Ordering number : EN8345B

SS2003M

Schottky Barrier Diode
30V, 2.0A, Low VF, Single MCPH6

ON Semiconductor®
http://onsemi.com

Applications

- High frequency rectification (switching regulators, converters, choppers)
- Halogen free compliance

Features

- Small Switching noise
- Low forward voltage (I_F=2A, V_F max=0.40V)
- Small package permitting applied sets to be small and slim

Specifications

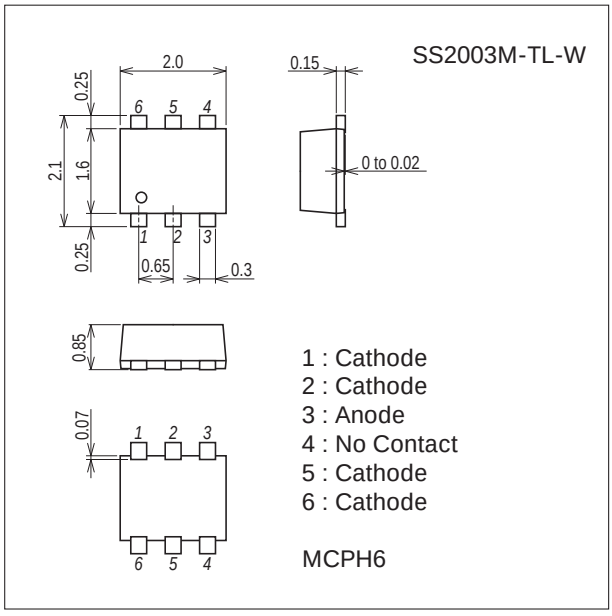
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		30	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		30	V
Average Output Current	I_O		2.0	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	10	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

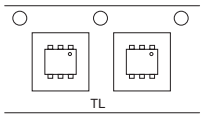
unit : mm (typ)
7022A-014



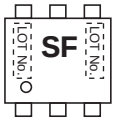
Ordering & Package Information

Device	Package	Shipping	memo
SS2003M-TL-W	MCPH6 SC-88, SC-70-6, SOT-363	3,000 pcs./reel	Pb-Free and Halogen Free

