

SMD Type

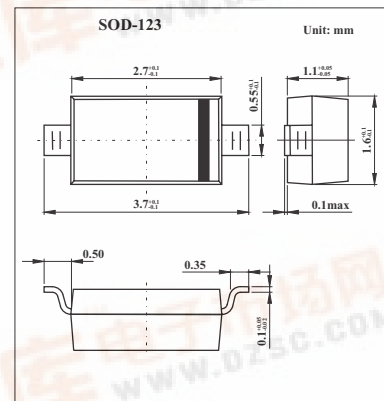
Diodes

SMALL SIGNAL DIODES

1N4151W

■ Features

- Silicon Epitaxial Planar Diode
- Fast switching diodes.
- This diode is also available in other case styles including:
the SOD-123 case with the type designation 1N4151W and
the Mini-MELF case with the type designation LL4151.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	50	V
Peak reverse voltage	V_{RM}	75	V
Rectified current (Average) Half wave rectification with resist.load at $T_{amb} = 25^\circ\text{C}$ and $f \geq 50\text{Hz}$	I_o	150 ⁽¹⁾	mA
Surge forward current at $t < 1\text{ s}$ and $T_j = 25^\circ\text{C}$	I_{FSM}	500	mA
Power dissipation at $T_{amb} = 25^\circ\text{C}$	P_{tot}	410 ⁽¹⁾	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_s	-65 to +150	$^\circ\text{C}$

NOTES::

(1) Valid provided that electrodes are kept at ambient temperature

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■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Characteristic	Symbol	Min	Typ	Max	Unit
Forward voltage at $I_F = 50\text{ mA}$	V_F			1.0	V
Leakage current					
at $V_R = 50\text{ V}$	I_R			50	nA
at $V_R = 20\text{ V}$, $T_j = 150^\circ\text{C}$	I_R			50	μA
Reverse breakdown voltage					
Tested with $5\text{ }\mu\text{A}$ pulses	$V_{(BR)R}$	75			V
Capacitance					
at $V_F = V_R = 0\text{ V}$	C_{tot}			2	pF
Reverse recovery time					
from $I_F = 10\text{ mA}$ through $I_R = 10\text{ mA}$, to $I_R = 1\text{ mA}$	t_{rr}			4	ns
from $I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $V_R = 6\text{ V}$, $R_L = 100\text{ }\Omega$	t_{rr}			2	ns
Thermal Resistance Junction to Ambient Air	R_{thJA}			450 ⁽¹⁾	$^\circ\text{C/W}$
Rectification Efficiency					
at $f = 100\text{ MHz}$, $V_{RF} = 2\text{ V}$	η_V	0.45			

NOTES::

(1) Valid provided that electrodes are kept at ambient temperature (SOD-123)