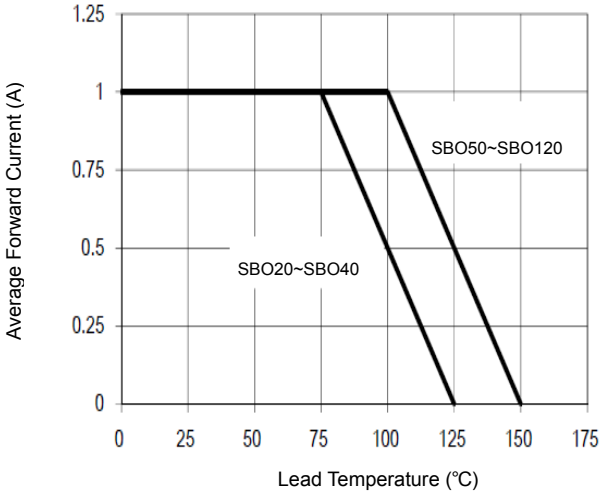


Figure 2. Forward Current Derating Curve

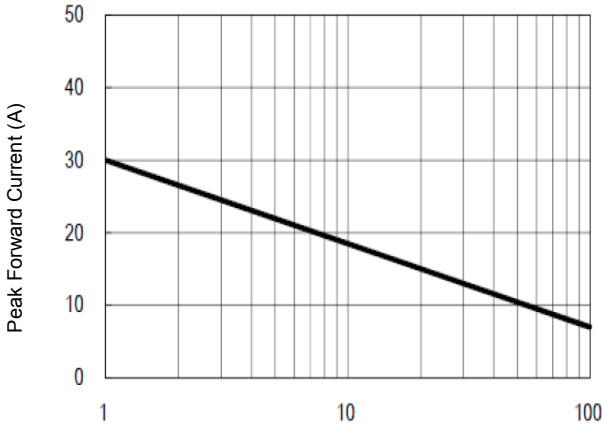


Figure 3. Maximum Non-Repetitive Forward Surge Current

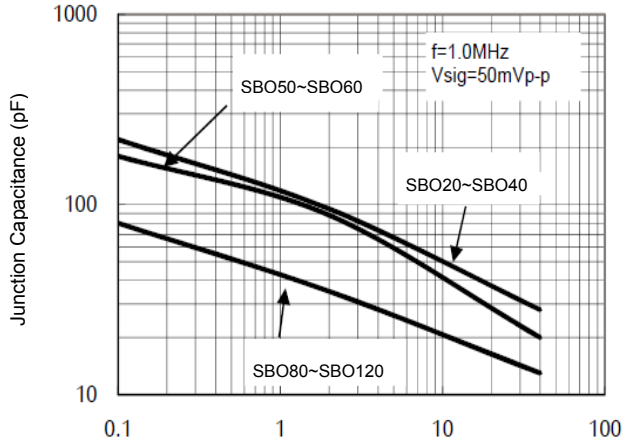


Figure 4. Typical Junction Capacitance

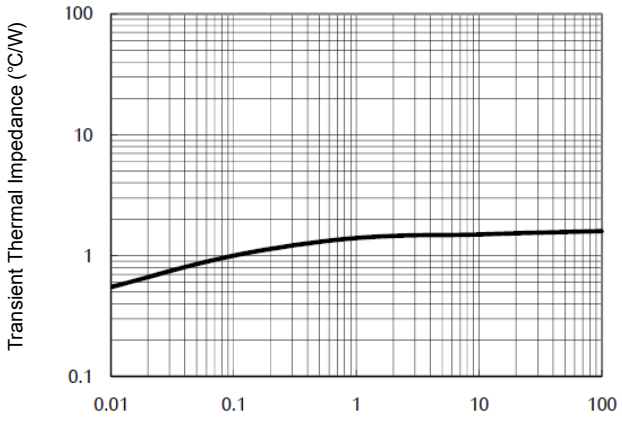


Figure 5. Typical Transient Thermal Impedance

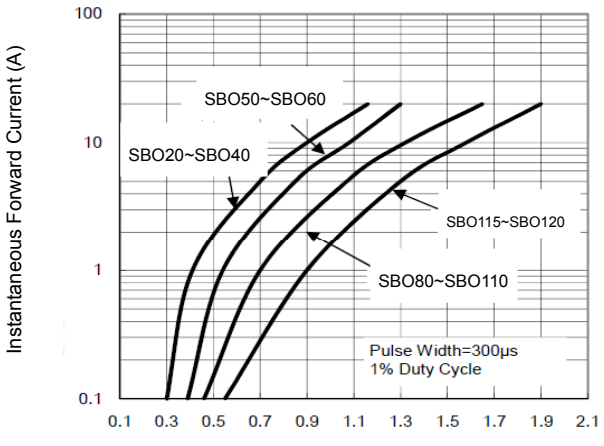


Figure 6. Typical Forward Characteristics