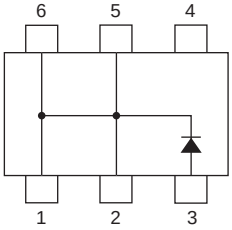
Packing Type : TL



Marking



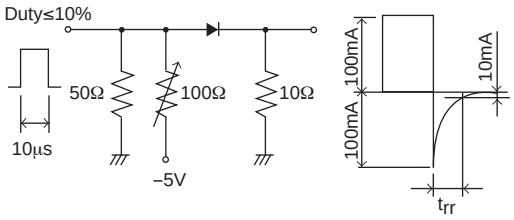
Electrical Connection

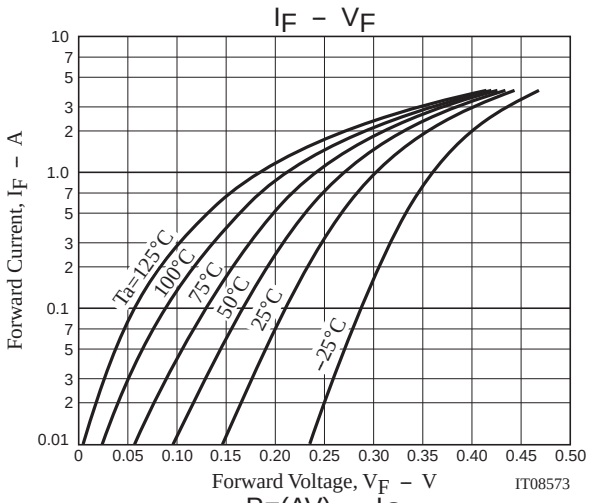


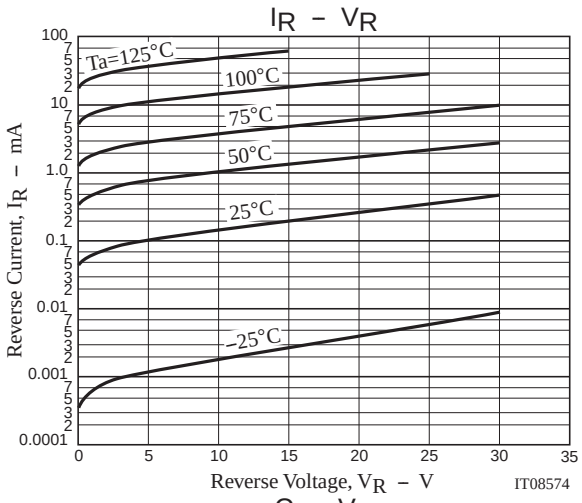
Electrical Characteristics at Ta=25°C

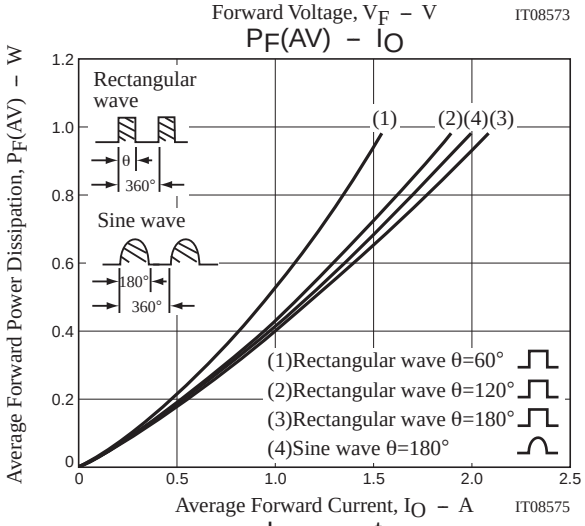
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=2.0mA	30			V
Forward Voltage	V_F	I_F=1.0A		0.30	0.35	V
		I_F=2.0A		0.35	0.40	V
Reverse Current	I_R	V_R=15V			1.25	mA
Interterminal Capacitance	C	V_R=10V, f=1MHz		75		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=100mA, See specified Test Circuit.			20	ns
Thermal Resistance	Rth(j-a)1	When mounted in Cu-foiled area of 1.44mm^2×0.03mm on glass epoxy substrate		93.4		°C / W
	Rth(j-a)2	When mounted on ceramic substrate (500mm^2×0.8mm)		71.4		°C / W

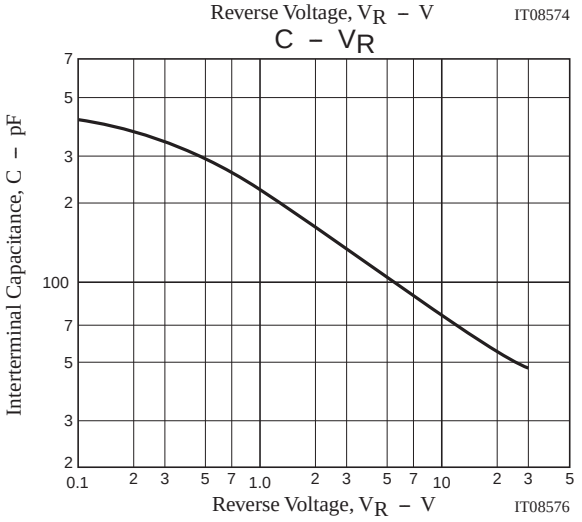
t_{rr} Test Cicuit

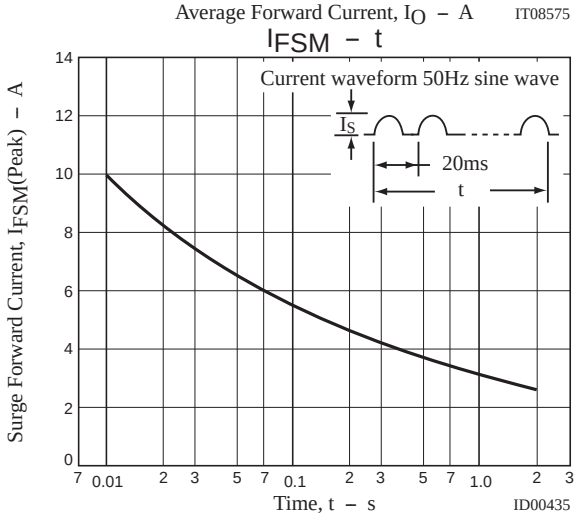



IF – VF
Forward Current, IF – A
Forward Voltage, VF – V
Ta=125°C
100°C
75°C
50°C
25°C
–25°C
IT08573


