High-speed Switching Diode

Description

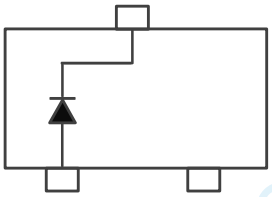
The OVW914T is a high-speed switching diode fabricated in planar technology, and encapsulated in a small SOT-23 plastic SMD package.

Features

- ✧ High switching speed: max. 4 ns
- ✧ Power dissipation of 350mW
- ✧ Repetitive peak reverse voltage: max. 100 V
- ✧ Repetitive peak forward current: max. 300 mA.

Applications

- ✧ High-speed switching in hybrid thick and thin-film circuits.



Circuit Diagram



SOT-23

Absolute Maximum Rating（T_A = 25 °C, unless otherwisespecified）

Parameters	Symbol	Value	Unit
Reverse Voltage	V_R	100	V
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Power Dissipation	P_d	350	mW
Operating junction temperature	Tj	150	℃
Storage temperature range	Ts	-55-+150	℃
Average Rectified Current	IO	300	mA
Peak Forward Surge Current @tp=1ms; TA=25℃	I_{FSM}	2.0	A
Typical thermal resistance	$R_{\theta JA}$	357	℃/W

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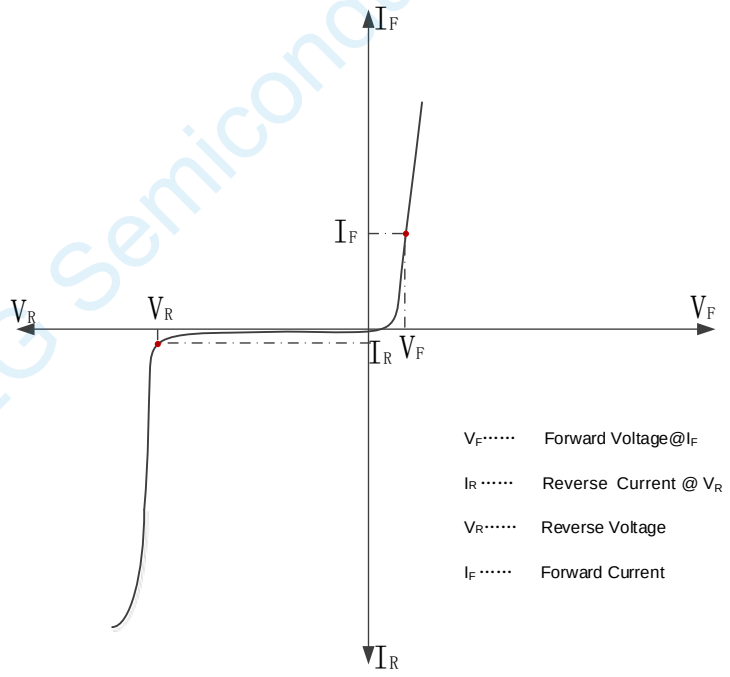
Electrical Characteristics（T_A = 25 °C, unless otherwisespecified）

Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Breakdown Voltage	V_{BR}	I_R=0.1mA	100			V
Reverse Current	I_{R1}	V_{R1} =20V			25	nA
	I_{R2}	V_{R2} =75V			1.0	uA
Forward Voltage	V_F	I_F=1mA I_F=10mA I_F=50mA I_F=150mA			0.72 0.86 1.00 1.25	V
Total Capacitance	C_T	V_R=0V,f=1MHz			2	pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 10mAdc $I_{R(REC)}$ = 1.0 mAdc			4	ns

Electrical Parameters（T_A = 25 °C, unless otherwisespecified）



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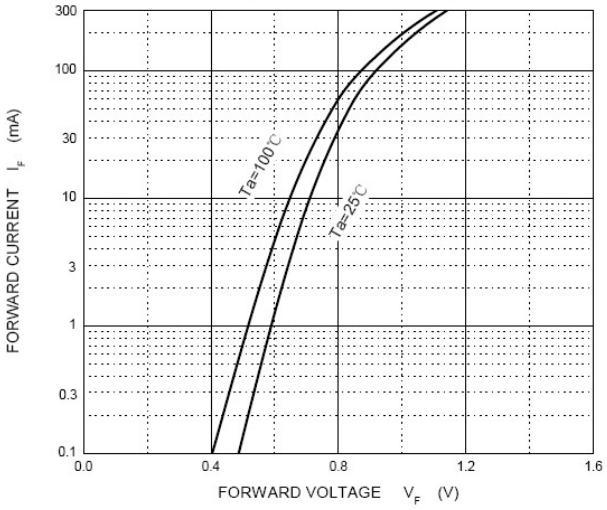
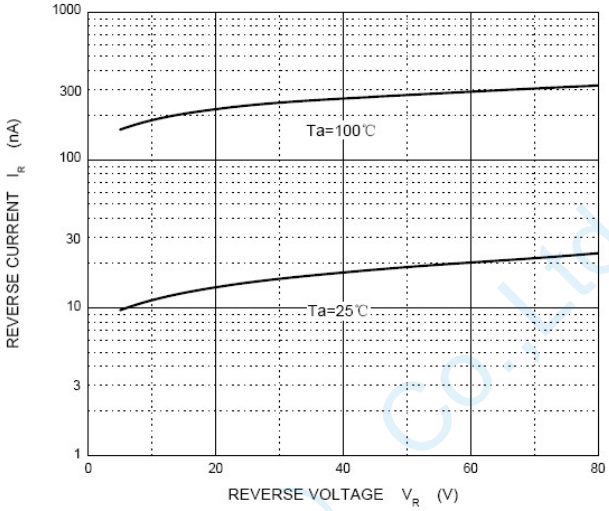
Typical Characteristics（T_A = 25 °C, unless otherwisespecified）

