

## 1N4148WT FAST SWITCHING DIODE



### Features

- Low Forward Voltage Drop
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- “-A” is an AEC-Q101 qualified device

### Circuit Diagram



### Maximum Ratings@T<sub>A</sub>=25°C unless otherwise specified

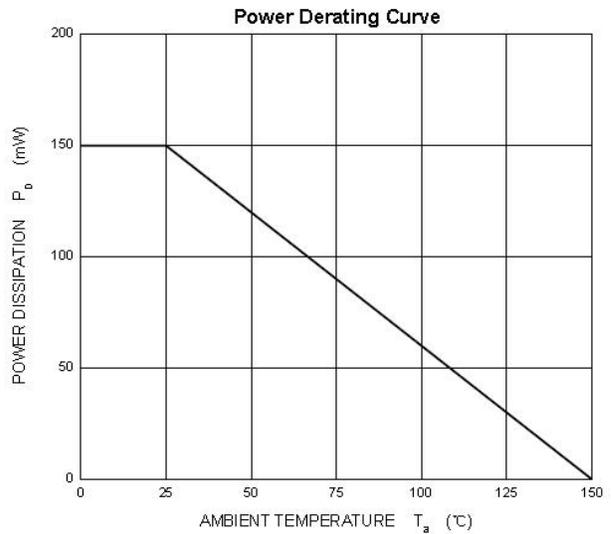
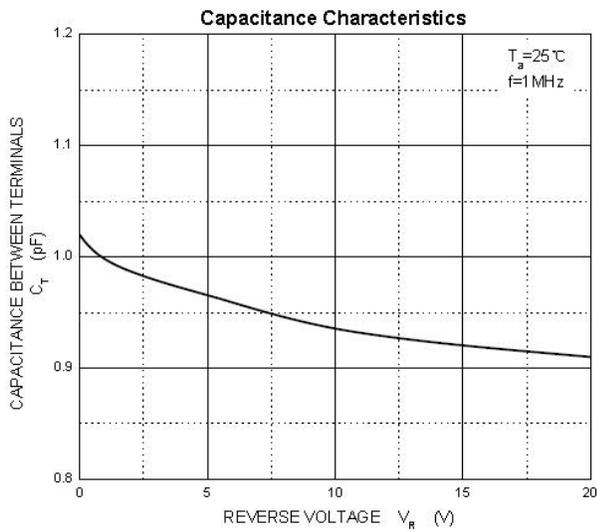
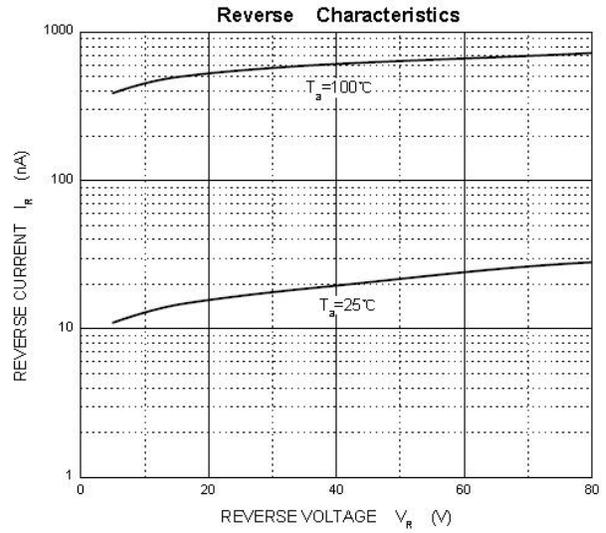
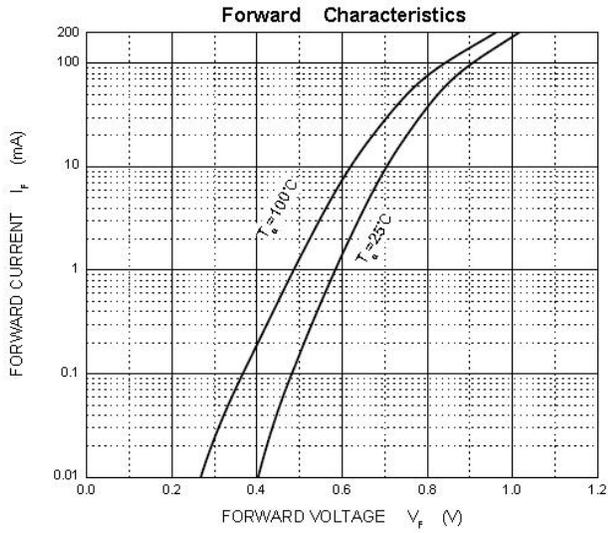
Parameter	Symbol	Value	Unit
Non-repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage	V <sub>R(RM)</sub>	75	V
Working Peak Reverse Voltage	V <sub>R(WM)</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	53	V
Average Rectified Output Current	I <sub>O</sub>	0.15	A
Non-repetitive Peak Forward Surge Current @ t=8.3ms	I <sub>FSM</sub>	300	mA
Power Dissipation	P <sub>D</sub>	150	mW
Thermal Resistance from Junction to Ambient	R <sub>ΘJA</sub>	833	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55~+150	°C