IR – VR
Reverse Current, IR – mA
Reverse Voltage, VR – V
Ta=125°C
100°C
75°C
50°C
25°C
–25°C
IT08574

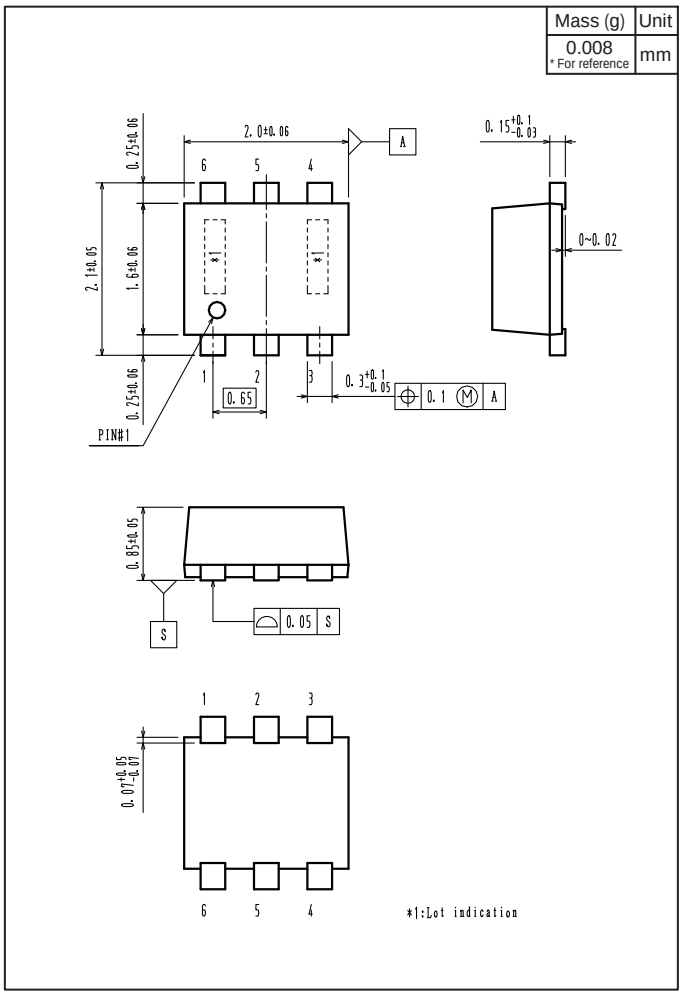

PF(AV) – IO
Average Forward Power Dissipation, PF(AV) – W
Average Forward Current, IO – A
Rectangular wave
θ
360°
Sine wave
180°
360°
(1)
(2)(4)(3)
(1)Rectangular wave θ=60°
(2)Rectangular wave θ=120°
(3)Rectangular wave θ=180°
(4)Sine wave θ=180°
IT08575


C – VR
Interterminal Capacitance, C – pF
Reverse Voltage, VR – V
IT08576

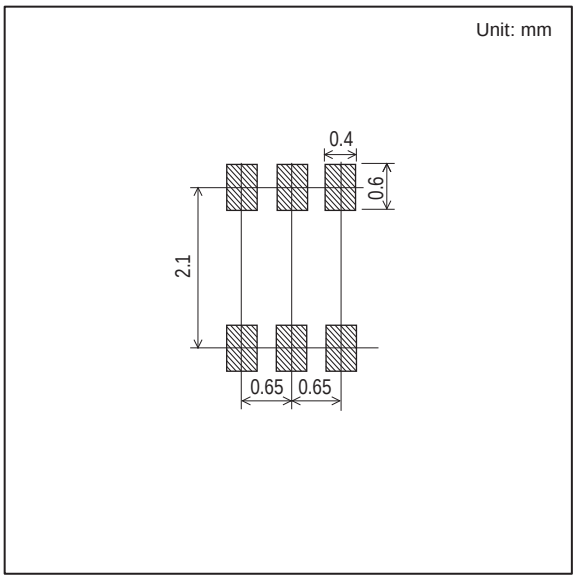

IFSM – t
Surge Forward Current, IFSM(Peak) – A
Time, t – s
Current waveform 50Hz sine wave
IS
20ms
t
ID00435

Outline Drawing

SS2003M-TL-W



Land Pattern Example



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SS2003M-TL-E