



# SANYO Semiconductors

## DATA SHEET

# SB10-05P — Schottky Barrier Diode

## 50V, 1A Rectifier

### Applications

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

### Features

- Low forward voltage ( $V_F$  max=0.55V).
- Short reverse recovery time ( $t_{rr}$  max=10ns).
- Low switching noise.
- Low leakage current and high reliability due to reliable planar structure.

### 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 Output Current	$I_O$		1	A
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	10	A
Junction Temperature	$T_J$		-55 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=300\mu\text{A}$	50			V
Forward Voltage	$V_F$	$I_F=1\text{A}$			0.55	V
Reverse Current	$I_R$	$V_R=25\text{V}$			80	$\mu\text{A}$
Interterminal Capacitance	C	$V_R=10\text{V}$ , $f=1\text{MHz}$		52		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , See specified Test Circuit			10	ns

Marking : SA

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90507SB TI IM TC-00000880 / 43098HA(KT)/92995GI(KOTO)/1169TA/6177AT;TS No.2154-1/3

# SB10-05P

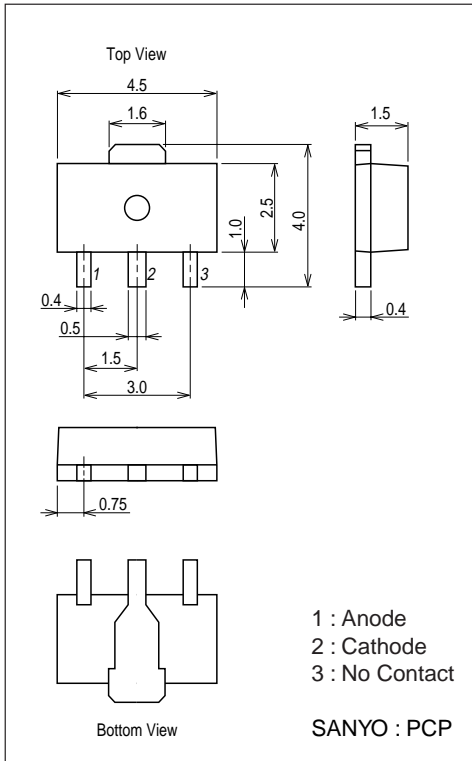
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Thermal Resistance	Rthj-a (1)			300		°C / W
	Rthj-a (2)	Mounted on a ceramic board (250mm <sup>2</sup> X0.8mm)		110		°C / W

