



**THE DATASHEET OF
SB10-05A3**





SB10-05A2, SB10-05A3

Schottky Barrier Diode

50V, 1.0A Rectifier

Applications

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

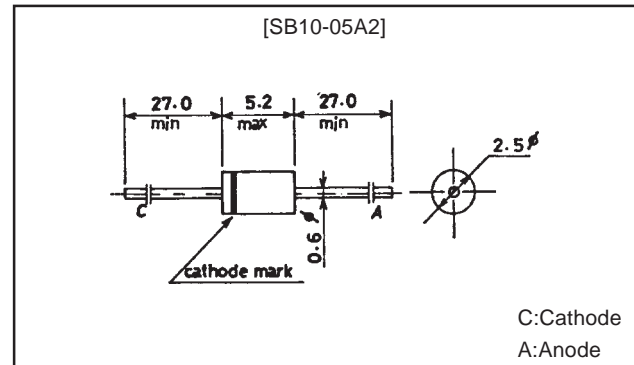
Features

- 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

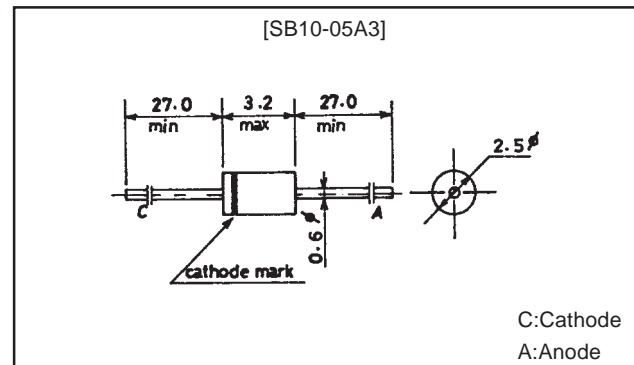
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1208



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 ² print land)	1.0	A
		SB10-05A3 50Hz, resistive load, sine wave, $T_a=29^\circ\text{C}$ (L=3mm, 5×5mm ² 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 $T_a = 25^\circ\text{C}$

