Ordering number : ENA0444B

SB10015M

Schottky Barrier Diode
15V, 1A, Low I_R, Single MCPH3

ON Semiconductor®
http://onsemi.com

Applications
- High frequency rectification (switching regulators, converters, choppers)

Features
- Small switching noise
- Halogen free compliance
- Low leakage current and high reliability due to highly reliable planar structure
- Ultrasmall package permitting applied sets to be small and slim (mounting height 0.85mm)

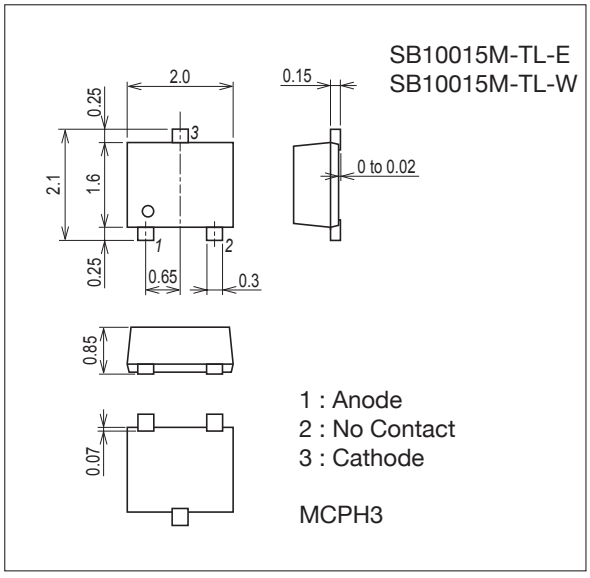
Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		15	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		17	V
Average Output Current	I_O		1.0	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	10	A
Junction Temperature	Tj		−55 to +150	°C
Storage Temperature	Tstg		−55 to +150	°C

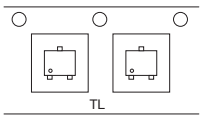
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

Package Dimensions
unit : mm (typ)
7019A-001



Product & Package Information
- Package : MCPH3
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

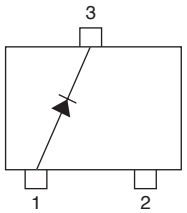
Packing Type : TL



Marking



Electrical Connection



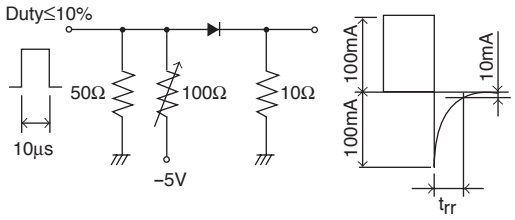
ORDERING INFORMATION
See detailed ordering and shipping information on page 2 of this data sheet.

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=0.1mA	15			V
Forward Voltage	V_F1	I_F=0.5A		0.43	0.48	V
	V_F2	I_F=1.0A		0.49	0.54	V
Reverse Current	I_R	V_R=7.5V			3	μA
Interterminal Capacitance	C	V_R=10V, f=1MHz		20		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=100mA, See specified Test Circuit.			10	ns
Thermal Resistance	Rth(j-a)	When mounted in Cu-foiled area of 0.72mm²×0.03mm on glass epoxy substrate		185		°C / W

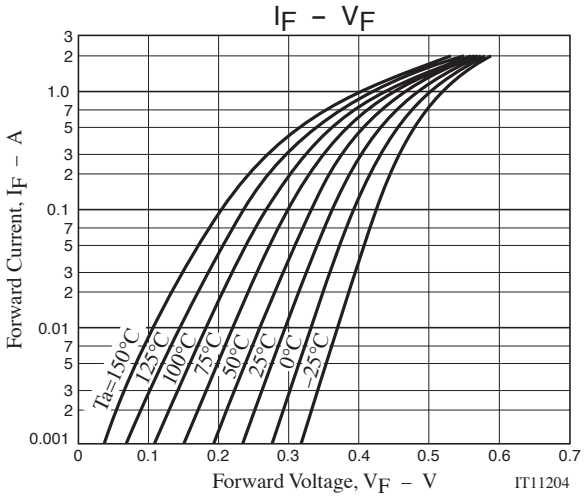
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

