



# SB10-05A2, SB10-05A3

Schottky Barrier Diode

## 50V, 1.0A Rectifier

### Applications

- High frequency rectification (switching regulators, converters, choppers).

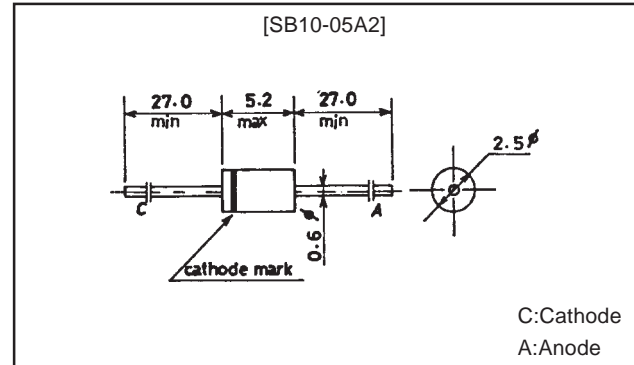
### Features

- Low forward voltage ( $V_F$  max=0.58V).
- Fast reverse recovery time ( $t_{rr}$  max=30ns).
- Low switching noise.
- Average rectified current ( $I_O$ =1.0A).

### Package Dimensions

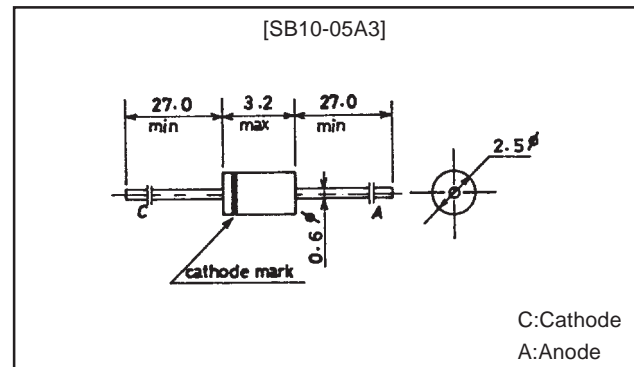
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1208



unit:mm

1209



### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		50	V
Nonrepetitive Peak Reverse Surge Voltage	$V_{RSM}$		55	V
Average Rectified Current	$I_O$	SB10-05A2 50Hz, resistive load, sine wave, $T_a=33^\circ\text{C}$ (L=8mm, 10×10mm <sup>2</sup> print land)	1.0	A
		SB10-05A3 50Hz, resistive load, sine wave, $T_a=29^\circ\text{C}$ (L=3mm, 5×5mm <sup>2</sup> print land)	1.0	A
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	25	A
Junction Temperature	$T_j$		125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-40 to +125	$^\circ\text{C}$

