DCB010

Very High-Speed Switching Diode

ON Semiconductor®

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Features

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

Silicon Epitaxial Planar Type
(Cathode Common)
100mA. 85V

SPECIFICATIONS

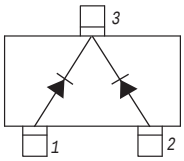
ABSOLUTE MAXIMUM RATINGS at Ta = 25°C (Note 1)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	85	V
Reverse Voltage	V_R	80	V
Peak Forward Current	I_{FM}	300	mA
	I_{FM} (Note 2)	450	mA
Average Rectified Current	I_O	100	mA
	I_O (Note 2)	150	mA
Surge Current (1μs)	I_{FSM}	4	A
	I_{FSM} (Note 2)	6	A
Allowable Power Dissipation	P	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature	T_{stg}	−55 to +125	°C

Note 1 : 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.

Note 2 :Total value

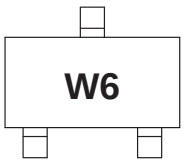
ELECTRICAL CONNECTION



1 : Anode
2 : Anode
3 : Cathode
Top view

MARKING

SC-59 / CP



ORDERING INFORMATION

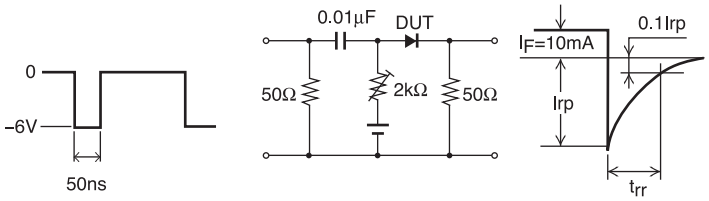
See detailed ordering and shipping information on page 4 of this data sheet

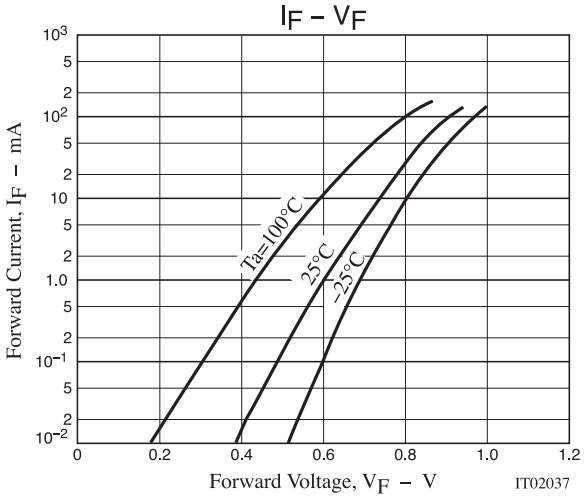
ELECTRICAL CHARACTERISTICS at Ta = 25°C (Note 3)

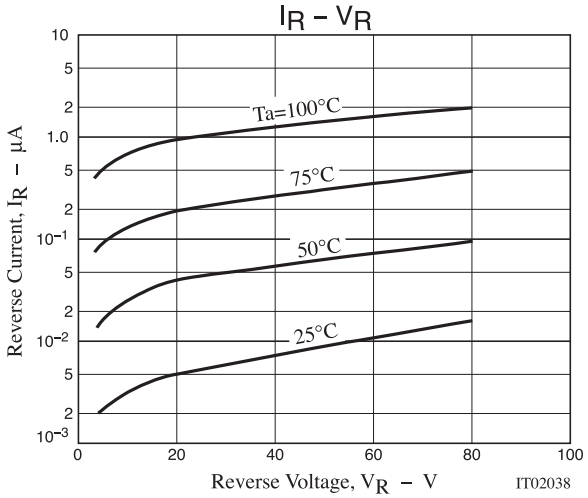
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Forward Voltage	V_{F1}	I_F = 1mA		0.6		V
	V_{F2}	I_F = 10mA		0.72		V
	V_{F3}	I_F = 100mA			1.2	V
Reverse Current	I_{R1}	V_R = 30V			0.1	μA
	I_{R2}	V_R = 80V			0.5	μA
Interterminal Capacitance	C	V_R = 0V, f = 1MHz			3.0	pF
Reverse Recovery Time	t_{rr}	I_F= 10mA, V_R = 6V, R_L= 50Ω, I_{rr} = 0.1I_{rp}			4.0	ns

