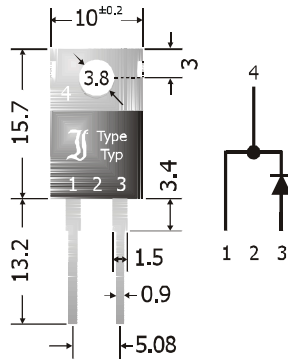


SBT1020 ... SBT10100

Schottky Barrier Rectifiers Schottky-Barrier-Gleichrichter

Version 2005-12-07



Dimensions - Maße [mm]

Nominal current Nennstrom	10 A
Repetitive peak reverse voltage Periodische Spitzensperrspannung	20...100 V
Plastic case Kunststoffgehäuse	TO-220AC
Weight approx. Gewicht ca.	1.8 g
Plastic material has UL classification 94V-0 Gehäusematerial UL94V-0 klassifiziert	
Standard packaging taped in tubes Standard Lieferform in Stangen	

Maximum ratings and Characteristics**Grenz- und Kennwerte**

Type Typ	Repetitive peak reverse voltage Periodische Spitzensperrspannung V_{RRM} [V]	Surge peak reverse voltage Stoßspitzensperrspannung V_{RSM} [V]	Forward voltage Durchlass-Spannung V_F [V] ¹⁾	
			$I_F = 5$ A	$I_F = 10$ A
SBT1020	20	20	< 0.47	< 0.54
SBT1030	30	30	< 0.47	< 0.54
SBT1040	40	40	< 0.47	< 0.54
SBT1045	45	45	< 0.47	< 0.54
SBT1050	50	50	< 0.57	< 0.64
SBT1060	60	60	< 0.57	< 0.64
SBT1090	90	90	< 0.72	< 0.79
SBT10100	100	100	< 0.72	< 0.79

Max. average forward rectified current, R-load Dauergrenzstrom in Einwegschaltung mit R-Last	$T_C = 100^\circ\text{C}$	I_{FAV}	10 A
Repetitive peak forward current Periodischer Spitzenstrom	$f > 15$ Hz	I_{FRM}	30 A ²⁾
Peak forward surge current, 50/60 Hz half sine-wave Stoßstrom für eine 50/60 Hz Sinus-Halbwellen	SBT1020... $T_A = 25^\circ\text{C}$ SBT1060	I_{FSM}	135/150 A
Peak forward surge current, 50/60 Hz half sine-wave Stoßstrom für eine 50/60 Hz Sinus-Halbwellen	SBT1090... $T_A = 25^\circ\text{C}$ SBT10100	I_{FSM}	115/125 A
Rating for fusing, $t < 10$ ms Grenzlastintegral, $t < 10$ ms	$T_A = 25^\circ\text{C}$	i^2t	80 A ² s
Junction temperature – Sperrschichttemperatur	T_j		-50...+150°C
Storage temperature – Lagerungstemperatur	T_s		-50...+175°C

1 $T_j = 25^\circ\text{C}$ 2 Max. temperature of the case $T_C = 100^\circ\text{C}$ – Max. Temperatur des Gehäuses $T_C = 100^\circ\text{C}$

Characteristics
Kennwerte

Leakage current	SBT1020 ... SBT1040	$T_j = 25^\circ\text{C}$	$V_R = V_{RRM}$	I_R	$< 500 \mu\text{A}$
Sperrstrom		$T_j = 100^\circ\text{C}$	$V_R = V_{RRM}$	I_R	$< 45 \text{ mA}$
Leakage current	SBT1045 ... SBT10100	$T_j = 25^\circ\text{C}$	$V_R = V_{RRM}$	I_R	$< 300 \mu\text{A}$
Sperrstrom		$T_j = 100^\circ\text{C}$	$V_R = V_{RRM}$	I_R	$< 25 \text{ mA}$
Thermal resistance junction to case				R_{thc}	$< 3 \text{ K/W}$
Wärmewiderstand Sperrschicht – Gehäuse					

