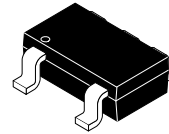


# Schottky Barrier Diode

30 V, 0.5 A, Low  $I_R$

## SBE805



CPH5  
CASE 318BC

### Features

- Low Forward Voltage ( $V_F$  Max = 0.55 V)
- Fast Reverse Recovery Time ( $t_{rr}$  Max = 10 ns)
- Composite Type with 2 Diodes Contained in the CPH Package Currently in Use, Improving the Mounting Efficiency Greatly
- The Chips Incorporated are Both Equivalent to the SB05-03C
- This Device is Pb-Free and Halide Free

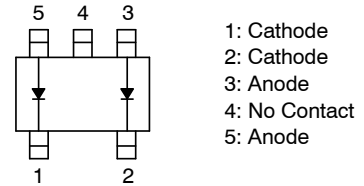
### Specifications

**ABSOLUTE MAXIMUM RATINGS** at  $T_a = 25^\circ\text{C}$  (Value per element)

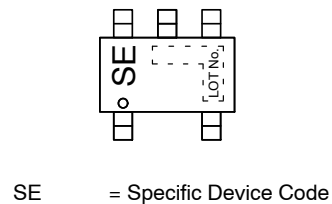
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	–	30	V
Nonrepetitive Peak Reverse Surge Voltage	$V_{RSM}$	–	35	V
Average Output Current	$I_O$	–	500	mA
Surge Forward Current	$I_{FSM}$	50 Hz sine wave, 1 cycle	5	A
Junction Temperature	$T_j$	–	– 55 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	–	– 55 to +125	$^\circ\text{C}$

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.

### ELECTRICAL CONNECTION



### MARKING DIAGRAM



### ORDERING INFORMATION

Device	Package	Shipping <sup>†</sup>
SBE805-TL-W	CPH-5 (Pb-Free and Halogen Free)	3000 / Tape & Reel

<sup>†</sup>For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, [BRD8011/D](#).

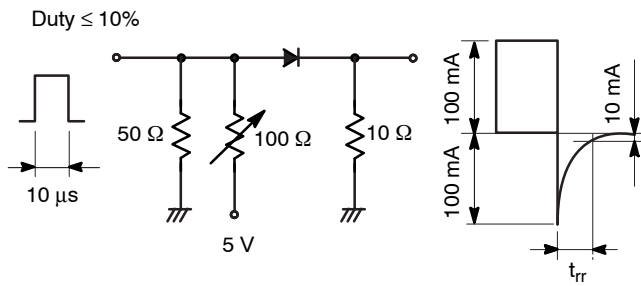
# SBE805

## ELECTRICAL CHARACTERISTICS at Ta = 25°C (Value per element)

Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Reverse Voltage	$V_R$	$I_R = 150 \mu\text{A}$	30	–	–	V
Forward Voltage	$V_F$	$I_F = 500 \text{ mA}$	–	–	0.55	V
Reverse Current	$I_R$	$V_R = 15 \text{ V}$	–	–	30	$\mu\text{A}$
Interterminal Capacitance	$C$	$V_R = 10 \text{ V}, f = 1 \text{ MHz}$	–	16	–	pF
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 100 \text{ mA}$ , See specified Test Circuit.	–	–	10	ns
Thermal Resistance	$R_{th(j-a)}$		–	300	–	$^{\circ}\text{C/W}$

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.