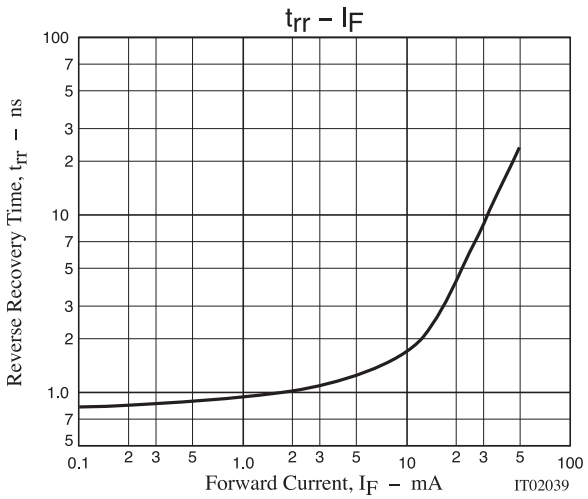
Note 3 : Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

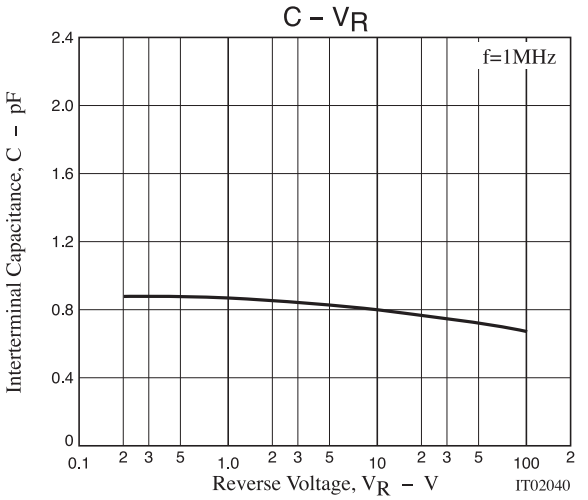
Revers Recovery Time Circuit





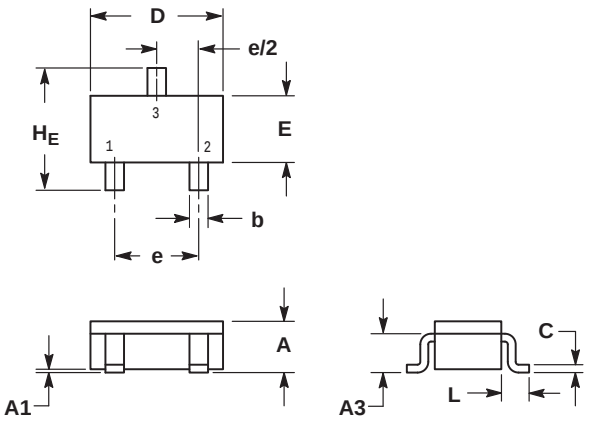






PACKAGE DIMENSIONS
unit : mm

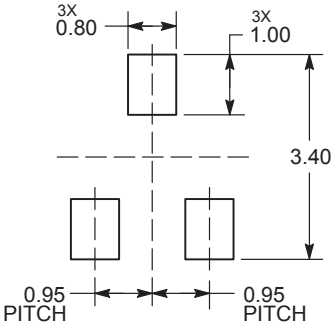
SC-59 / CP
CASE 318AN
ISSUE A



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.

	MILLIMETERS	
DIM	MIN	MAX
A	0.90	1.30
A1	0.00	0.10
A3	0.80 REF	
b	0.35	0.50
c	0.10	0.26
D	2.70	3.10
E	1.30	1.70
e	1.70	2.10
H_E	2.20	3.00
L	0.35	0.75

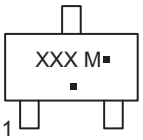
RECOMMENDED SOLDERING FOOTPRINT*



DIMENSIONS: MILLIMETERS

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

GENERIC MARKING DIAGRAM



XXX = Specific Device Code
M = Date Code
▪ = Pb-Free Package*

(*Note: Microdot may be in either location)

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, “G” or microdot “ ▪ ”, may or may not be present.

ORDERING INFORMATION

Device	Marking	Package	Shipping
DCB010-TB-E	W6	SC-59 / CP (Pb-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 Specifications Brochure, BRD8011/D. http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF