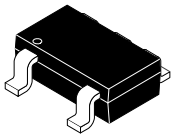
Schottky Barrier Diode

30 V, 0.5 A, Low I_R

SBE805



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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

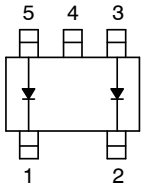
Specifications

ABSOLUTE MAXIMUM RATINGS at Ta = 25°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	°C
Storage Temperature	T_{stg}	–	– 55 to +125	°C

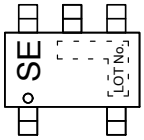
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

ELECTRICAL CONNECTION



1: Cathode
2: Cathode
3: Anode
4: No Contact
5: Anode

MARKING DIAGRAM



SE = Specific Device Code

ORDERING INFORMATION

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

†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.

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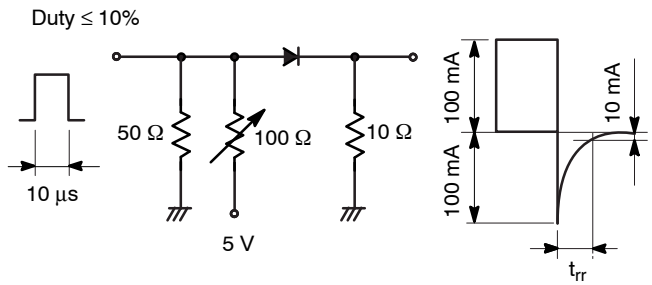
ELECTRICAL CHARACTERISTICS at Ta = 25°C (Value per element)

