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

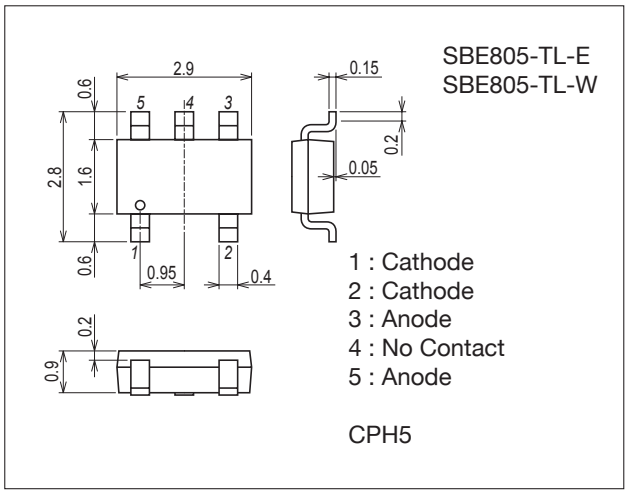
Absolute Maximum Ratings at Ta=25°C (Value per element)

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

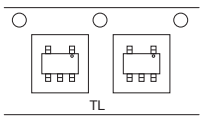
unit : mm (typ)
7017A-001



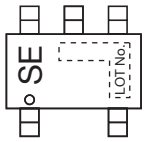
Product & Package Information

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

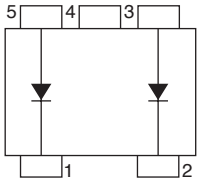
Packing Type : TL



Marking



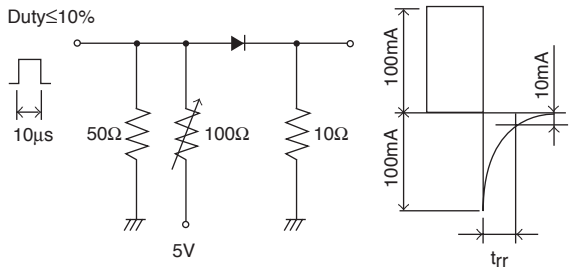
Electrical Connection



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

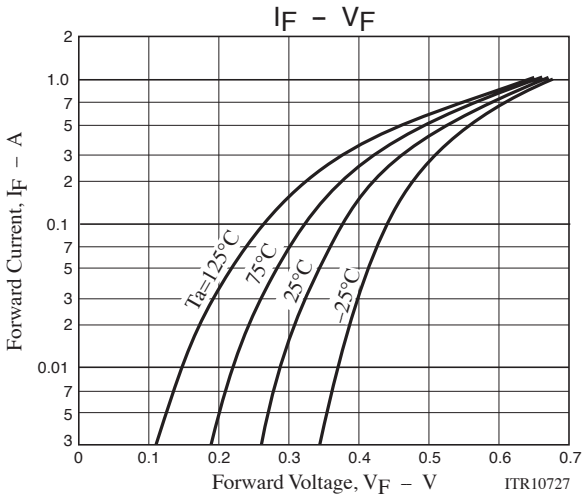
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=150μA	30			V
Forward Voltage	V_F	I_F=500mA			0.55	V
Reverse Current	I_R	V_R=15V			30	μA
Interterminal Capacitance	C	V_R=10V, f=1MHz		16		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=100mA, See specified Test Circuit.			10	ns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