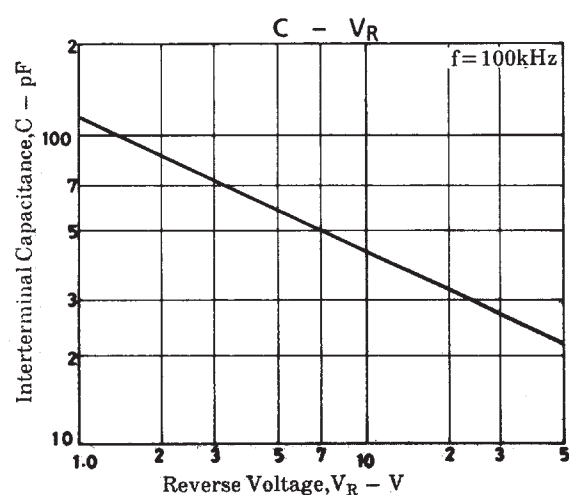
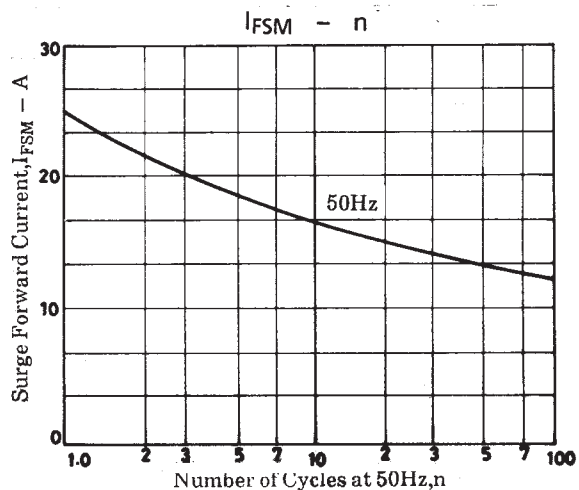
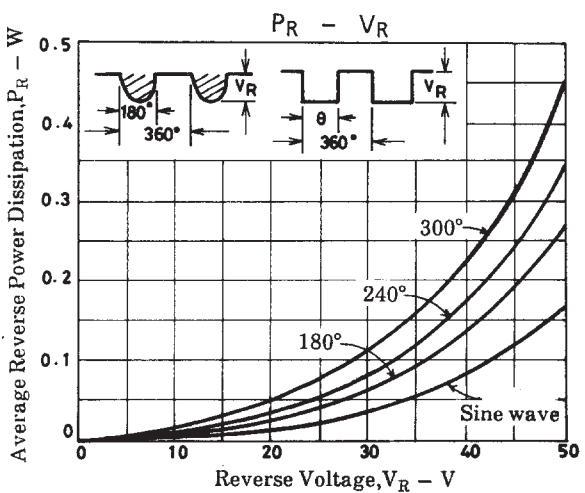
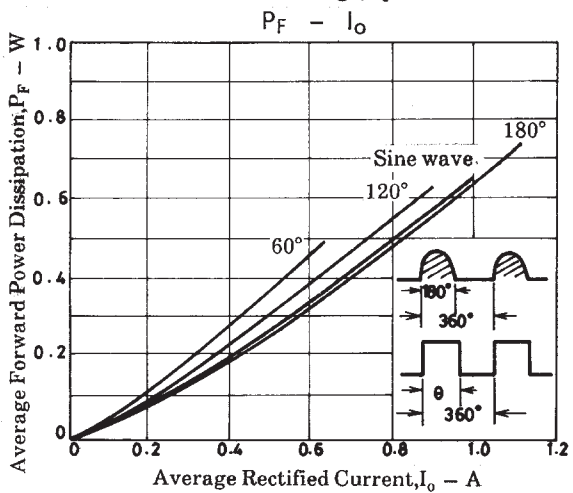
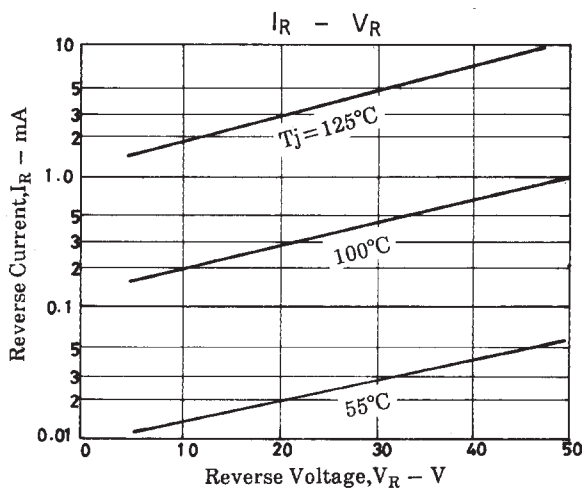
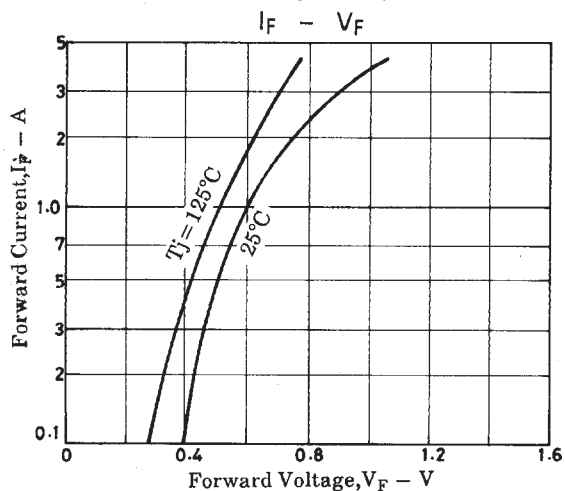
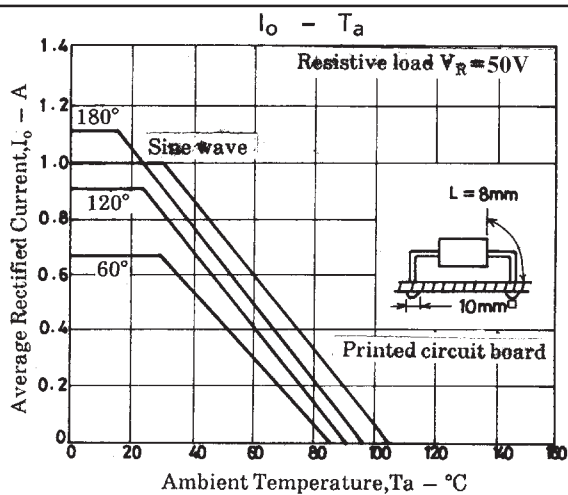
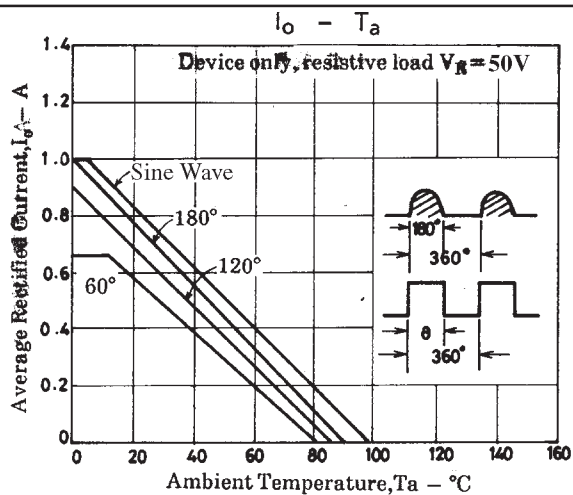
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Voltage	V_F	$I_F=1.0\text{A}$			0.58	V
Reverse Current	I_R	$V_R=50\text{V}$			1.0	mA
Reverse Recovery Time	t_{rr}	$I_{FM}=1\text{A}$, $-dI_F/dt=50\text{A}/\mu\text{s}$			30	ns
Thermal Resistance (Junction-Ambient)	$R_{th(j-a)}$	No fin,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

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SB10-05A2, SB10-05A3



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