onsemi

Shottky Barrier Diode, Low VF, Single CPH6

30 V, 3.0 A

SS3003CH

Features

- Small Switching Noise
- Low Forward Voltage ($I_F = 3 \text{ A}, V_F \text{ Max} = 0.42 \text{ V}$)
- Ultra-small Package Permitting Applied Sets to be Small and Slim
- Halogen Free Compliance
- These are Pb–Free Devices

Applications

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

ABSOLUTE MAXIMUM RATINGS (at $T_A = 25^{\circ}C$)

Symbol	Parameter	Conditions	Ratings	Unit
V _{RRM}	Repetitive Peak Reverse Voltage		30	V
V _{RSM}	Nonrepetitive Peak Reverse Surge Voltage		30	V
lo	Average Output Current		3.0	A
I _{FSM}	Surge Forward Current	50 Hz sine wave, 1 cycle	20	A
Тj	Junction Temperature		-55 to +125	°C
T _{stg}	Storage Temperature		-55 to +125	°C

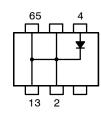
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

ELECTRICAL CHARACTERISTICS (at T_A = 25°C)

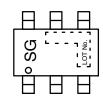


CPH6 CASE 318BD

ELECTRICAL CONNECTION



MARKING DIAGRAM



ORDERING INFORMATION

Device	Package	Shipping [†]
SS3003CH-TL-E	CPH6 (Pb–Free)	3 000 / Tape & Reel
SS3003CH-TL-W	CPH6 (Pb–Free, Halide Free)	3 000 / Tape & Reel

+For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, <u>BRD8011/D</u>.

Symbol	Parameter	Test Conditions	Min	Тур	Max	Unit
V _R	Reverse Voltage	I _R = 2.0 mA	30	-	-	V
V _F	Forward Voltage	I _F = 2.0 A	-	0.335	0.385	V
		I _F = 3.0 A	-	0.37	0.42	V
I _R	Reverse Current	V _R = 15 V	-	-	1.4	mA
С	Interterminal Capacitance	V _R = 10 V, f = 1 MHz	-	90	-	pF
t _{rr}	Reverse Recovery Time	$I_{\rm F} = I_{\rm R} = 100 {\rm mA}$	-	-	20	ns
Rth(j-a)	Thermal Resistance	When mounted on ceramic substrate (900 mm ² \times 0.8 mm)	_	50	_	°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.

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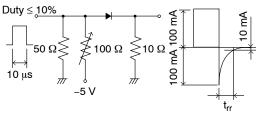
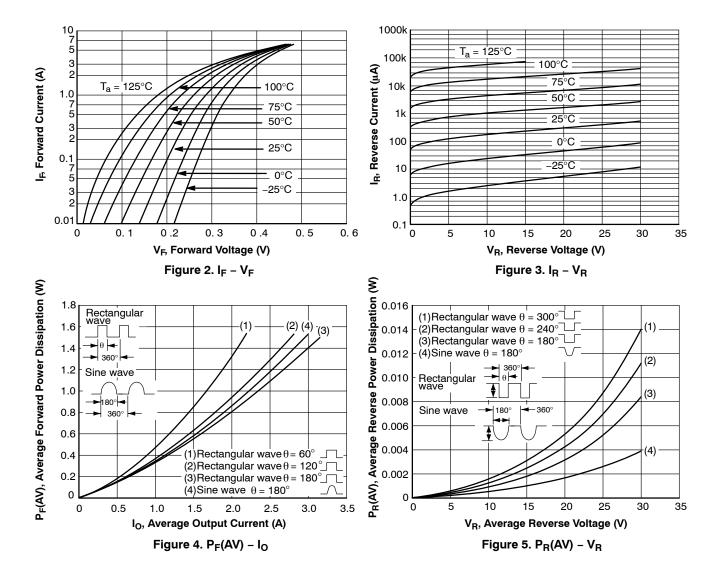


Figure 1. t_{rr} Test Circuit





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TYPICAL PERFORMANCE CHARACTERISTICS (continued)

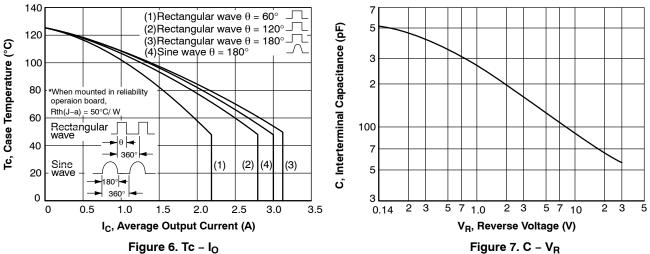
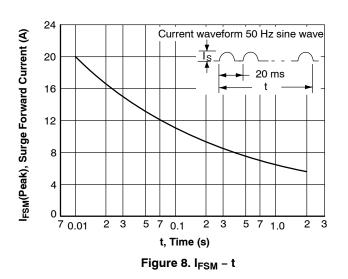


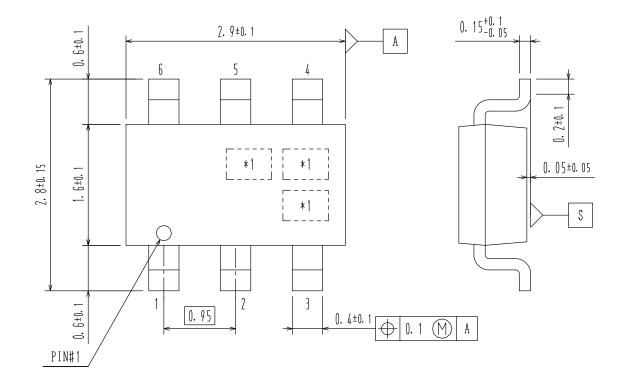
Figure 7. C – V_R

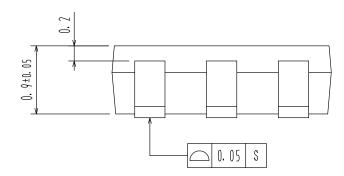




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DATE 30 NOV 2011





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