



# SB05-05NP

Shottky Barrier Diode

## 50V, 500mA Rectifier

### Applications

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

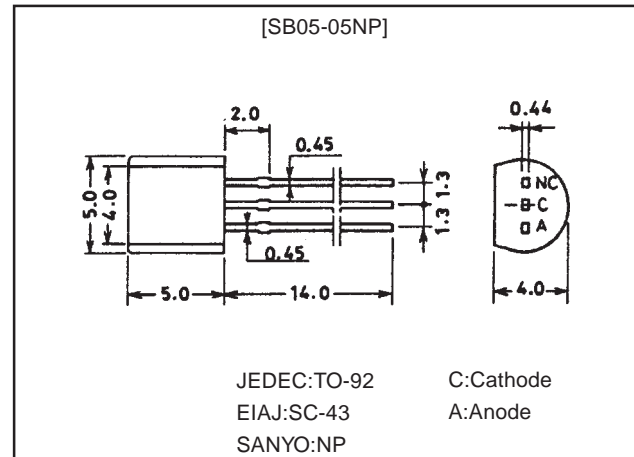
### Features

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

### Package Dimensions

unit:mm

1157



### Specifications

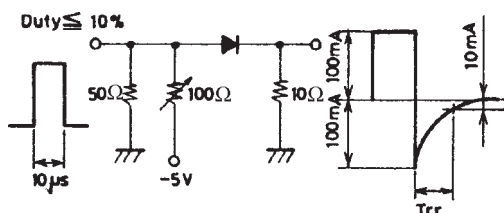
#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

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	$I_O$	50Hz, resistive load, $T_a=53^\circ\text{C}$	500	mA
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1cycle	5	A
Junction Temperature	$T_j$		-55 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

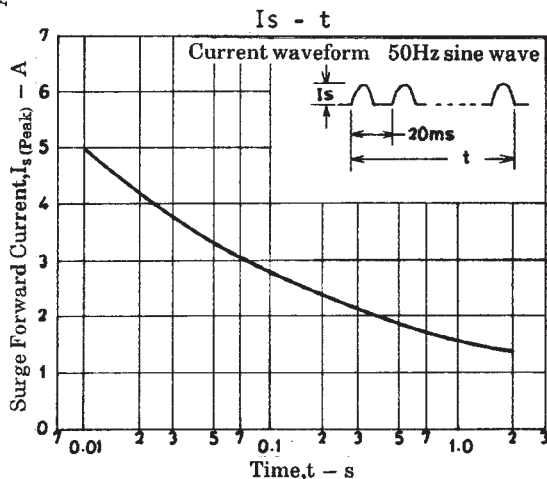
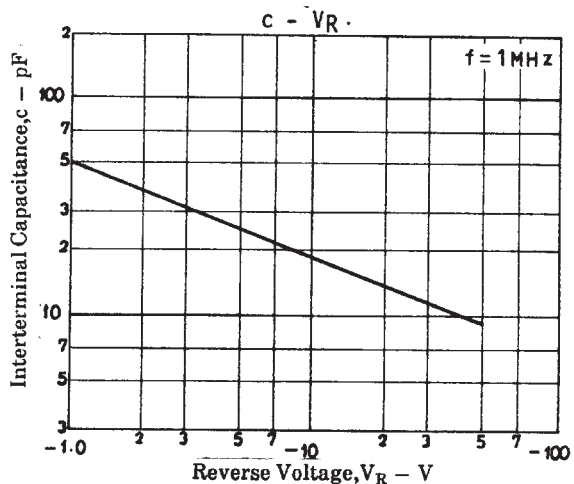
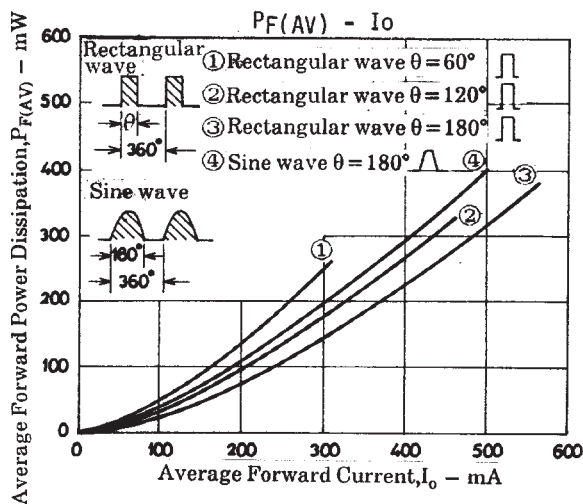
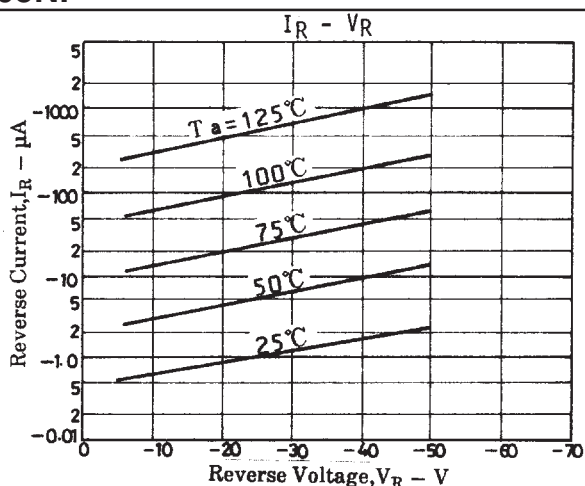
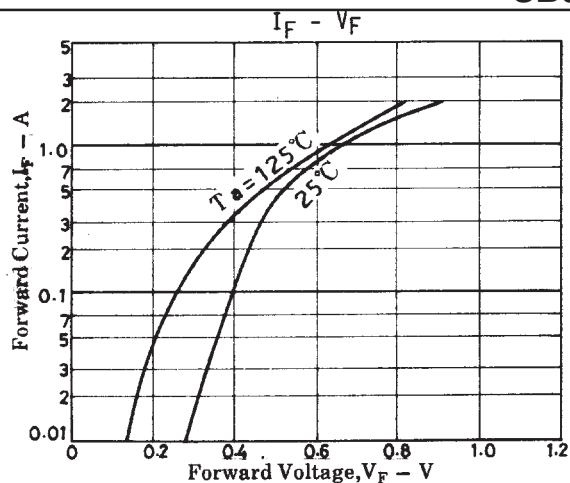
#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=-200\mu\text{A}$	-50			V
Forward Voltage	$V_F$	$I_F=500\text{mA}$			0.55	V
Reverse Current	$I_R$	$V_R=-25\text{V}$			-50	$\mu\text{A}$
Interterminal Capacitance	C	$V_R=-10\text{V}$ , $f=1\text{MHz}$		18		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , See specified Test Circuit			10	ns
Thermal Resistance	$R_{thj-a}$			165		$^\circ\text{C/W}$

#### $t_{rr}$ Test Circuit



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