



Axial lead diode

Schottky barrier rectifiers diodes

SB 1820 ... SB 1840

Forward Current: 18 A

Reverse Voltage: 20 to 40 V

Features

- Max. solder temperature: 260 °C
- Plastic material has UL classification 94V-0

Mechanical Data

- Plastic case: 8 x 7,5 [mm]
- Weight approx.: 1,5 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo or 1000 pieces per reel

- 1) Valid, if leads are kept at T_A at a distance of 10 mm from case
- 2) $I_F = 5 A$, $T_j = 25 °C$
- 3) $T_A = 25 °C$
- 4) Thermal resistance from junction to lead/terminal at a distance 0 mm from case
- 5) Max. junction temperature $T_j \leq 200 °C$ in bypass mode / DC forward mode

Type	Repetitive peak reverse voltage V_{RRM} V	Surge peak reverse voltage V_{RSM} V	Max. reverse recovery time $I_F = - A$ $I_R = - A$ $I_{RR} = - A$ t_{rr} ns	Max. forward voltage $V_F^{(2)}$
SB 1820	20	20	-	0,39
SB 1830	30	30	-	0,39
SB 1840	40	40	-	0,39

Absolute Maximum Ratings		$T_A = 25 °C$, unless otherwise specified	
Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, $T_A = 50 °C$ ¹⁾	18	A
I_{FRM}	Repetitive peak forward current $f > 15 Hz$ ¹⁾	70	A
I_{FSM}	Peak forward surge current Hz half sinus-wave ³⁾	450	A
i^2t	Rating for fusing, $t < 10 ms$ ³⁾	1020	A ² s
R_{thA}	Max. thermal resistance junction to ambient ¹⁾		K/W
R_{thL}	Max. thermal resistance junction to terminals ⁴⁾	3	K/W
T_j	Operating junction temperature	- 50 ... + 150 ($T_j \leq 200 °C$ in bypass mode ⁵⁾)	°C
T_s	Storage temperature	- 50 ... + 175	°C

Characteristics		$T_A = 25 °C$, unless otherwise specified	
Symbol	Conditions	Values	Units
I_R	Maximum leakage current, $T_j = 25 °C$; $V_R = V_{RRM}$	<500	μA
	$T_j = 100 °C$; $V_R = V_{RRM}$	30 (typ.)	mA
C_j	Typical junction capacitance (at MHz and applied reverse voltage of V)	-	pF
Q_{rr}	Reverse recovery charge ($U_R = V$; $I_F = A$; $dI_F/dt = A/ms$)	-	μC
E_{RSM}	Non repetitive peak reverse avalanche energy ($I_R = mA$; $T_j = °C$; inductive load switched off)	-	mJ