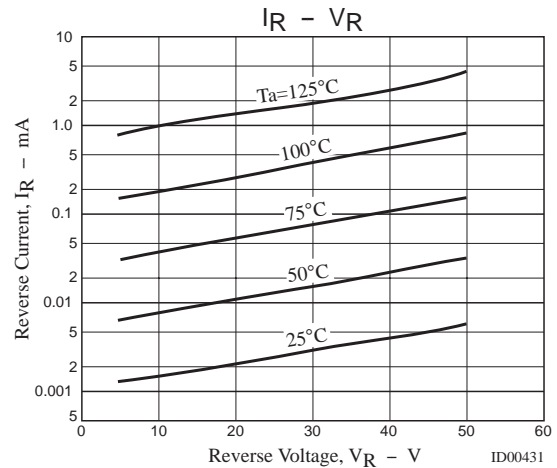
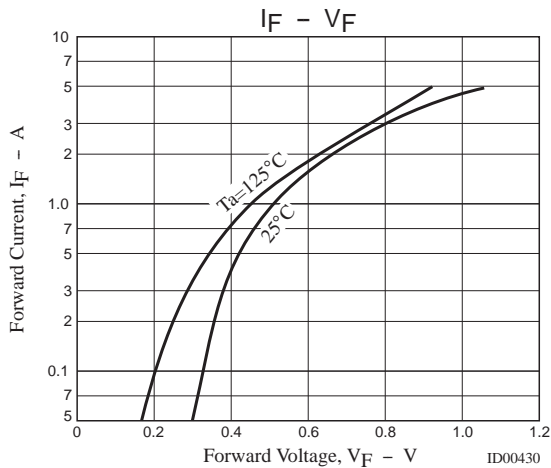
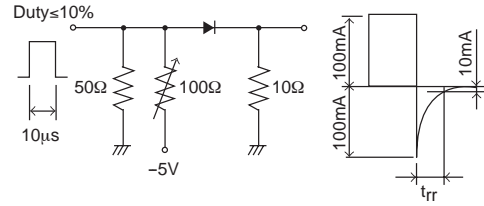
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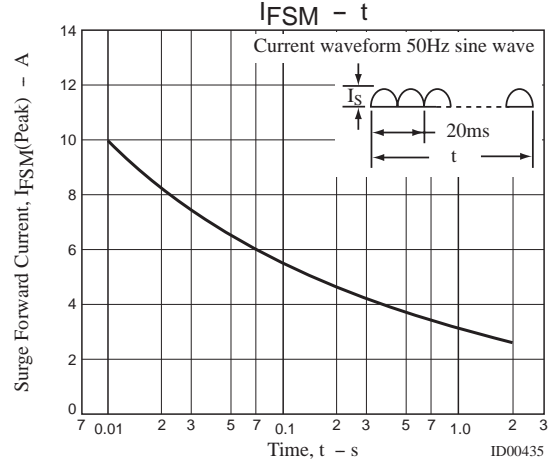
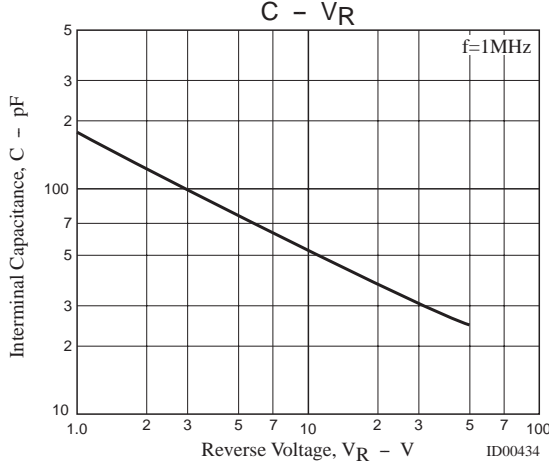
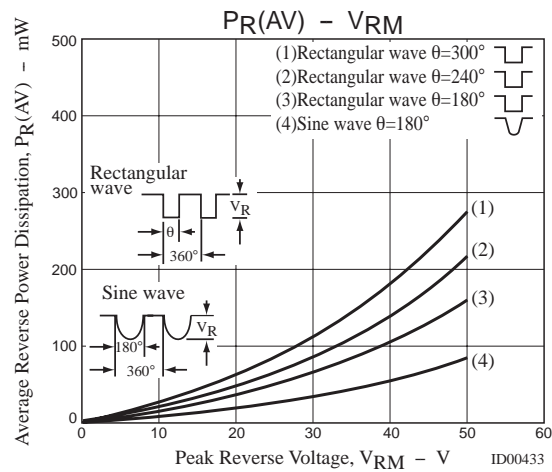
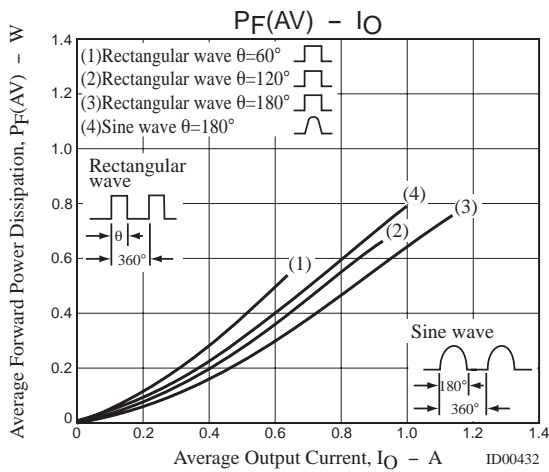
unit : mm (typ)

7007A-001



## trr Test Circuit





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