

# DCA010



## Very High-Speed Switching Diode

ON Semiconductor®

www.onsemi.com

### Features

- Ideally suited for use in hybrid ICs because of very small-sized package
- Fast switching speed • Small interterminal capacitance

### Specifications

#### Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Rating	Unit
Peak Reverse Voltage	V <sub>RM</sub>		85	V
Reverse Voltage	V <sub>R</sub>		80	V
Peak Forward Current	I <sub>FM</sub>	Unit rating	300	mA
		Total rating	450	mA
Average Rectified Current	I <sub>O</sub>	Unit rating	100	mA
		Total rating	150	mA
Surge Current(1μs)	I <sub>FSM</sub>	Unit rating	4	A
		Total rating	6	A
Allowable Power Dissipation	P		200	mW
Junction Temperature	T <sub>j</sub>		125	°C
Storage Temperature	T <sub>stg</sub>		-55to +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.

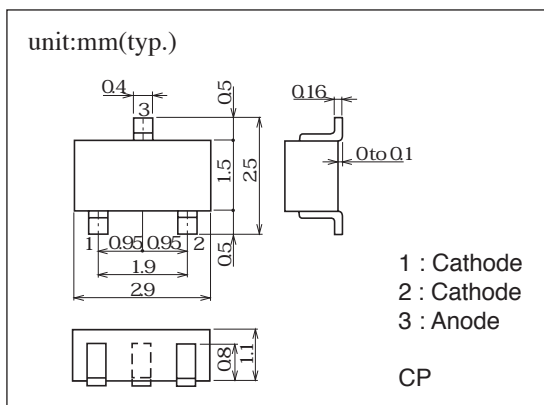
#### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Rating			Unit
			min	typ	max	
Forward Voltage	V <sub>F1</sub>	I <sub>F</sub> =1mA		0.61		V
	V <sub>F2</sub>	I <sub>F</sub> =10mA		0.74		V
	V <sub>F3</sub>	I <sub>F</sub> =100mA			1.20	V
Reverse Current	I <sub>R1</sub>	V <sub>R</sub> =30V			0.1	μA
	I <sub>R2</sub>	V <sub>R</sub> =80V			0.5	μA
Interterminal Capacitance	C	V <sub>R</sub> =0V, f=1MHz			4.0	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =10mA, V <sub>R</sub> =6V, R <sub>L</sub> =50Ω, I <sub>rr</sub> =0.1I <sub>rp</sub>			4.0	ns

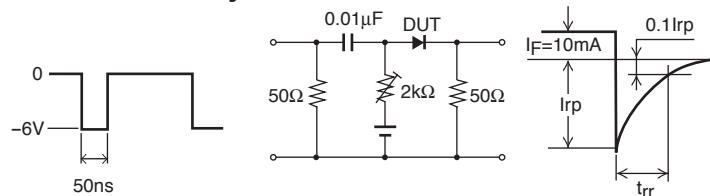
Marking: W5

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.

