

Silicon Epitaxial Switching Diode

Feature:

- Fast Switching Diode



Marking : 1N4148WS = W2 with cathode band

Absolute Maximum Ratings

Description	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	75	V
Repetitive Peak Reverse Voltage	V_{RRM}	100	
Average Rectified Current Half Wave Rectification with Resistive Load $f \geq 50$ Hz	$*I_F (AV)$	150	mA
Surge Forward Current $t < 1$ s and $T_j = 25^\circ\text{C}$	I_{FSM}	350	
Power Dissipation at $T_{amb} = 25^\circ\text{C}$	$*P_{tot}$	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +150	

Thermal Resistance

Junction to Ambient in Free Air	$*R_{th (j-a)}$	650	$^\circ\text{C} / \text{W}$
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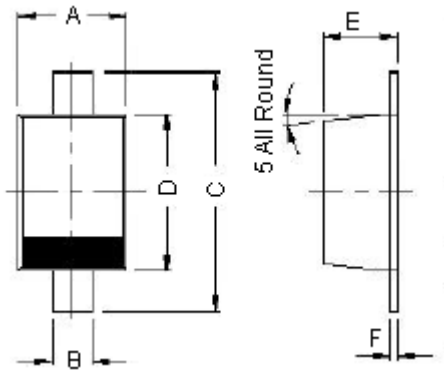
*Valid provided that electrodes are kept at ambient temperature

Electrical Characteristics ($T_{amb} = 25^\circ\text{C}$ unless specified otherwise)

Description	Symbol	Test Condition	Minimum	Maximum	Unit
Forward Voltage	V_F	$I_F = 10$ mA	-	1	V
Reverse Current	I_R	$V_R = 20$ V $V_R = 20$ V, $T_j = 150^\circ\text{C}$	-	25 50	nA μA
		$V_R = 75$ V	-	5	μA

Dynamic Characteristics					
Diode Capacitance Diode Capacitance	C_d	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	-	4	pF
Voltage Rise When Switching On (Tested with 50 ms Pulses)	V_{fr}	Tested with = 50 mA Pulses, $t_p = 0.1 \mu\text{s}$, Rise Time = <30 ns, $t_p = (5 \text{ to } 100) \text{ KHZ}$	-	2.5	V
Reverse Recovery Time	t_{rr}	$I_F = 10 \text{ mA}$, to $I_R = 60 \text{ mA}$ $R_L = 100 \Omega$ Measured at $I_R = 1 \text{ mA}$	-	4	ns
Rectification Efficiency	η_V	$f = 100 \text{ MHz}, V_{RF} = 2 \text{ V}$	0.45	-	-

Package SOD - 323 FL



Dimensions : Millimetres

Cathode is Marked by Band

Dimension	Minimum	Maximum
A	1.15	1.35
B	0.25	0.4
C	2.3	2.8
D	1.6	1.8
E	0.8	1.1
F	0	0.15

Dimensions : Millimetres

Part Number Table

Description	Part Number
Diode, H Speed, 100 V, 0.15 A, SOD323	1N4148WS

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