High-speed Switching Diode

Description

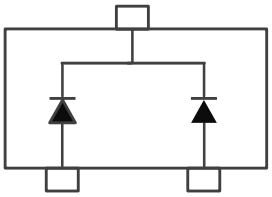
The OVW170T is a high-speed switching diode fabricated in planar technology, and encapsulated in a small SOT-23 plastic SMD package.

Features

- ✧ High switching speed: max. 3 ns
- ✧ Power dissipation of 250mW
- ✧ Repetitive peak reverse voltage: max. 85 V
- ✧ Repetitive peak forward current: max. 500 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
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Power Dissipation	Pd	250	mW
DC Blocking Voltage	V_R	75	V
Forward Current(single diode)	IF	215	mA
Forward Current(double diode)	IF	125	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current@ t =8.3m s	I_{FSM}	1	A
Thermal Resistance from Junction to Ambient	$R_{\Theta JA}$	500	℃/W
Operation Junction and Storage Temperature Range	T_J,T_{stg}	-55~+150	℃

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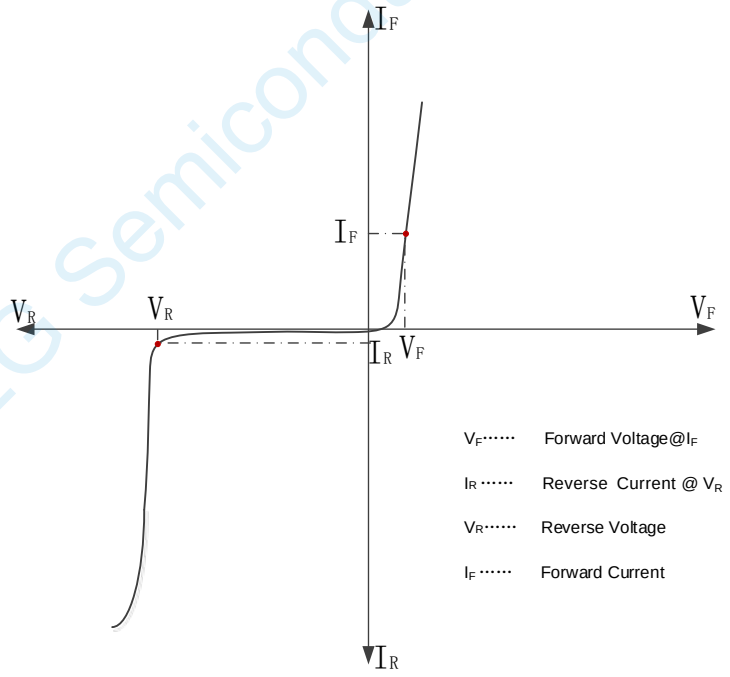
Electrical Characteristics（T_A = 25 °C, unless otherwisespecified）

Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Breakdown Voltage	V_{BR}	I_R=0.1mA	75			V
Reverse Current	I_R	V_{R2} =75V			5	nA
Forward Voltage	V_F	I_F=1mA I_F=10mA I_F=50mA I_F=150mA			0.90 1.00 1.10 1.25	V
Total Capacitance	C_T	V_R=0V,f=1MHz		2		pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA, R_L=100Ω I_{RR}=0.1xIR			3	ns

