

**SB05-09**

Shottky Barrier Diode

**90V, 500mA Rectifier****Applications**

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

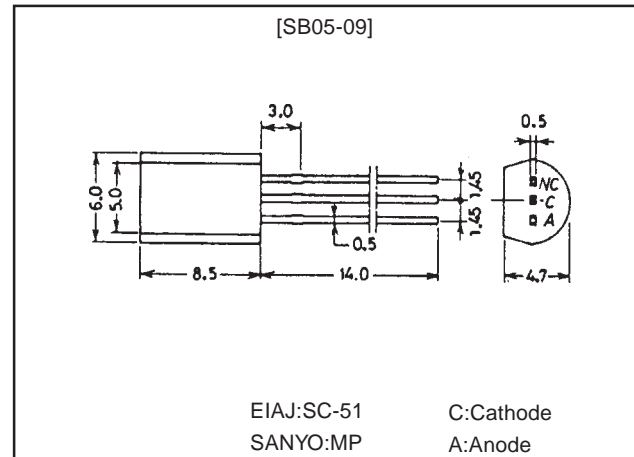
**Features**

- Low forward voltage ( $V_F$  max=0.7V).
- 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

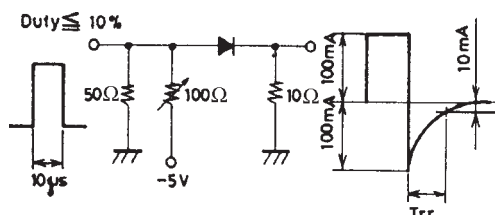
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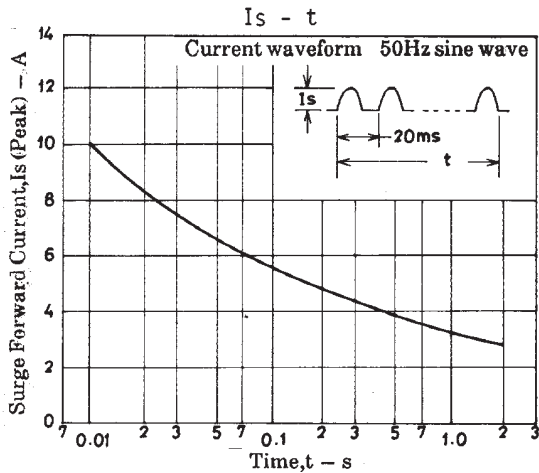
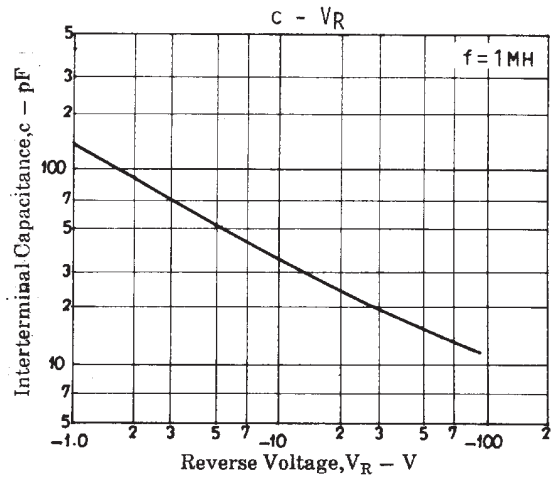
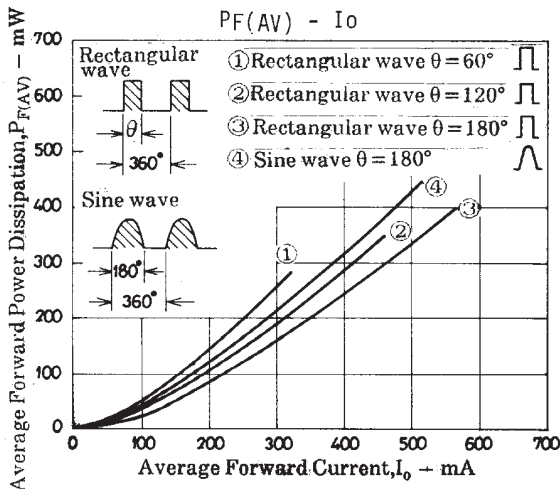
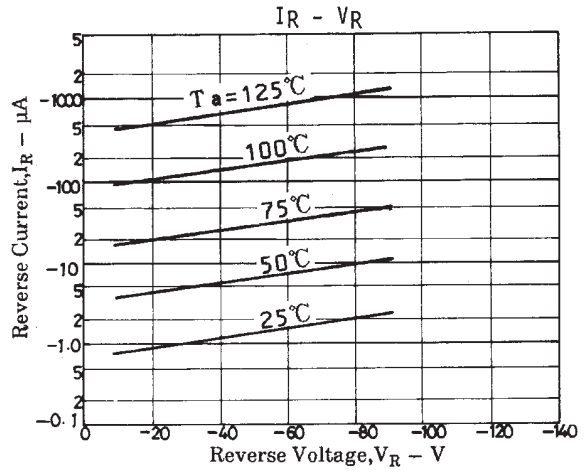
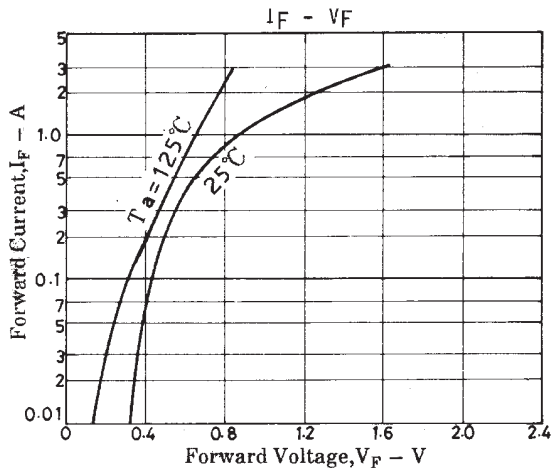
**Specifications****Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$** 

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		-90	V
Nonrepetitive Peak Reverse Surge Voltage	$V_{RSM}$		-95	V
Average Output Current	$I_O$	50Hz, resistive load, $T_a=60^\circ\text{C}$	500	mA
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1cycle	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	$V_R$	$I_R=-300\mu\text{A}$	-90			V
Forward Voltage	$V_F$	$I_F=500\text{mA}$			0.7	V
Reverse Current	$I_R$	$V_R=-45\text{V}$			-80	$\mu\text{A}$
Interterminal Capacitance	C	$V_R=-10\text{V}$ , $f=1\text{MHz}$		34		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , See specified Test Circuit			10	ns
Thermal Resistance	$R_{thj-a}$			110		$^\circ\text{C/W}$

 **$t_{rr}$  Test Circuit**



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