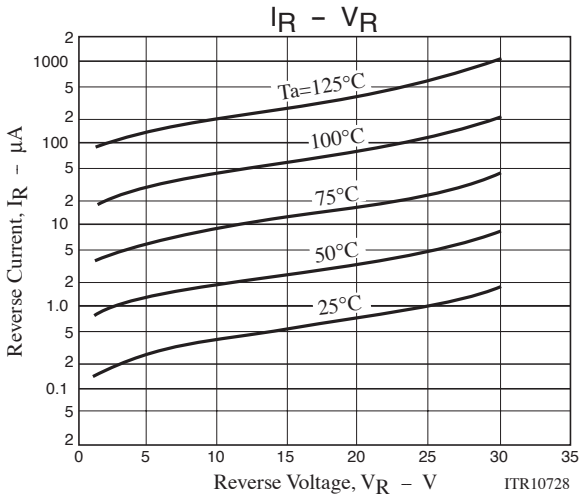
t_{rr} Test Circuit

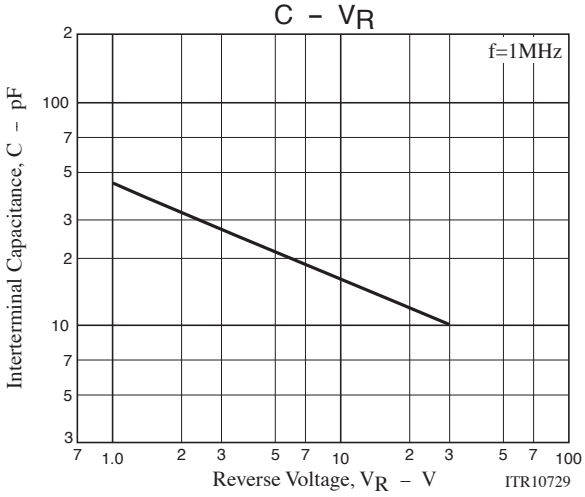


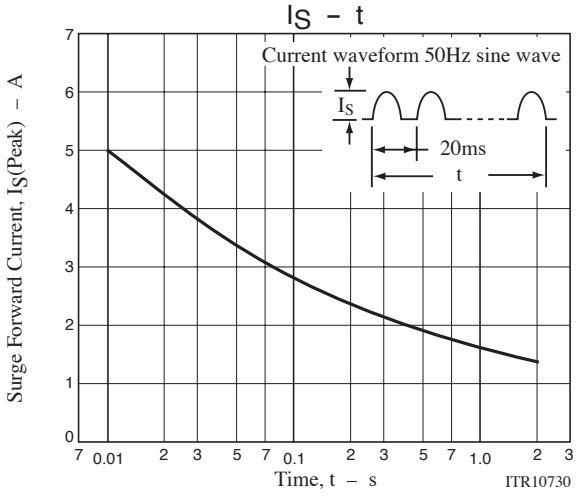
Ordering Information

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

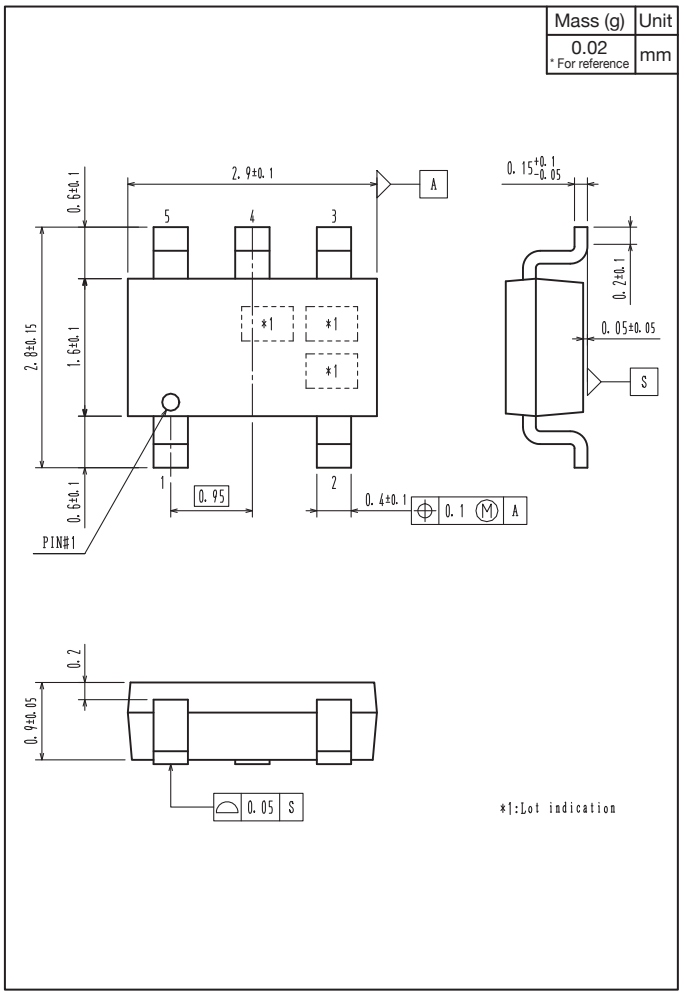

IR – VR
Reverse Current, IR – μA
Reverse Voltage, VR – V
Ta=125°C
100°C
75°C
50°C
25°C
ITR10728


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

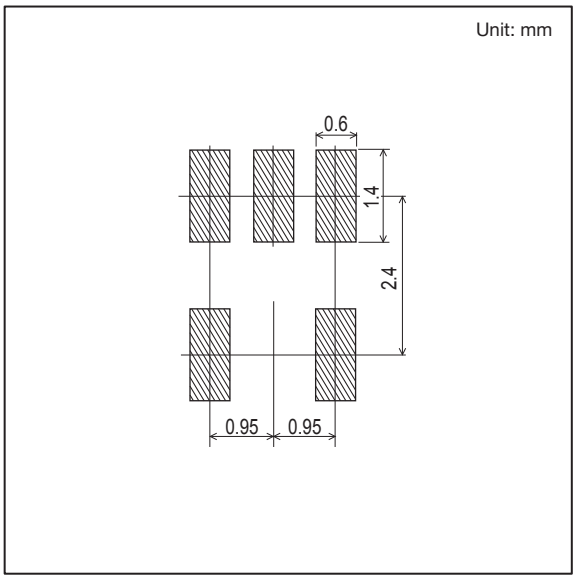

IS – t
Current waveform 50Hz sine wave
IS
20ms
t
Surge Forward Current, IS(Peak) – A
Time, t – s
ITR10730

Outline Drawing

SBE805-TL-E, SBE805-TL-W



Land Pattern Example



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SBE805-S-TL-E