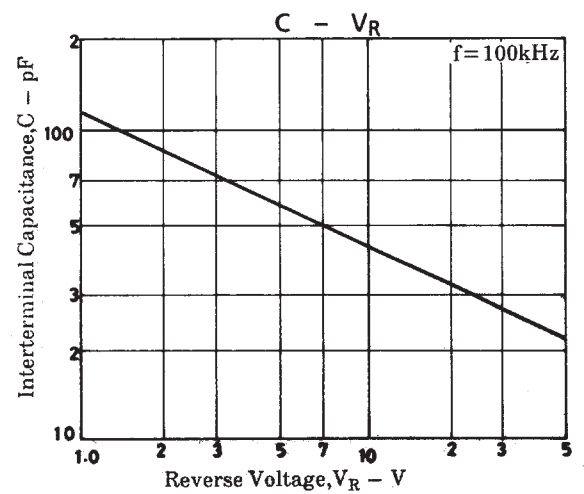
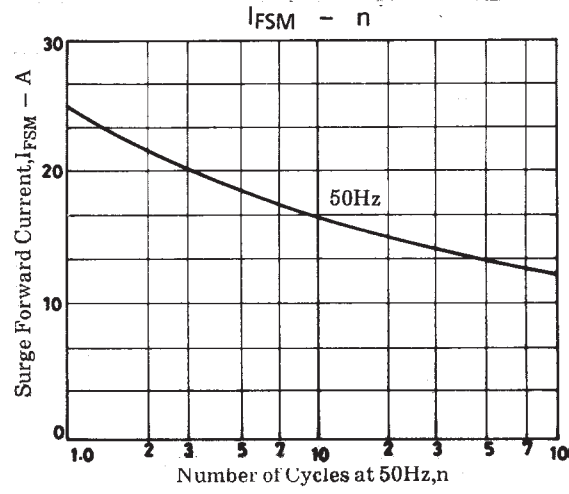
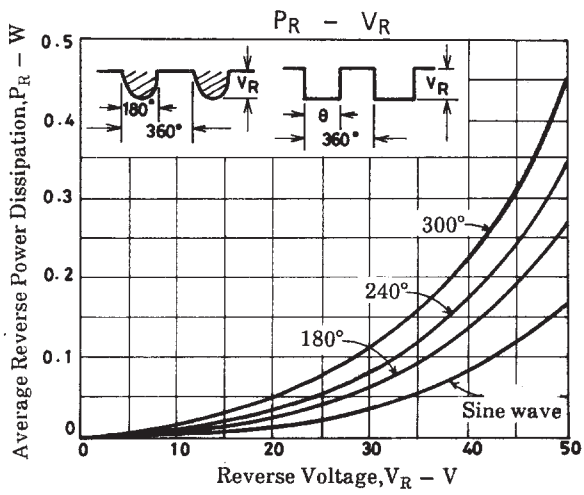
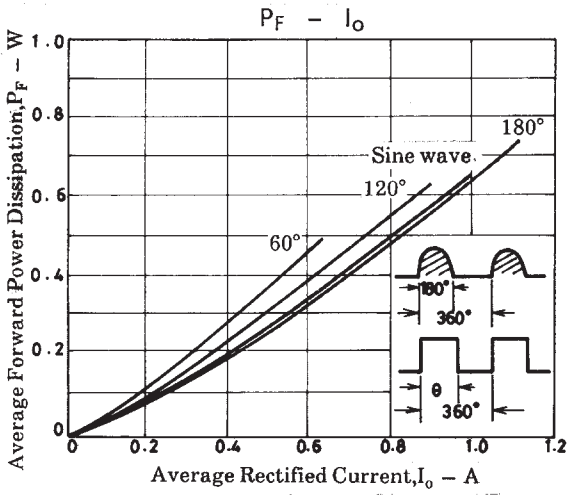
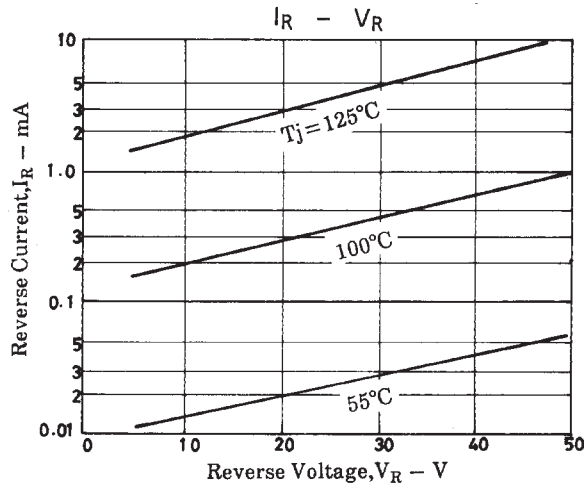
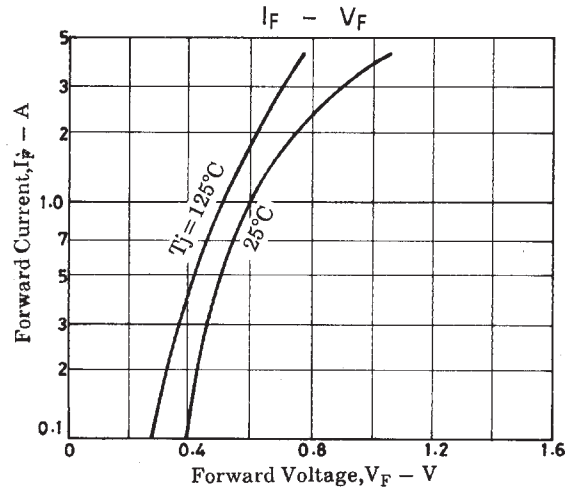
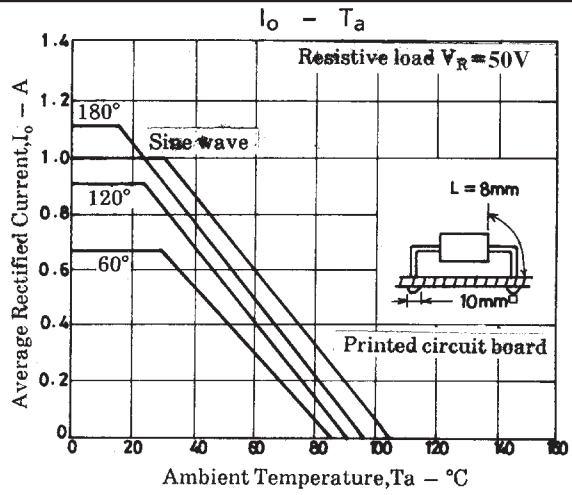
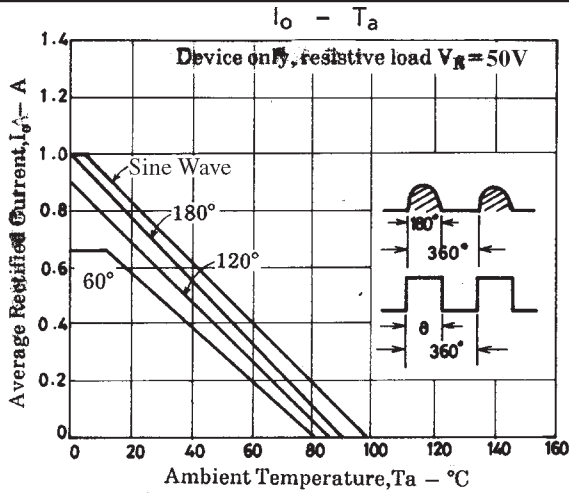
#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Voltage	$V_F$	$I_F=1.0\text{A}$			0.58	V
Reverse Current	$I_R$	$V_R=50\text{V}$			1.0	mA
Reverse Recovery Time	$t_{rr}$	$I_{FM}=1\text{A}$ , $-dI_F/dt=50\text{A}/\mu\text{s}$			30	ns
Thermal Resistance (Junction-Ambient)	$R_{th(j-a)}$	No fin, device only			140	$^\circ\text{C}/\text{W}$

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