# **SBE002**

# **Schottky Barrier Diode** 50V, 1A, Low IR, Single CPH6



### **Applications**

• High frequency rectification (switching regulators, converters, choppers)

### **Features**

- Low forward voltage (VF max=0.55V) • Halogen free compliance
- Fast reverse recovery time (trr 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**

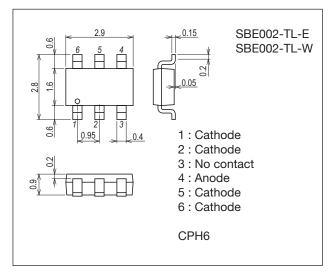
#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		50	V
Nonrepetitive Peak Reverse Surge Voltage	VRSM		55	V
Average Output Current	lo		1	А
Surge Forward Current	IFSM	50Hz sine wave, 1 cycle	10	А
Junction Temperature	Тј		-55 to +125	°C
Storage Temperature	Tstg		-55 to +125	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected

#### **Package Dimensions**

unit : mm (typ) 7018A-012



#### **Product & Package Information** • Package

- : CPH6
  - : SC-74, SOT-26, SOT-457
- Minimum Packing Quantity : 3,000 pcs./reel

Packing Type: TL

• JEITA, JEDEC







#### **Electrical Connection**

2 3

#### **ORDERING INFORMATION**

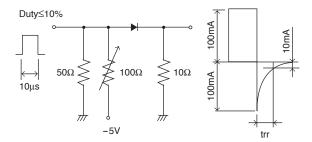
See detailed ordering and shipping information on page 2 of this data sheet.

#### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Linit
			min	typ	max	Unit
Reverse Voltage	VR	I <sub>R</sub> =300μA	50			V
Forward Voltage	VF	IF=1A			0.55	V
Reverse Current	IR	V <sub>R</sub> =25V			80	μΑ
Interterminal Capacitance	С	V <sub>R</sub> =10V, f=1MHz		52		pF
Reverse Recovery Time	t <sub>rr</sub>	IF=IR=100mA, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)	When mounted on ceramic substrate (600mm <sup>2</sup> ×0.8mm)		110		°C / W

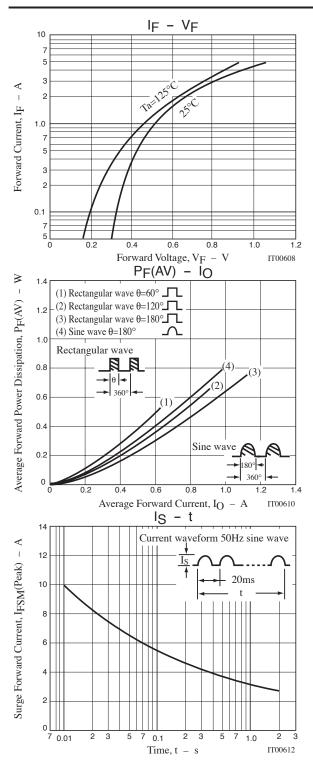
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

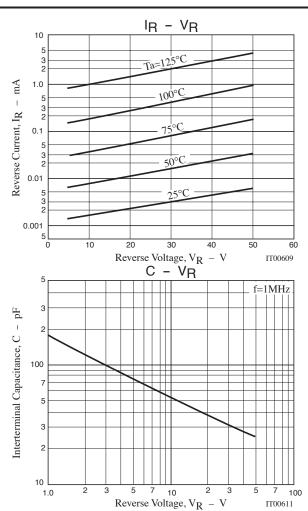
#### trr Test Cicuit



#### **Ordering Information**

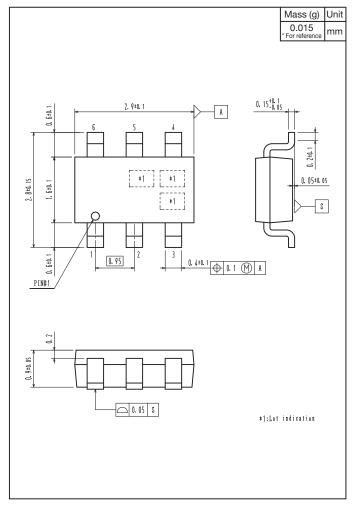
Device	Package	Shipping	memo	
SBE002-TL-E	CPH6	3,000pcs./reel	Pb-Free	
SBE002-TL-W CPH6		3,000pcs./reel	Pb-Free and Halogen Free	



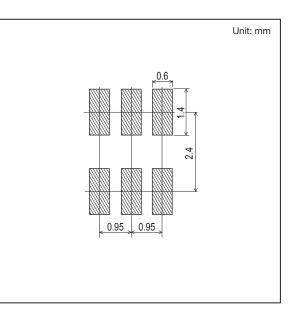


#### Outline Drawing

SBE002-TL-E, SBE002-TL-W



#### Land Pattern Example



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