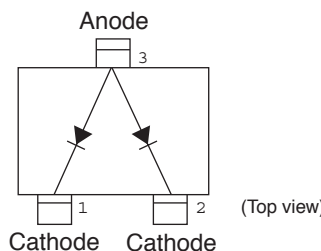
### Package Dimensions



### Reverse Recovery Time Test Circuit

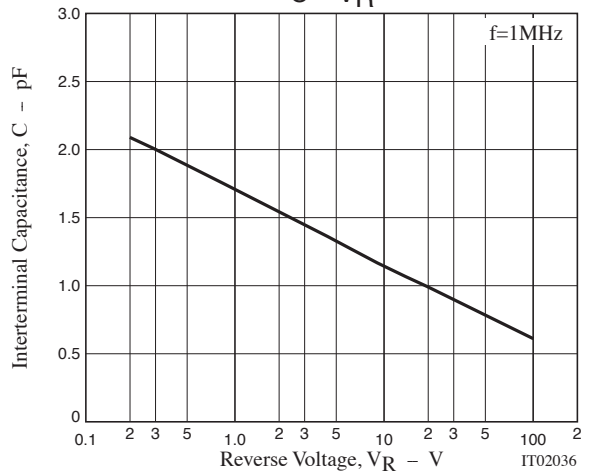
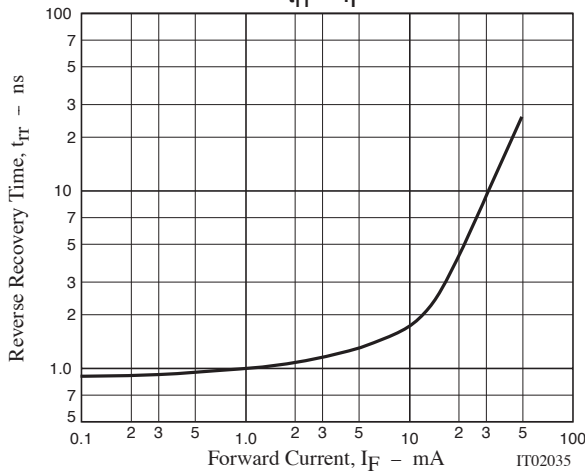
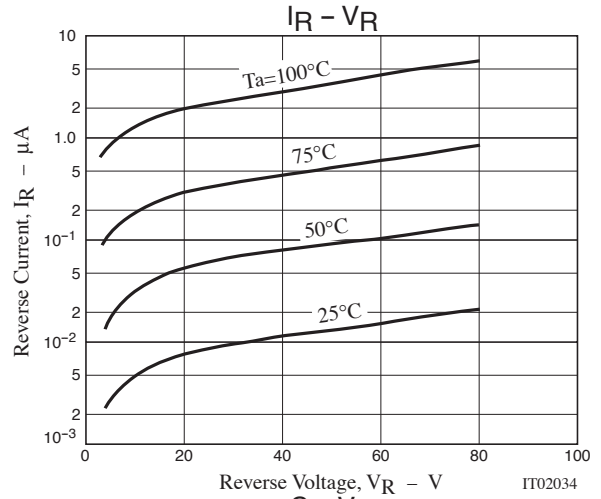
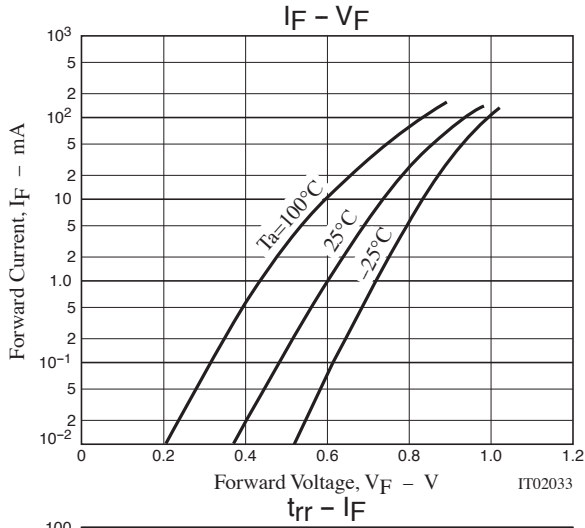


