

**SBE002****50V, 1A Rectifier**

An ON Semiconductor Company

**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.
- Ultrasmall package, permitting SBE002-applied sets to be compact and slim (mounting height 0.9mm).
- Large allowable power dissipation.

**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  $T_a = 25^\circ\text{C}$ 

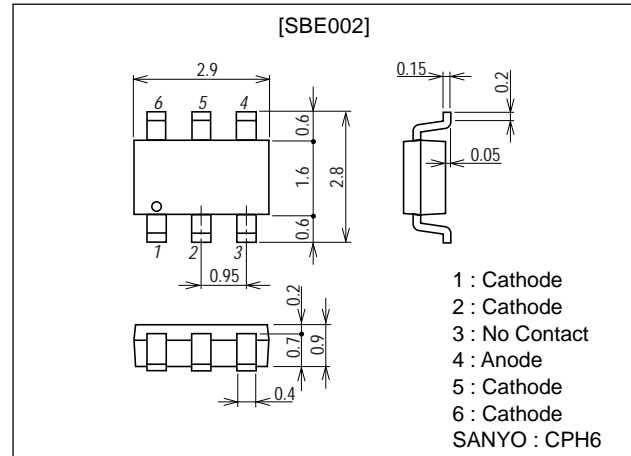
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=300\mu\text{A}$	50			V
Forward Voltage	$V_F$	$I_F=1\text{A}$			0.55	V
Reverse Current	$I_R$	$V_R=25\text{V}$			80	$\mu\text{A}$
Interterminal Capacitance	C	$V_R=10\text{V}$ , $f=1\text{MHz}$		52		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , See specified Test Circuit.			10	ns
Thermal Resistance	$R_{th-j-a}$	Mounted on a ceramic board (600mm <sup>2</sup> ×0.8mm)		110		$^\circ\text{C/W}$

Marking : SD

**Package Dimensions**

unit:mm

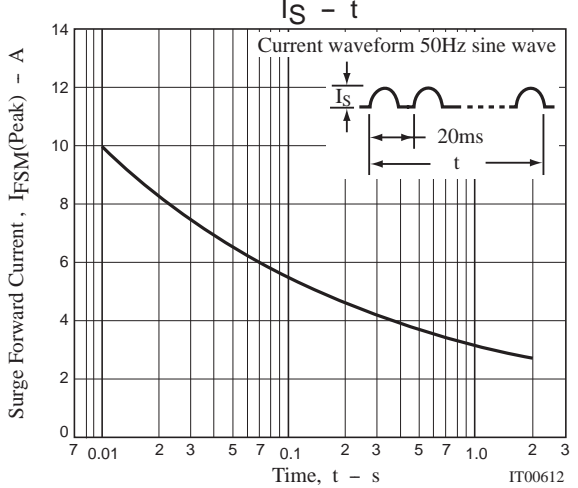
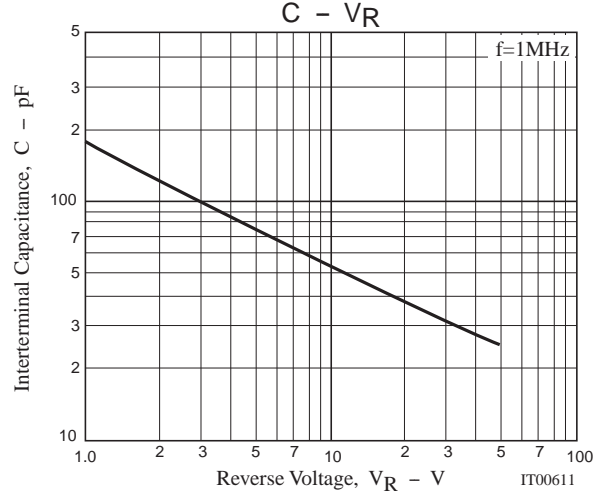
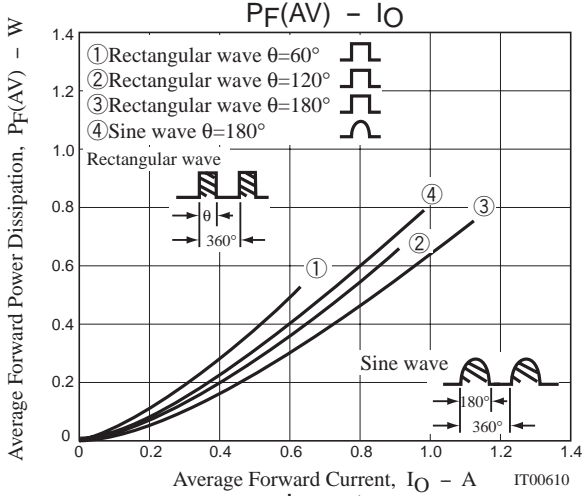
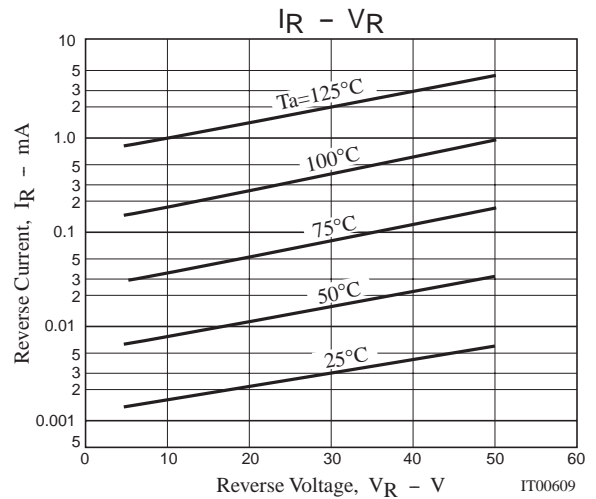
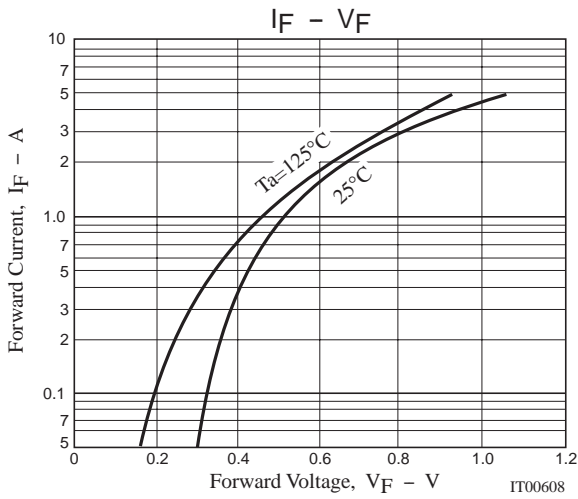
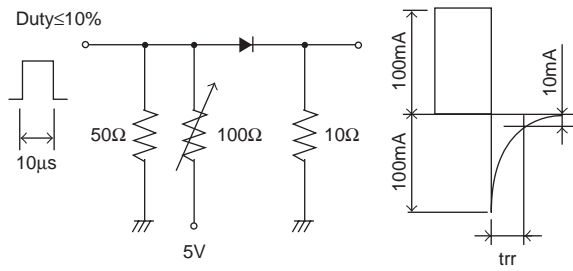
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trr Specified Test Circuit



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