



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	μA
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 ² X0.2mm on glass epoxy board		330		$^\circ\text{C} / \text{W}$

Marking : B

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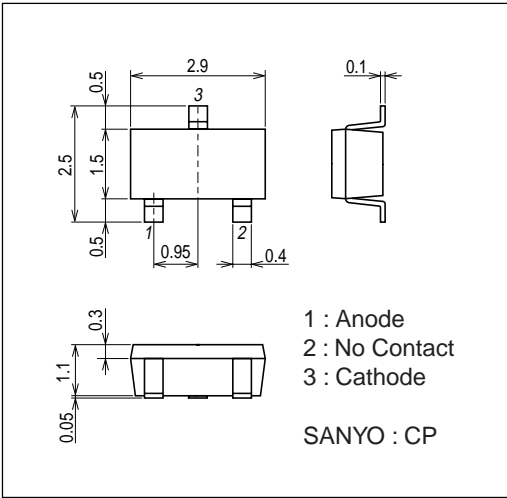
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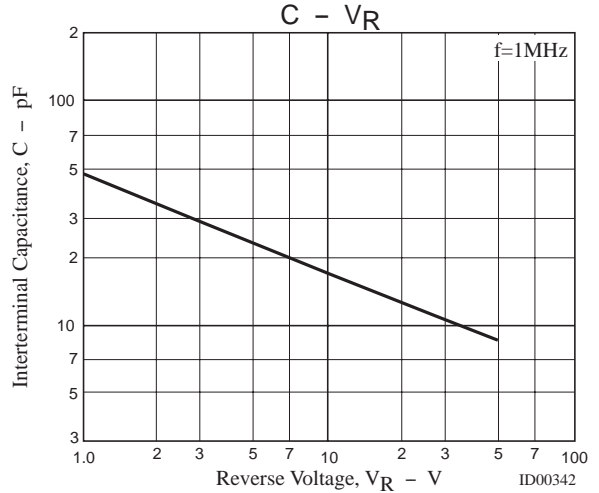
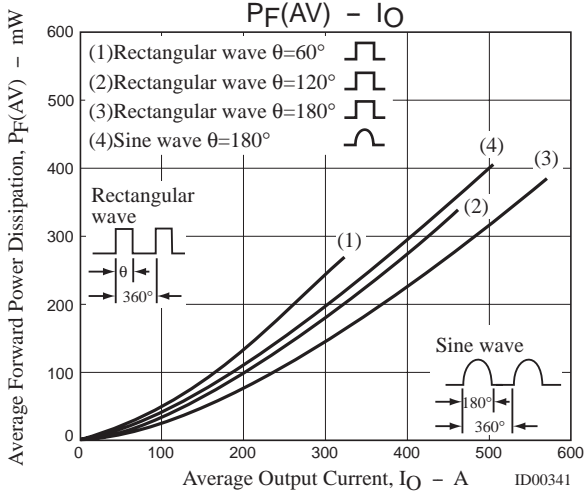
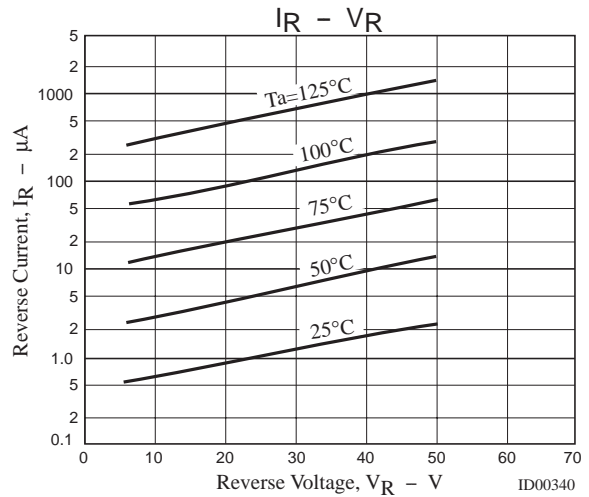
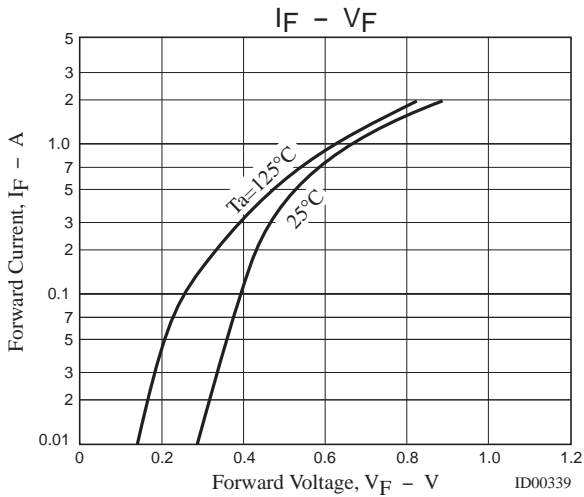
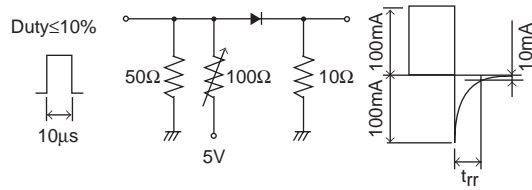
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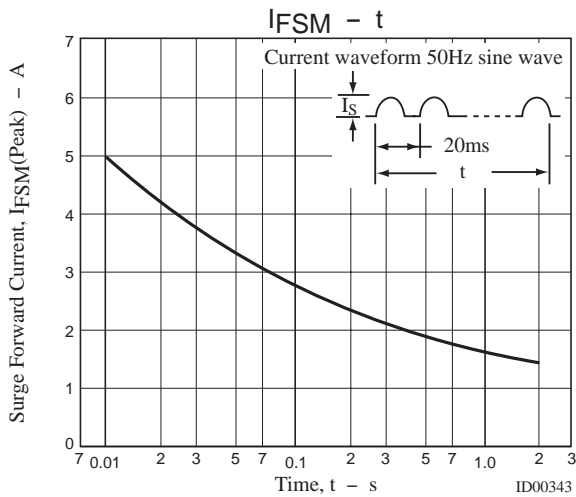
Package Dimensions

unit : mm
7013A-004



t_{rr} Test Circuit





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