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



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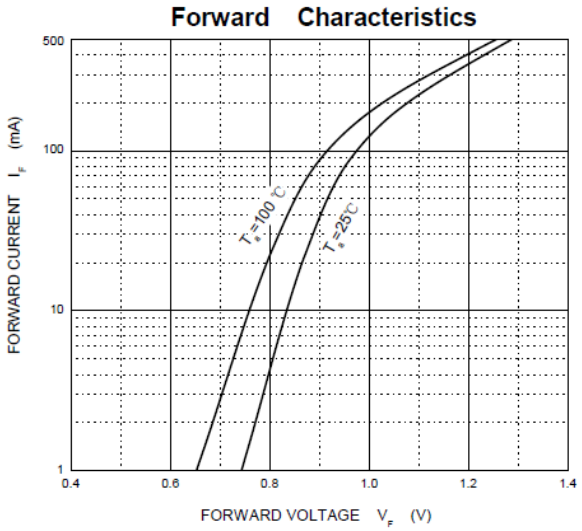
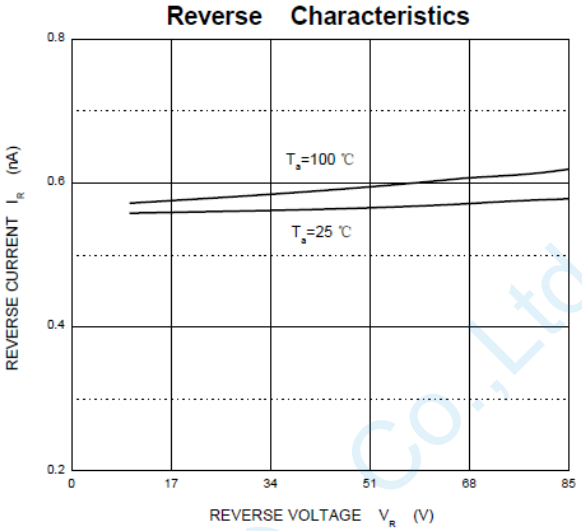
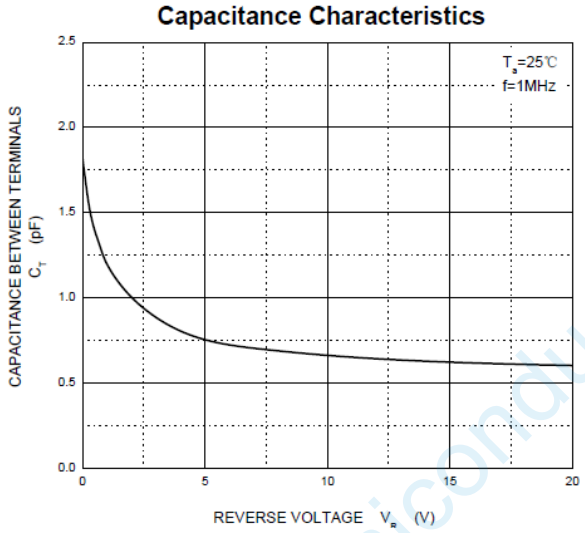
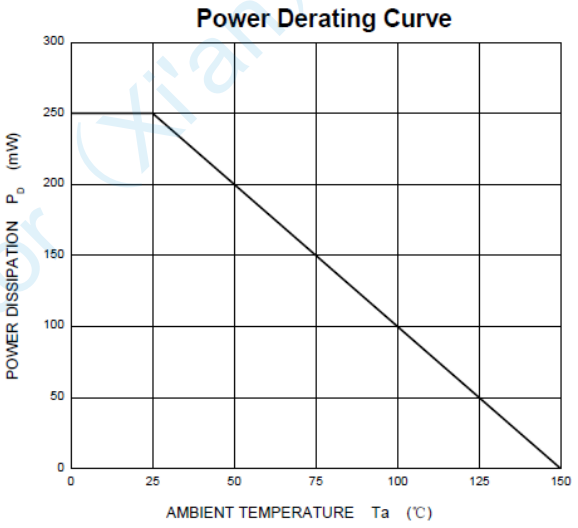
Typical Characteristics（T_A = 25 °C, unless otherwisespecified）









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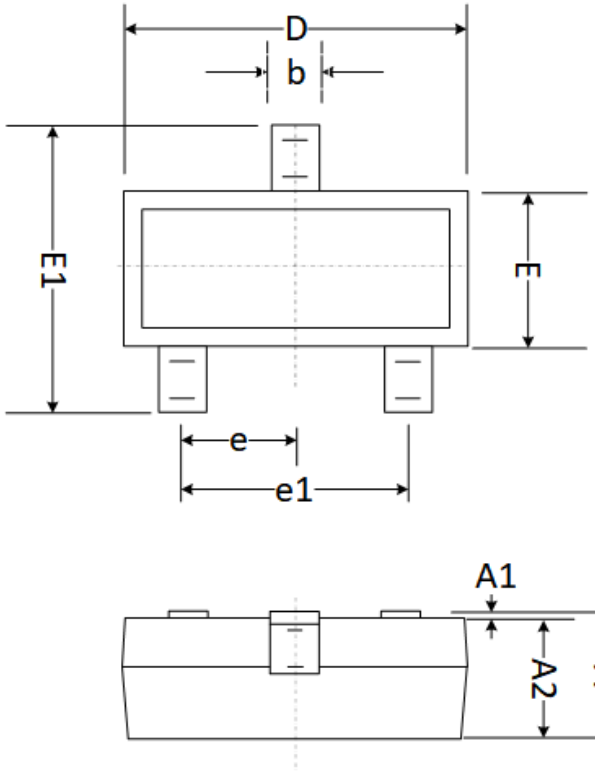
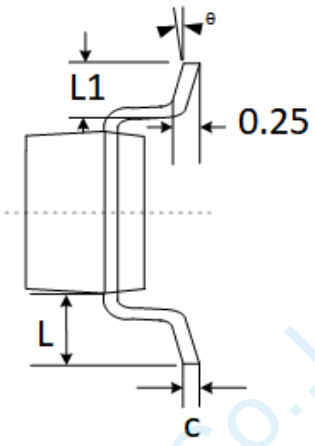
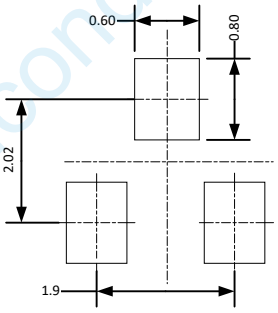
Package Information





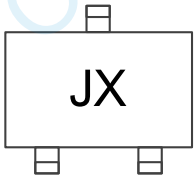
COMMON DIMENSION (MM)			
PKG	SOT23		
REF.	MIN.	NOM.	MAX.
A	0.80	-	1.25
A1	0.00	-	0.15
A2	0.80	1.00	1.20
b	0.25	-	0.55
c	0.08	-	0.22
D	2.70	2.90	3.10
E	1.15	1.30	1.75
E1	2.20	2.40	3.0
e	0.95TY		
e1	1.75	1.90	2.05
L	0.55RE		
L1	0.25	0.45	0.65
θ	0		8°

Recommend PCB Layout



Notes: This Pcb Layout Is For Reference Purposes Only

Marking



Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVW170T	GREEN	T/R	7 inch	3k/reel	10reel= 30k/box	4boxes=120k/carton

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