Ordering number : EN7291B

# SBE805

## Schottky Barrier Diode
## 30V, 0.5A, Low $I_R$

ON Semiconductor®
http://onsemi.com

### Features

- Low forward voltage ($V_F$ max=0.55V)
- Fast reverse recovery time ($t_{rr}$ max=10ns)
- 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

### Specifications

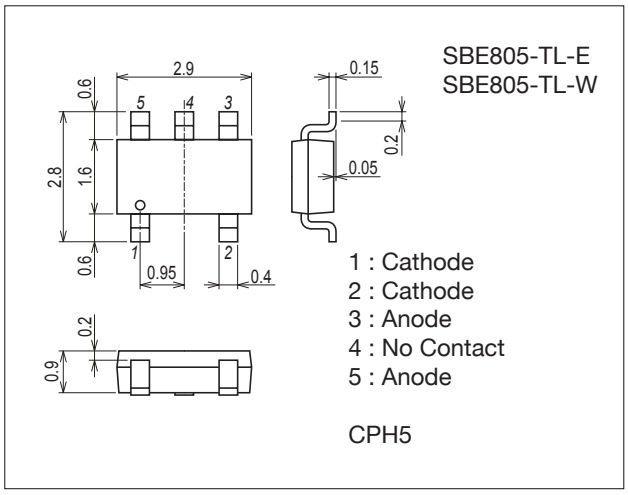
**Absolute Maximum Ratings** at Ta=25°C (Value per element)

| 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 | $I_{FSM}$ | 50Hz sine wave, 1 cycle | 5 | A |
| Junction Temperature | Tj | | −55 to +125 | °C |
| Storage Temperature | Tstg | | −55 to +125 | °C |

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

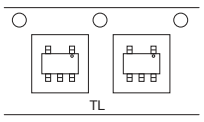
unit : mm (typ)
7017A-001



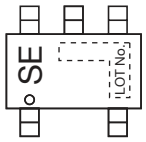

### Product & Package Information

- Package : CPH5
- JEITA, JEDEC : SC-74A, SOT-25
- Minimum Packing Quantity : 3,000 pcs./reel

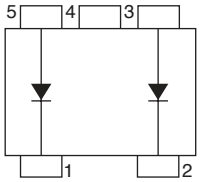
### Packing Type : TL




### Marking



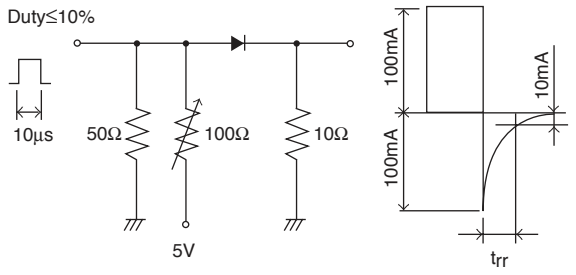

### Electrical Connection



## Electrical Characteristics at Ta=25°C (Value per element)

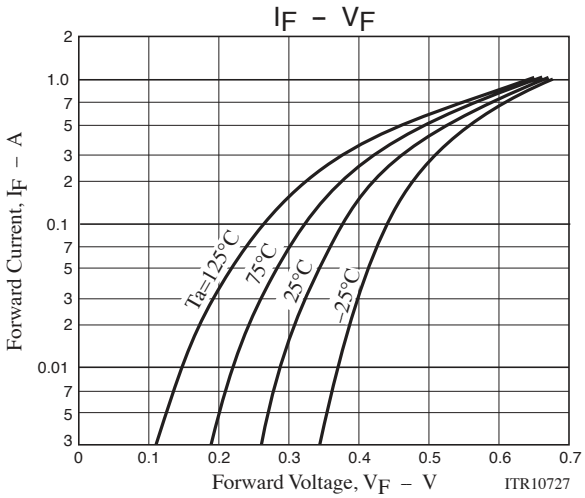
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Reverse Voltage | $V_R$ | $I_R$=150μA | 30 | | | V |
| Forward Voltage | $V_F$ | $I_F$=500mA | | | 0.55 | V |
| Reverse Current | $I_R$ | $V_R$=15V | | | 30 | μA |
| Interterminal Capacitance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