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

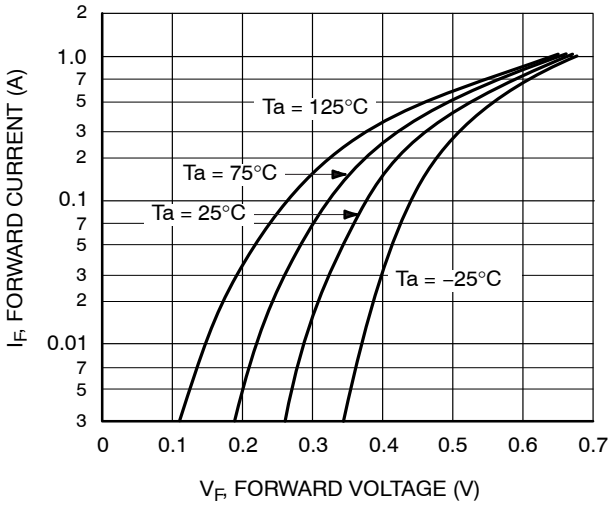


Figure 1. I_F – V_F

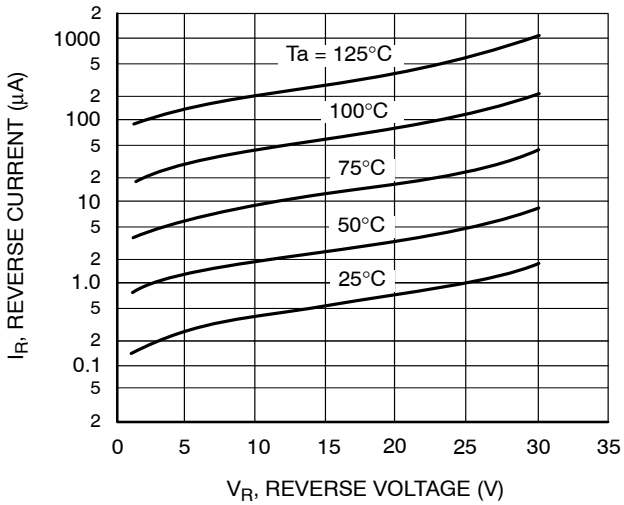


Figure 2. I_R – V_R

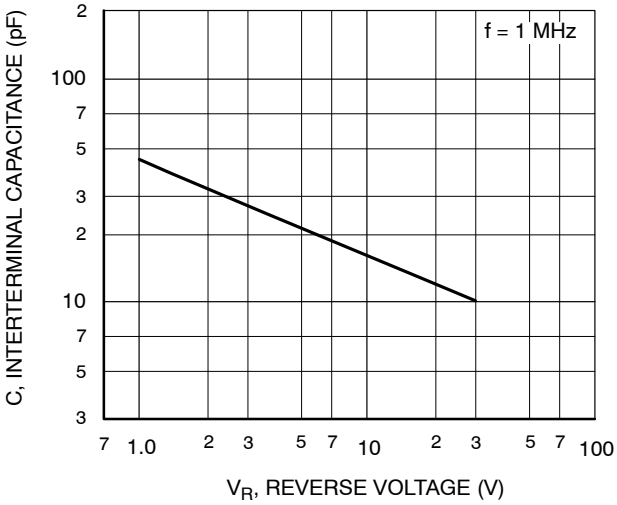


Figure 3. C – V_R

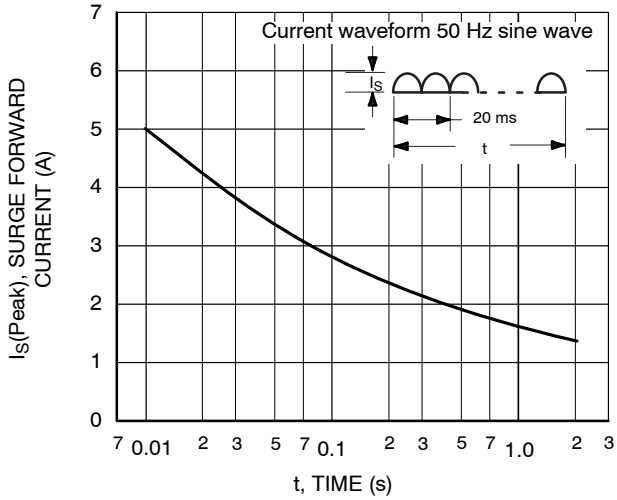


Figure 4. I_S – t

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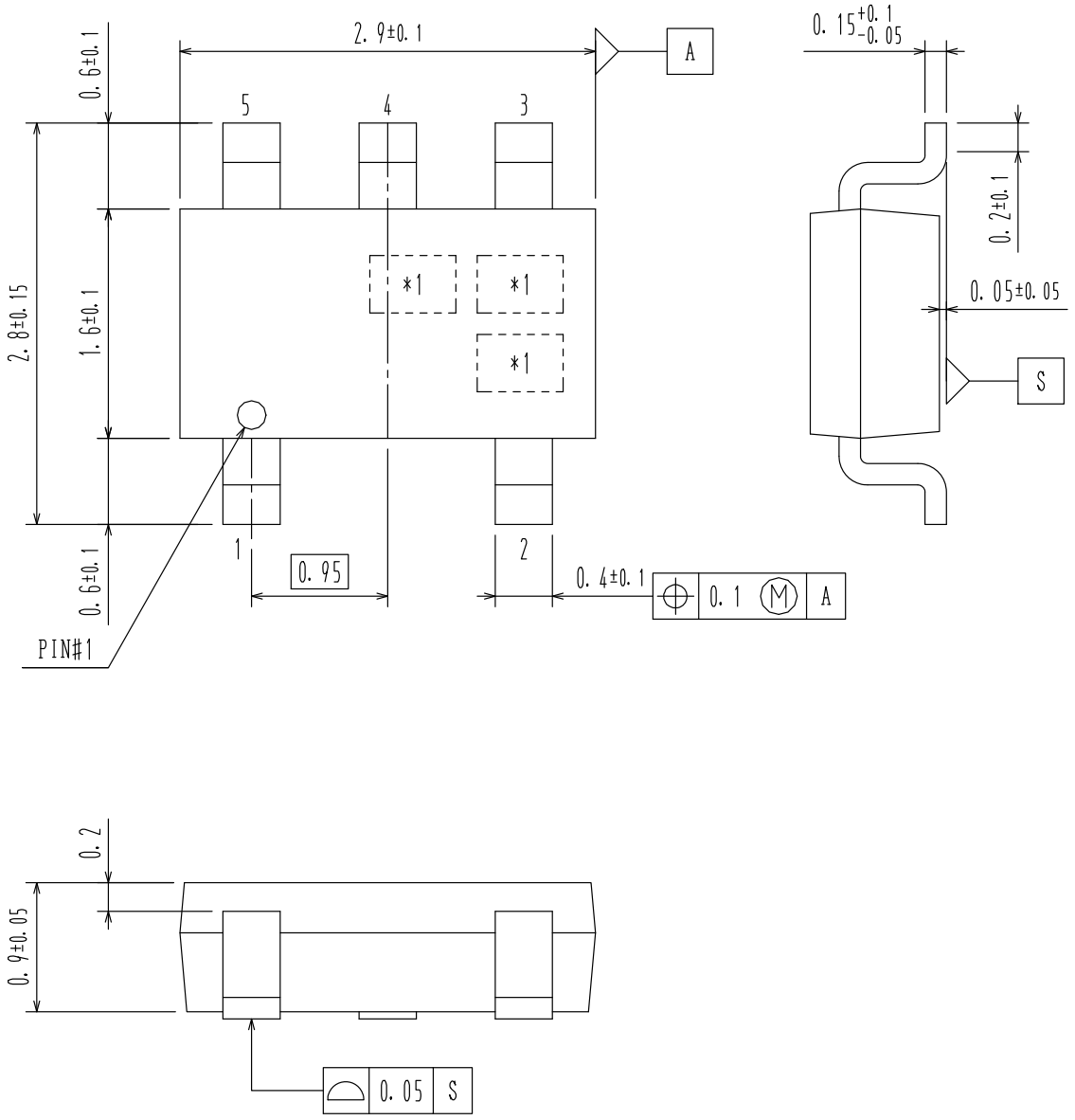

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