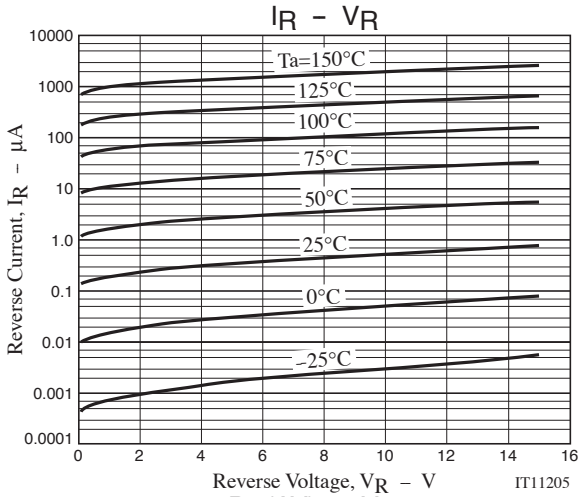
t_{rr} Test Circuit

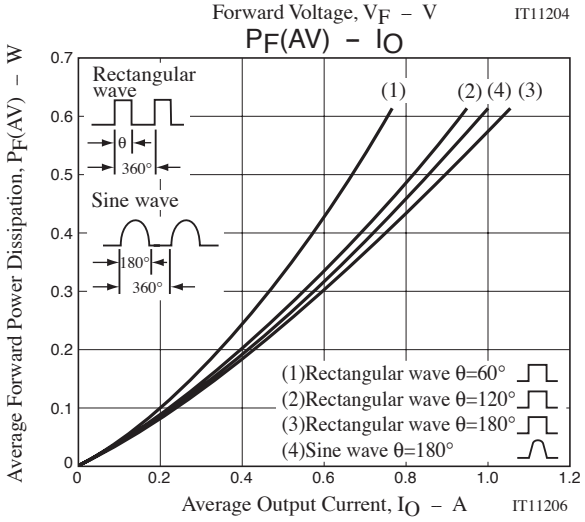


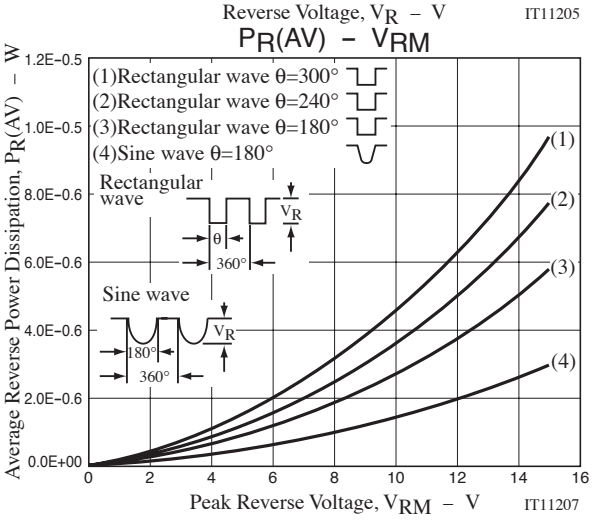
Ordering Information

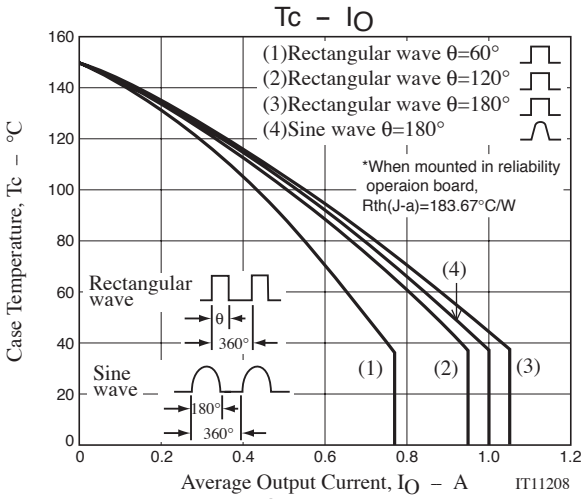
Device	Package	Shipping	memo
SB10015M-TL-E	MCPH3	3,000pcs./reel	Pb-Free
SB10015M-TL-W	MCPH3	3,000pcs./reel	Pb-Free and Halogen Free