### Electrical Connection



### ORDERING INFORMATION

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



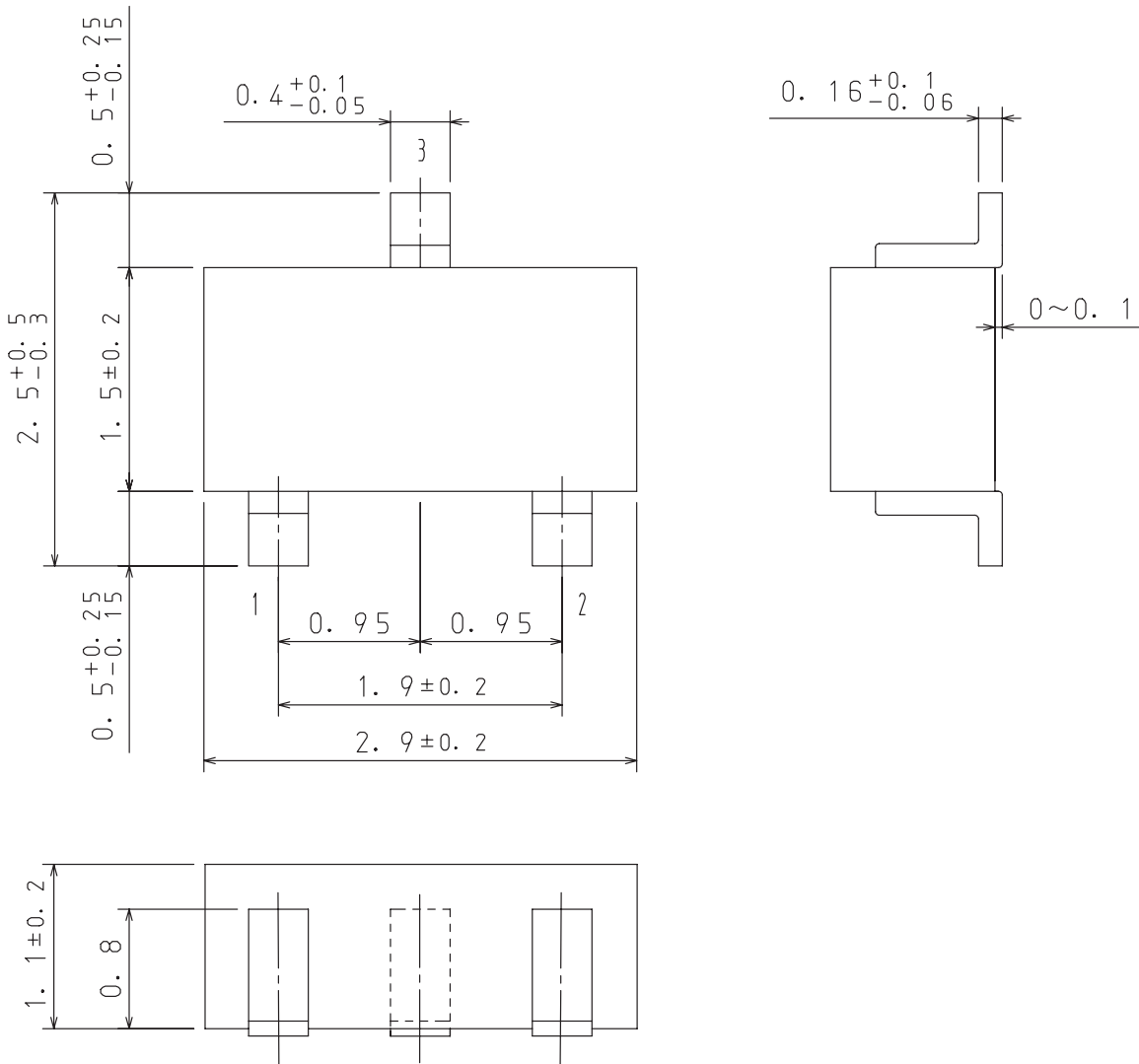
**ORDERING INFORMATION**

Device	Package	Shipping	memo
DCA010-TB-E	CP	3,000 pcs. / reel	Pb-Free

Package Dimensions

SC-59 / CP  
CASE 318AN  
ISSUE O

unit : mm



Dimensions with no tolerance specified represent typical values.

There may be resin burrs that cannot be seen apparently from the drawing.

ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC) or its subsidiaries in the United States and/or other countries. SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at [www.onsemi.com/site/pdf/Patent-Marking.pdf](http://www.onsemi.com/site/pdf/Patent-Marking.pdf). SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.