

Schottky Barrier Diode

30 V, 1 A, Low I_R

SBE807

Features

- Low Switching Noise
- Low Reverse Current ($V_R = 16 \text{ V}$, $I_R \text{ Max}=15 \mu\text{A}$)
- This Device is Pb-Free and Halide Free

Applications

• High Frequency Rectification (Switching Regulators, Converters, and Choppers)

Specifications

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

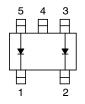
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	-	30	٧
Nonrepetitive Peak Reverse Surge Voltage	V _{RSM}	-	35	٧
Average Output Current	I _O	-	1.0	Α
Surge Forward Current	I _{FSM}	50 Hz sine wave, 1 cycle	10	Α
Junction Temperature	Тј	-	– 55 to +125	°С
Storage Temperature	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.



CPH5 CASE 318BC

ELECTRICAL CONNECTION



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

MARKING DIAGRAM



SJ = Specific Device Code

ORDERING INFORMATION

Device	Package	Shipping [†]
SBE807-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 (Ta = 25°C)

				Ratings		
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Reverse Voltage	V _R	I _R = 0.2 mA	30	-	-	٧
Forward Voltage	V _F 1	I _F = 0.7 A	-	0.45	0.50	٧
	V _F 2	I _F = 1.0 A	_	0.48	0.53	٧
Reverse Current	I _R	V _R = 16 V	_	-	15	μА
Interterminal Capacitance	С	V _R = 10 V, f = 1 MHz	_	27	-	pF
Reverse Recovery Time	t _{rr}	I _F = I _R = 100 mA, See specified Test Circuit.	-	-	10	ns
Thermal Resistance	Rth _(j-a)	When mounted on ceramic substrate (900 mm ² ×0.8 mm)	_	111	-	°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

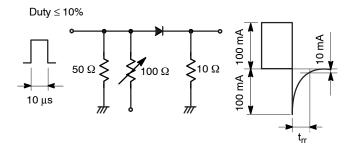
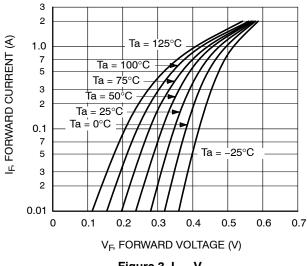


Figure 1. t_{rr} Test Circuit

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TYPICAL CHARACTERISTICS



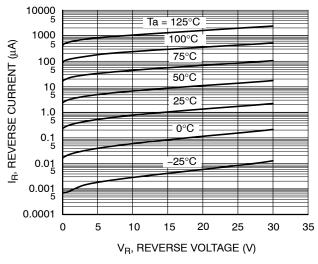
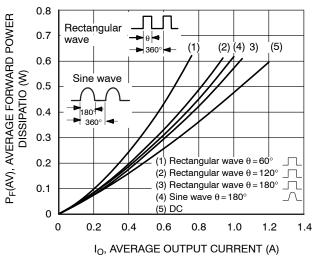


Figure 3. I_F - V_F

Figure 4. I_R - V_R



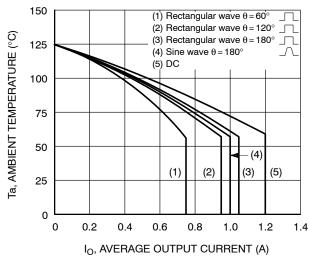
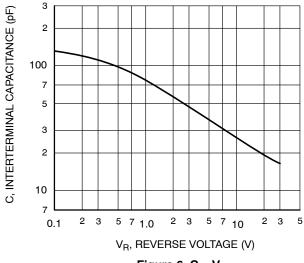


Figure 5. P_F(AV) - I_O

Figure 7. Ta - I_O



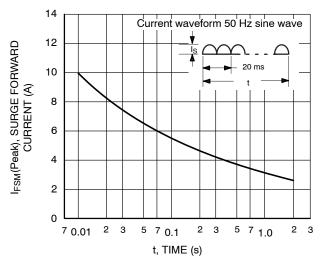


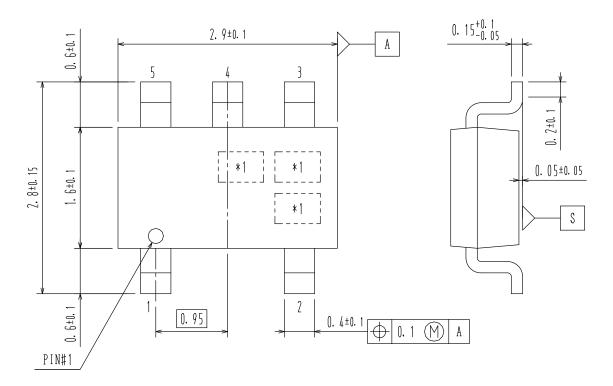
Figure 6. C - V_R

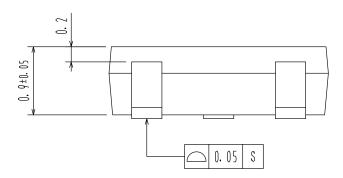
Figure 2. I_{FSM} - t



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