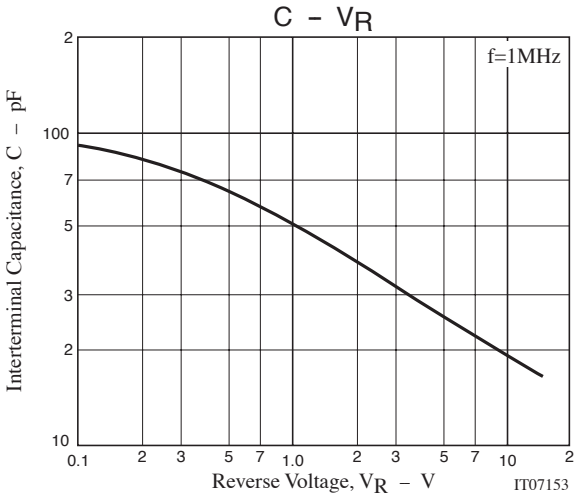


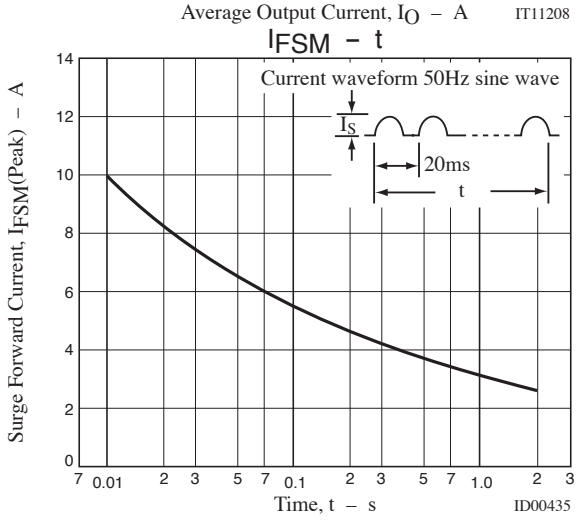






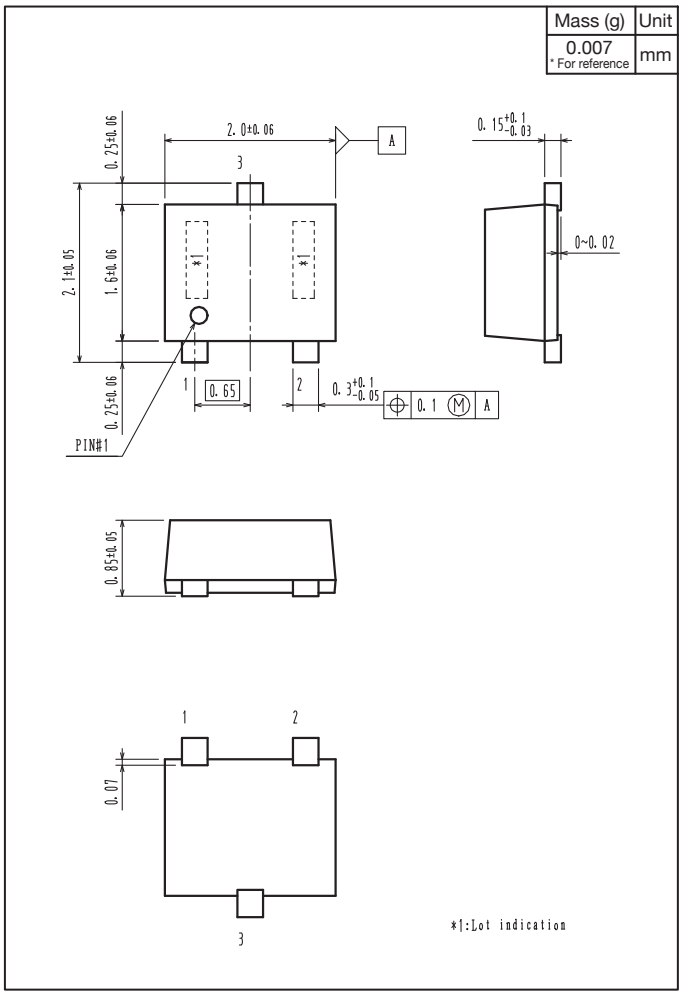

Tc – IO
(1)Rectangular wave θ=60°
(2)Rectangular wave θ=120°
(3)Rectangular wave θ=180°
(4)Sine wave θ=180°
*When mounted in reliability operaion board, Rth(J-a)=183.67°C/W
Rectangular wave
θ
360°
Sine wave
180°
360°
(1)
(2)
(3)
(4)
Case Temperature, Tc – °C
Average Output Current, IO – A
IT11208


C – VR
f=1MHz
Interterminal Capacitance, C – pF
Reverse Voltage, VR – V
IT07153

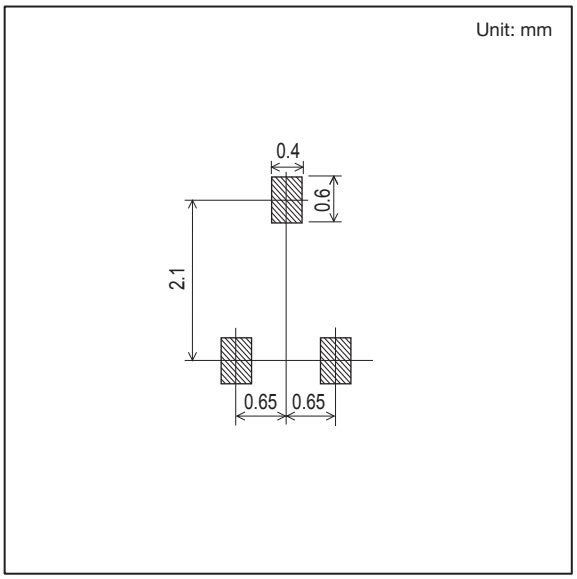

IFSM – t
Current waveform 50Hz sine wave
IS
20ms
t
Surge Forward Current, IFSM(Peak) – A
Time, t – s
ID00435

Outline Drawing

SB10015M-TL-E, SB10015M-TL-W



Land Pattern Example



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