



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## SB05-05C — Schottky 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.

### 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	$I_O$		500	mA
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	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	$V_R$	$I_R=200\mu\text{A}$ , $T_J=25^\circ\text{C}$	50			V
Forward Voltage	$V_F$	$I_F=500\text{mA}$ , $T_J=25^\circ\text{C}$			0.55	V
Reverse Current	$I_R$	$V_R=25\text{V}$ , $T_J=25^\circ\text{C}$			50	$\mu\text{A}$
Interterminal Capacitance	$C$	$V_R=10\text{V}$ , $f=1\text{MHz}$		17		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , $T_J=25^\circ\text{C}$ , See specified Test Circuit.			10	ns
Thermal Resistance	Rthj-a(1)			420		$^\circ\text{C} / \text{W}$
	Rthj-a(2)	Mounted in Cu-foiled area of 16mm <sup>2</sup> X0.2mm on glass epoxy board		330		$^\circ\text{C} / \text{W}$

Marking : B

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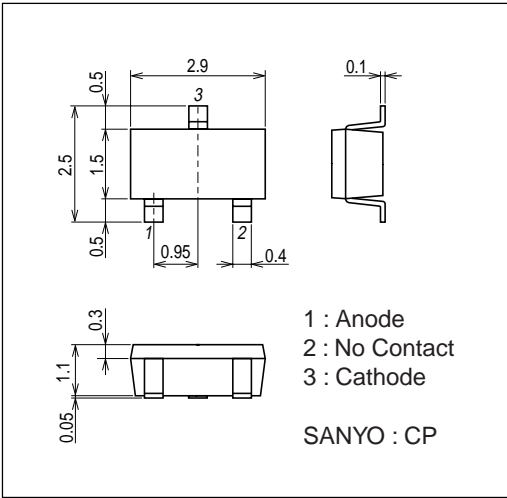
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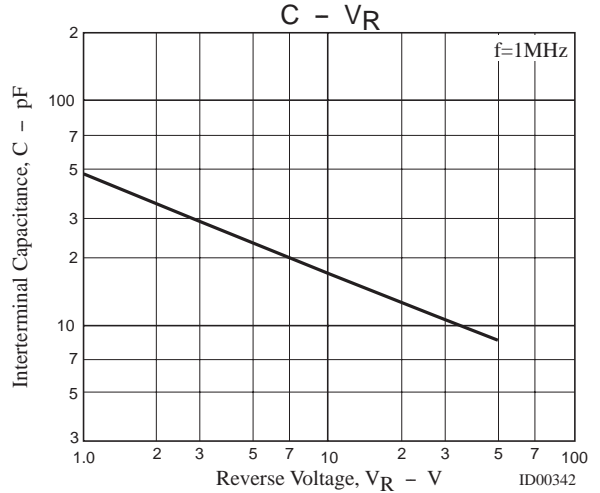
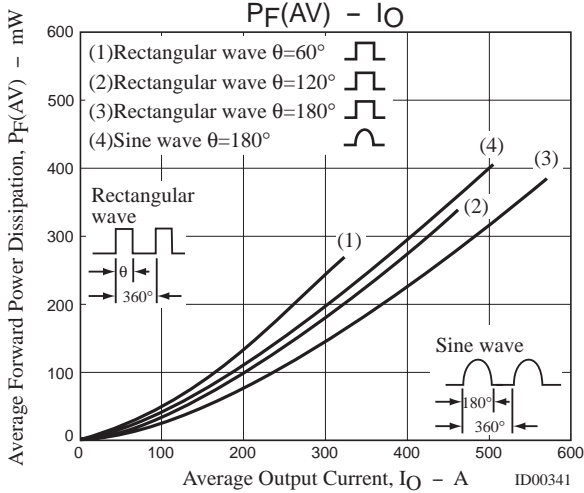
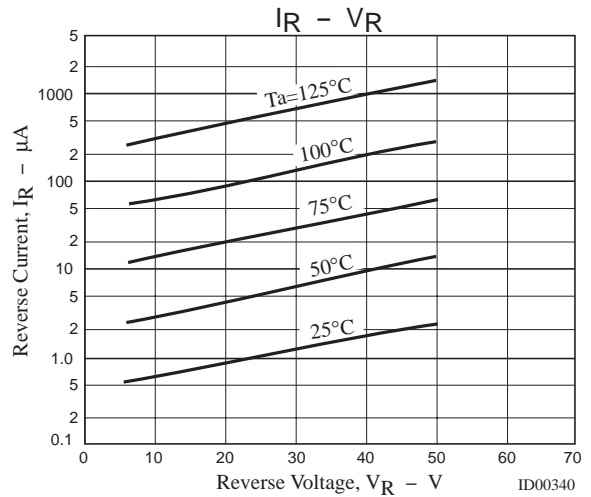
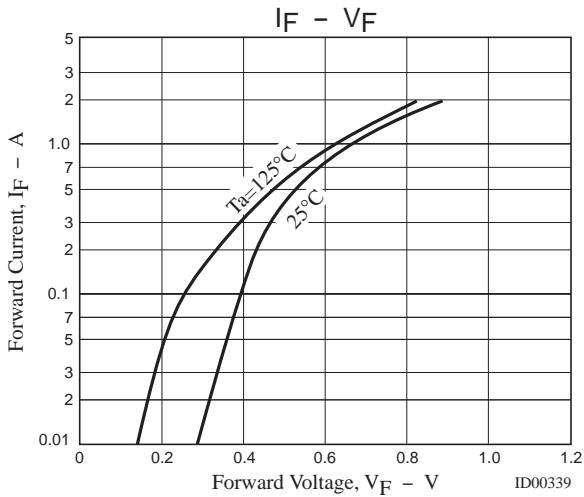
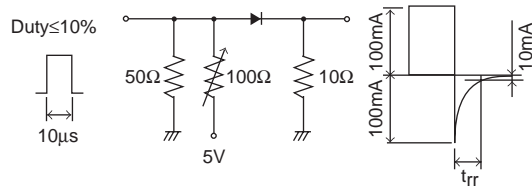
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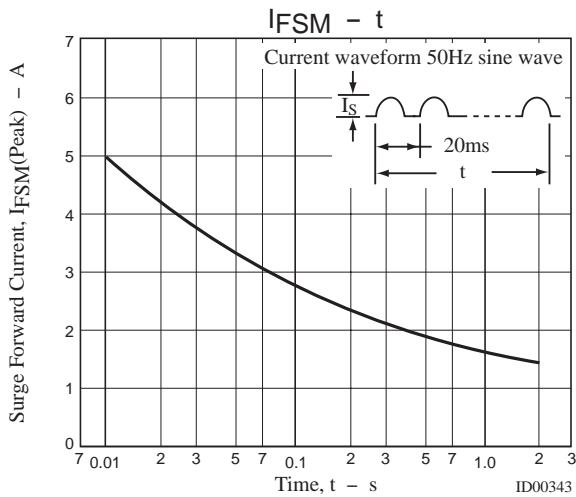
## Package Dimensions

unit : mm  
7013A-004



## t<sub>rr</sub> Test Circuit





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