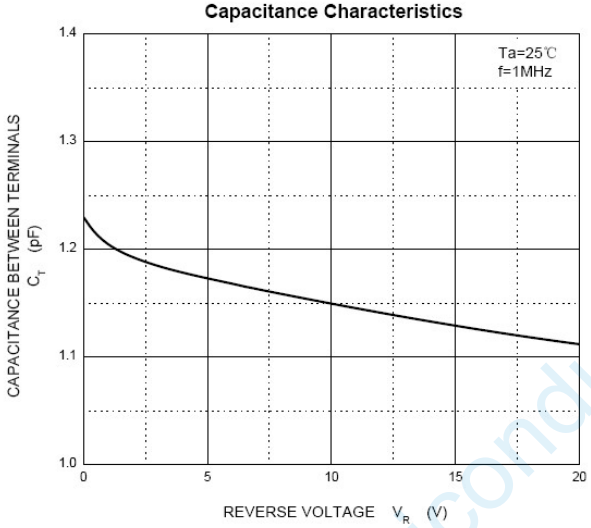
Forward Characteristics



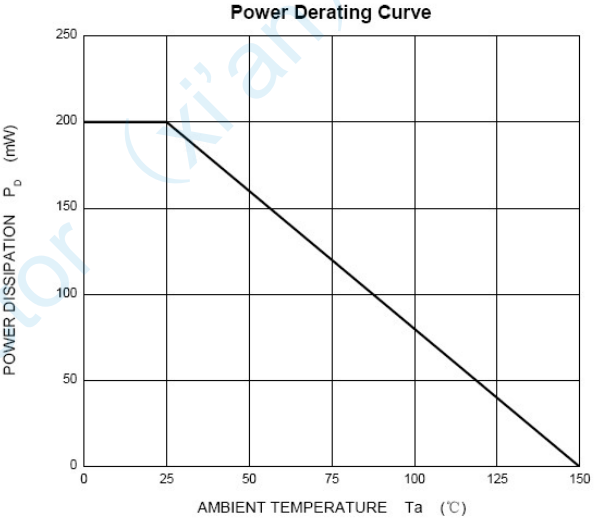
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve



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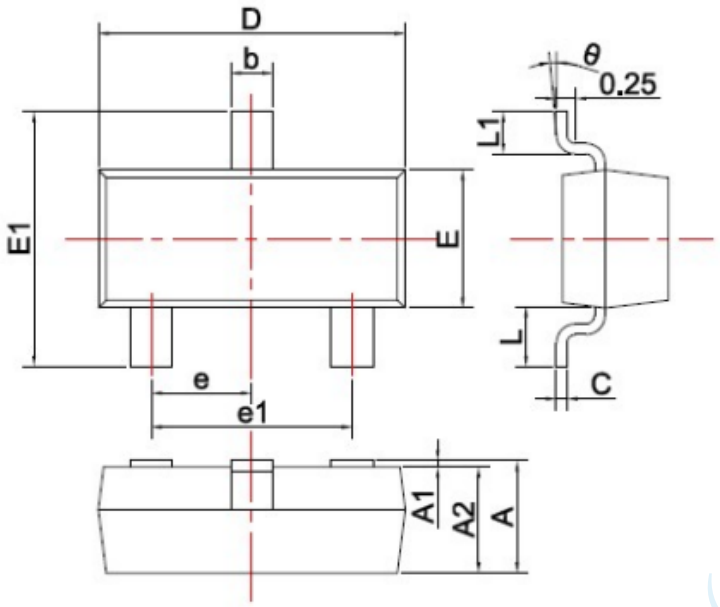
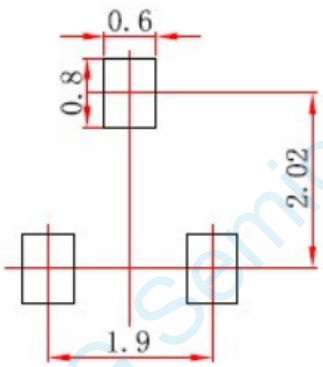
Package Information



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

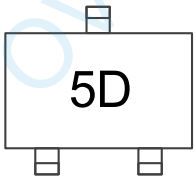
Unit: mm

Recommend PCB Layout



Note:
1.Controlling dimension:In millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

Marking



Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVW914T	GREEN	T/R	7 inch	3k/reel	10reel= 30k/box	4boxes=120k/carton