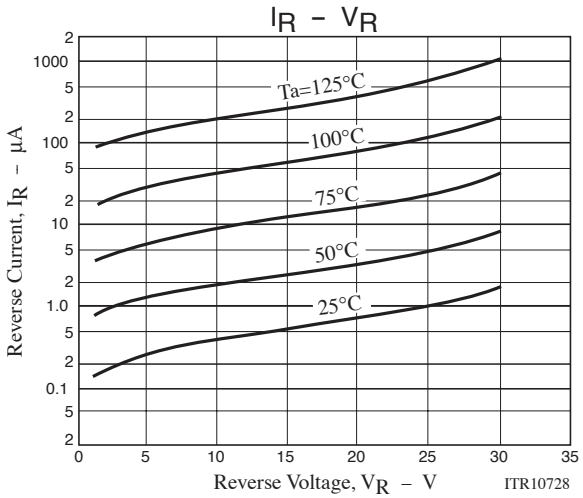
## $t_{rr}$ Test Circuit

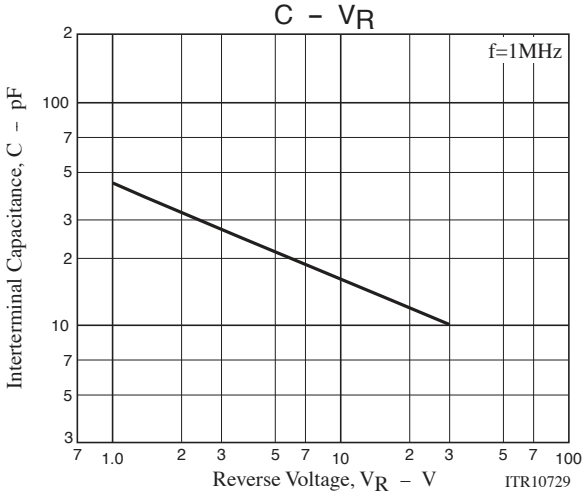


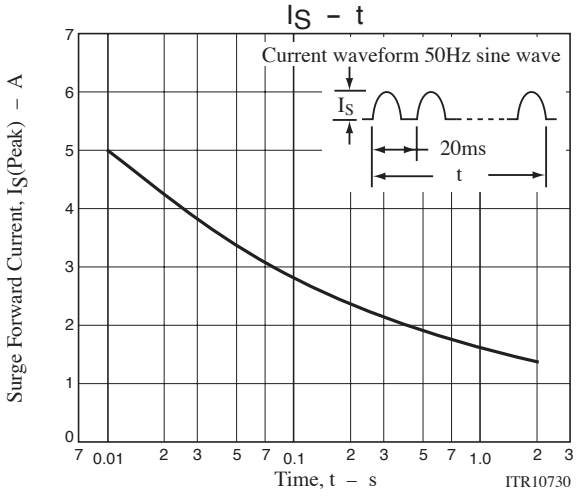

## Ordering Information

| Device | Package | Shipping | memo |
|---|---|---|---|
| SBE805-TL-E | CPH5 | 3,000pcs./reel | Pb-Free |
| SBE805-TL-W | | | Pb-Free and Halogen Free |


IF – VF
Forward Current, IF – A
Forward Voltage, VF – V
Ta=125°C
75°C
25°C
–25°C
ITR10727

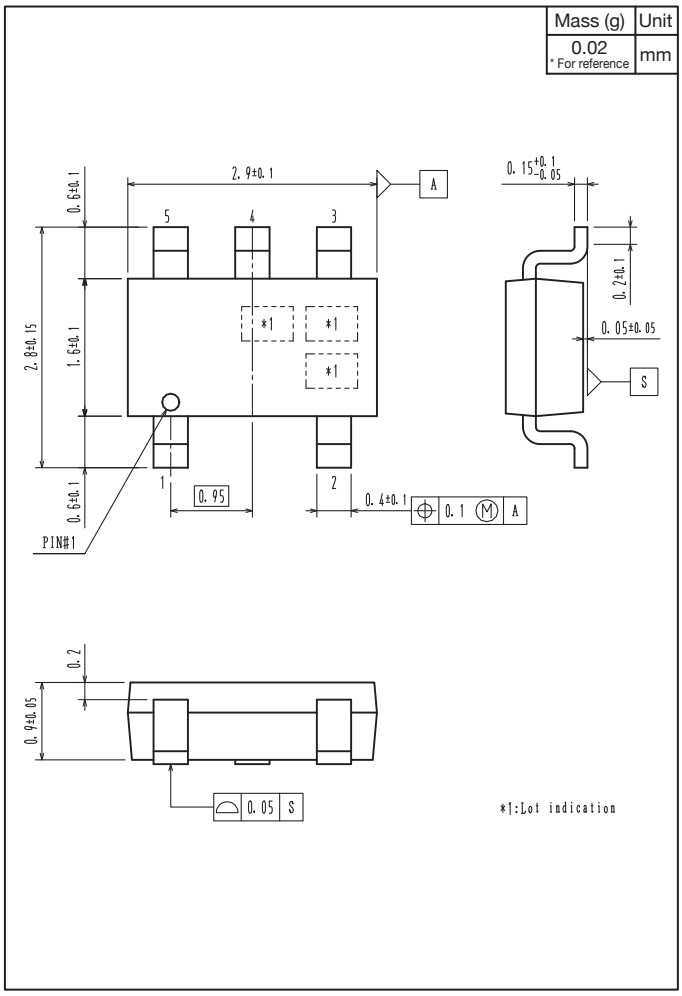

IR – VR
Reverse Current, IR – μA
Reverse Voltage, VR – V
Ta=125°C
100°C
75°C
50°C
25°C
ITR10728


C – VR
f=1MHz
Interterminal Capacitance, C – pF
Reverse Voltage, VR – V
ITR10729


IS – t
Current waveform 50Hz sine wave
IS
20ms
t
Surge Forward Current, IS(Peak) – A
Time, t – s
ITR10730

## Outline Drawing

SBE805-TL-E, SBE805-TL-W




## Land Pattern Example