

DCC010

Ultrahigh-Speed Switching Diode



ON Semiconductor®

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Features

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

SPECIFICATIONS

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

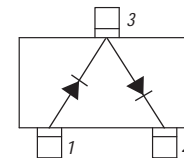
Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V _{RM}	85	V
Reverse Voltage	V _R	80	V
Peak Forward Current	I _{FM} (Note 2)	300	mA
	I _{FM}	210	mA
Average Rectified Current	I _O (Note 2)	100	mA
	I _O	70	mA
Surge Current (1μs)	I _{FSM} (Note 2)	4	A
	I _{FSM}	2.8	A
Allowable Power Dissipation	P	200	mW
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 :Unit Rating

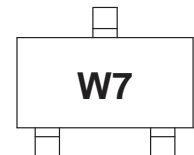
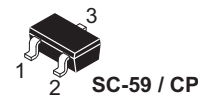
**Silicon Epitaxial Planar Type
(Series Connection)
70mA. 85V**

ELECTRICAL CONNECTION



1 : Anode
2 : Cathode
3 : Cathode / Anode
Top view

MARKING



ORDERING INFORMATION

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

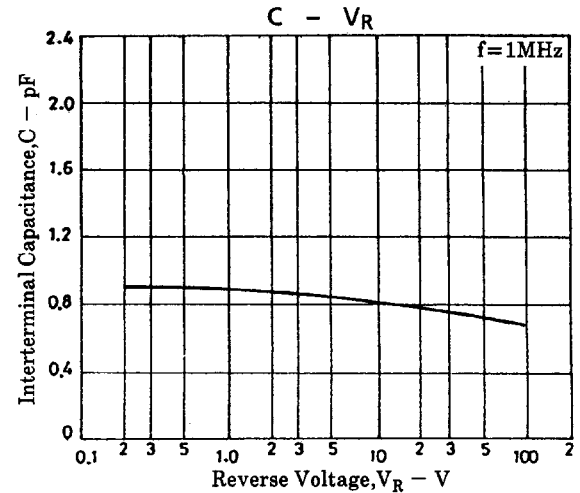
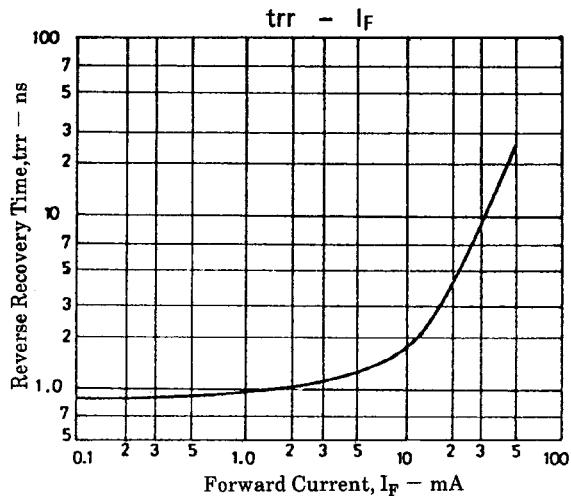
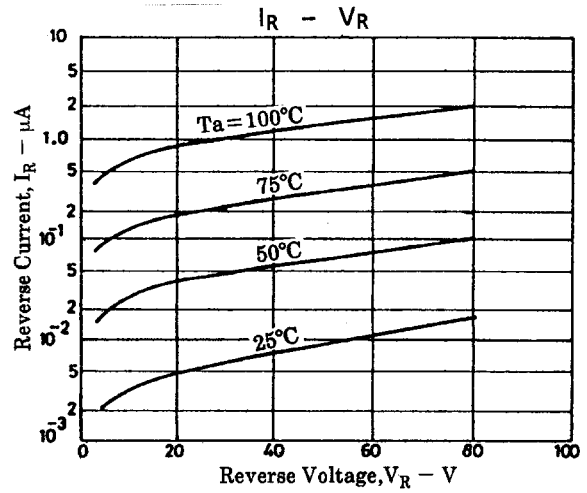
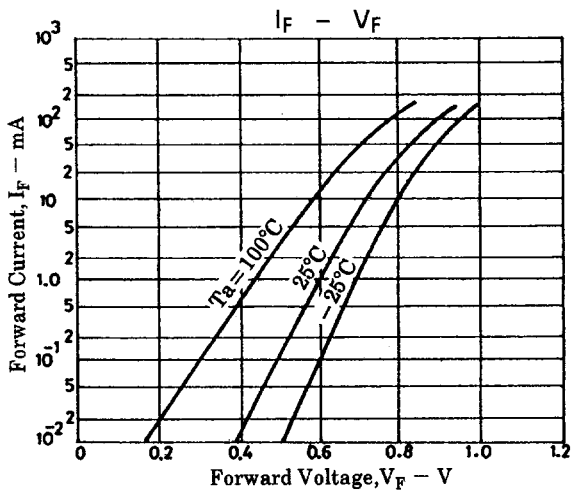
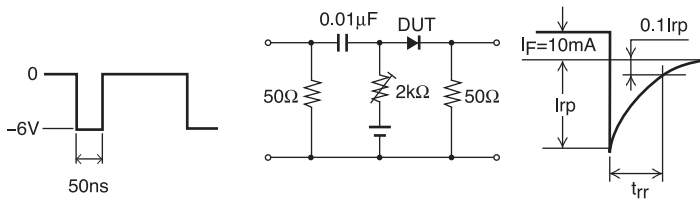
DCC010

ELECTRICAL CHARACTERISTICS at $T_a = 25^\circ\text{C}$ (Note 3)

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

Reverse Recovery Time Circuit

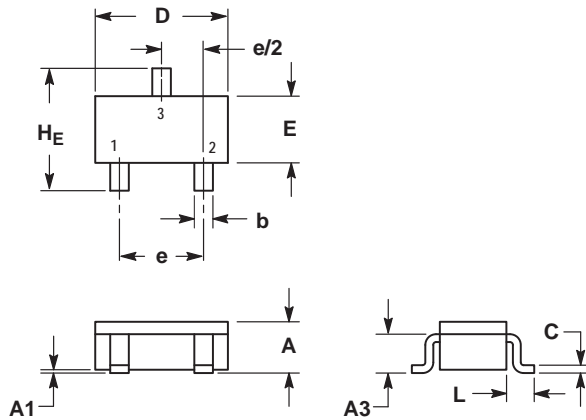


DCC010

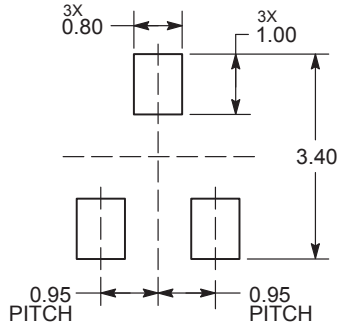
PACKAGE DIMENSIONS

unit : mm

SC-59 / CP
CASE 318AN
ISSUE A



RECOMMENDED SOLDERING FOOTPRINT*



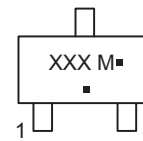
*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

NOTES:

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

DIM	MILLIMETERS	
	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
HE	2.20	3.00
L	0.35	0.75

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.

DCC010

ORDERING INFORMATION

Device	Marking	Package	Shipping
DCC010-TB-E	W7	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

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