### $t_{rr}$ Test Circuit



TYPICAL CHARACTERISTICS

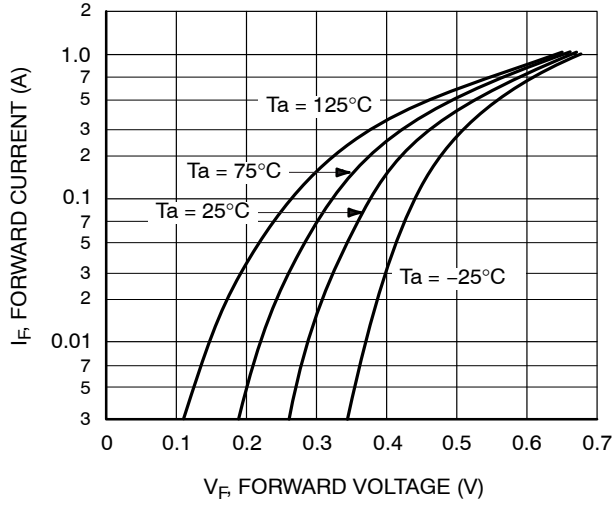


Figure 1.  $I_F - V_F$

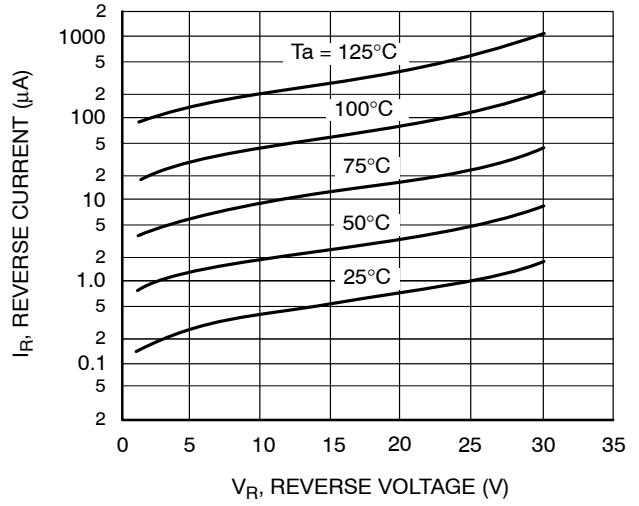


Figure 2.  $I_R - V_R$

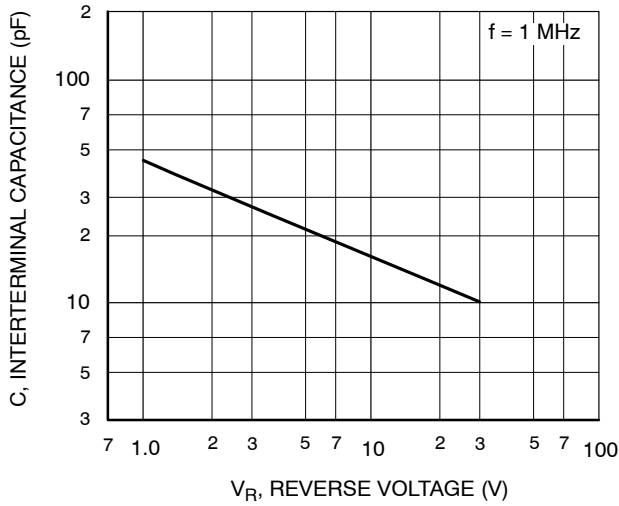


Figure 3.  $C - V_R$

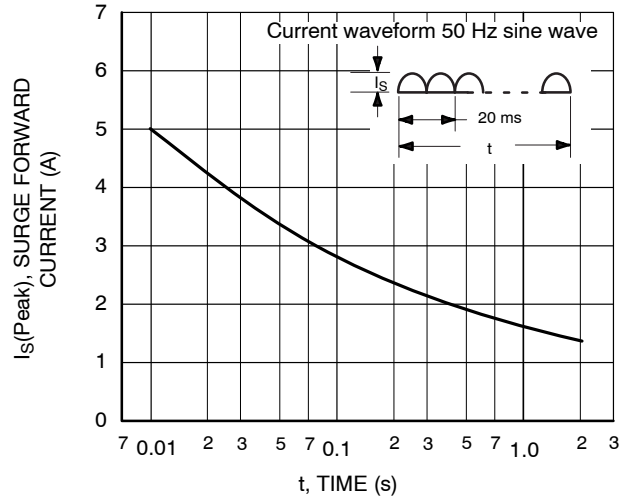
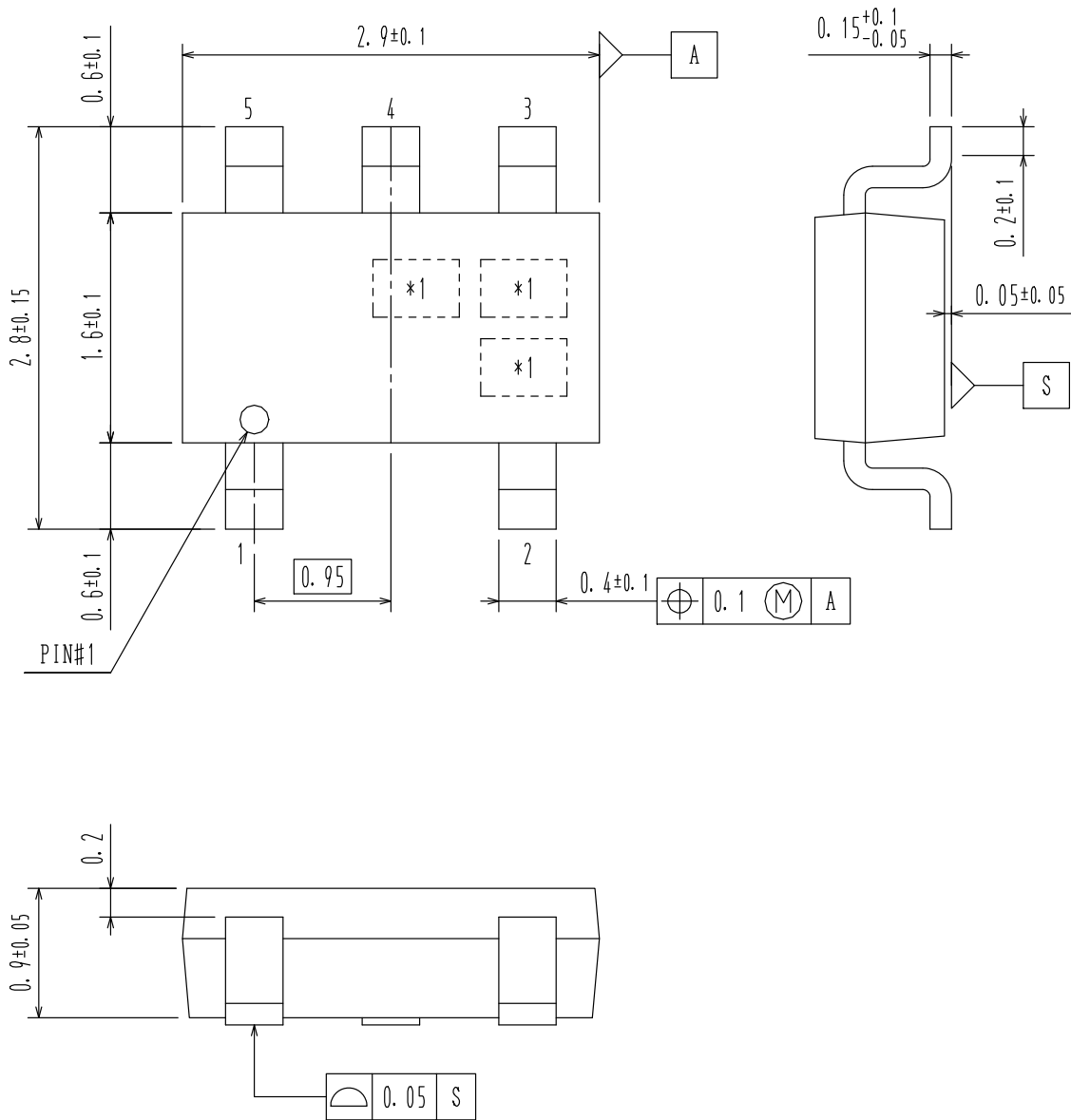


Figure 4.  $I_S - t$

**MECHANICAL CASE OUTLINE**  
**PACKAGE DIMENSIONS**

**CPH5**  
**CASE 318BC**  
**ISSUE O**

DATE 30 NOV 2011



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