### Electrical Characteristics@T<sub>A</sub>=25°C unless otherwise specified

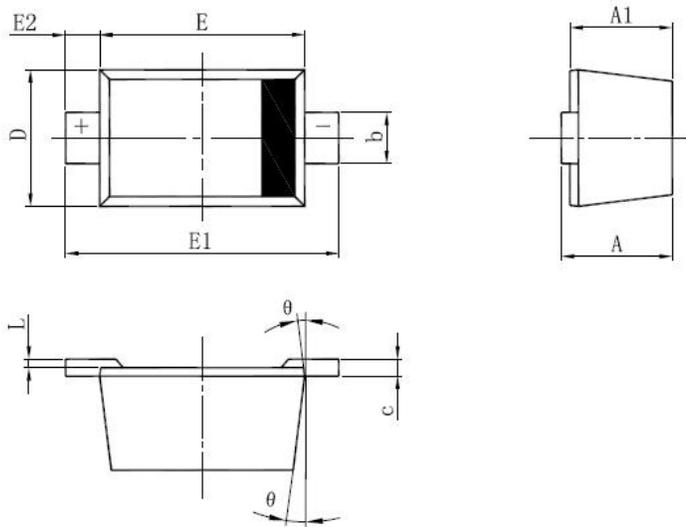
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	V <sub>(BR)</sub>	I <sub>R</sub> =1μA	75	-	-	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =75V	-	-	1	μA
		V <sub>R</sub> =20V	-	-	25	nA
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =1mA	-	-	0.715	V
		I <sub>F</sub> =10mA	-	-	0.855	
		I <sub>F</sub> =50mA	-	-	1	
		I <sub>F</sub> =150mA	-	-	1.25	
Total capacitance	C <sub>tot</sub>	V <sub>R</sub> =0V, f=1MHz	-	-	2	pF
Reverse recovery time	T <sub>rr</sub>	I <sub>F</sub> = I <sub>R</sub> =10mA, I <sub>rr</sub> =0.1×I <sub>R</sub> , R <sub>L</sub> =100Ω	-	-	4	ns

\* Pulse width < 300 μs, duty cycle < 2%

**Ratings and Characteristics Curves**



**Mechanical Dimensions SOD-523**



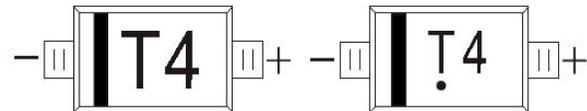
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF.	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

**Ordering Information**

Device	Package	Shipping
1N4148WT	SOD-523	8000pcs / reel

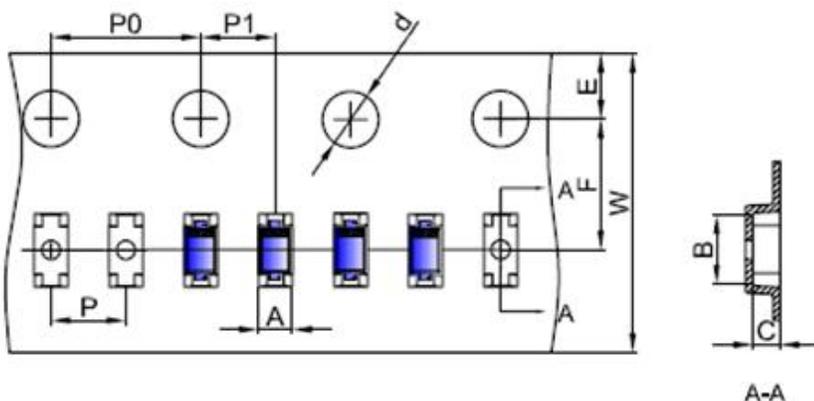
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**



Solid dot = Green molding compound device, if none, the normal device.

**Carrier Tape & Reel Specification SOD-523**



SYMBOL	Millimeters	
	Min.	Max.
A	0.85	0.95
B	1.89	1.99
C	0.68	0.78
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	1.90	2.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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