

# 1N4148WT-E

Reverse Voltage 100 Volts Forward Current - 0.15 Ampere

## 1. Description

FAST SWITCHING DIODES

## 2. Features

- Small Package
- Low Reverse Current
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion

## 3. Application

- High frequency rectifier
- Signal switching

## 4. Mechanical Data

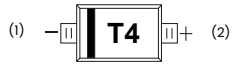
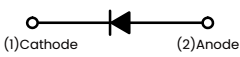
- Case : SOD-523 Molded Plastic
- Polarity : Polarity symbols marked on case
- Marking: T4

## 5. Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Reverse Breakdown voltage at $I_R=1\ \mu\text{A}$	$V_{(BR)R}$	75	V
Forward continuous current	$I_{FM}$	300	mA
Average rectified output current	$I_o$	150	mA
Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$	$I_{FSM}$	2	A
Power Dissipation	$P_D$	150	mW
Thermal resistance junction to ambient Junction	$R_{JA}$	833	$^{\circ}\text{C}/\text{W}$
Temperature	$T_J$	125	$^{\circ}\text{C}$
Storage Temperature	$T_{stg}$	-55~+125	$^{\circ}\text{C}$

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## 6. Pinning information

Pin	Symbol	Description	Simplified outline	Equivalent Circuit	Marking	Package
1	-	Cathode			T4	SOD-523
2	+	Anode				

## 7. Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbols	Condition	Min	Typ	Max	Unit
Forward voltage	$V_{F1}$	$I_F=1.0\text{mA}$	-	-	0.715	V
	$V_{F2}$	$I_F=10\text{mA}$	-	-	0.855	V
	$V_{F3}$	$I_F=50\text{mA}$	-	-	1.0	V
	$V_{F4}$	$I_F=150\text{mA}$	-	-	1.25	V
Reverse current	$I_{R1}$	$V_R=20\text{V}$	-	-	0.025	$\mu\text{A}$
	$I_{R2}$	$V_R=75\text{V}$	-	-	1	$\mu\text{A}$
Capacitance between terminals	$C_{\text{tot}}$	$V_R=0\text{V}$ , $f=1.0\text{MHz}$	-	-	2	pF
Reverse recovery time	$t_{\text{rr}}$	$I_F=I_R=10\text{mA}$ $I_{\text{rr}}=0.1 \times I_R$ , $R_L=100\Omega$	-	-	4	ns

## 8. Typical Characteristics

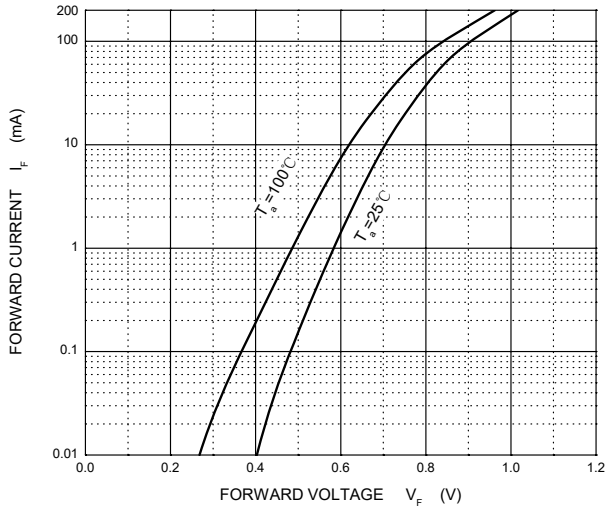


Figure 1. Forward Characteristics

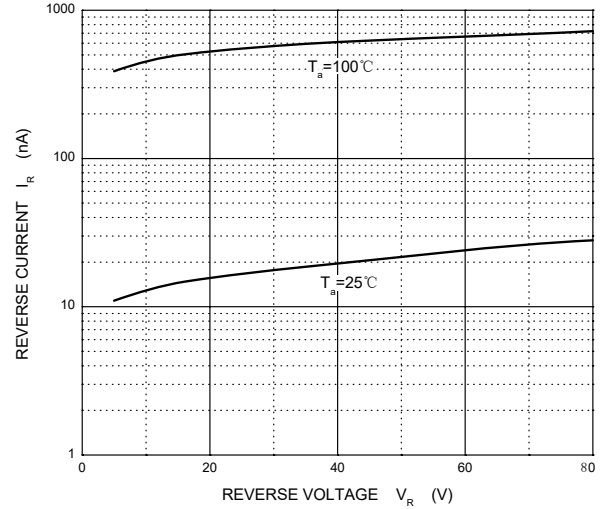


Figure 2. Reverse Characteristics

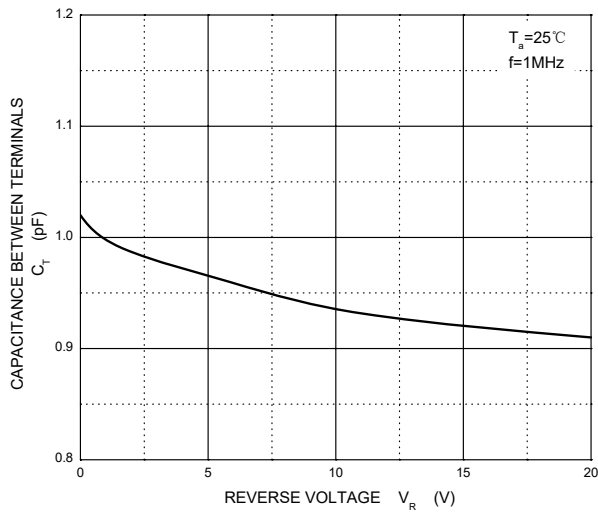


Figure 3. Capacitance Characteristics

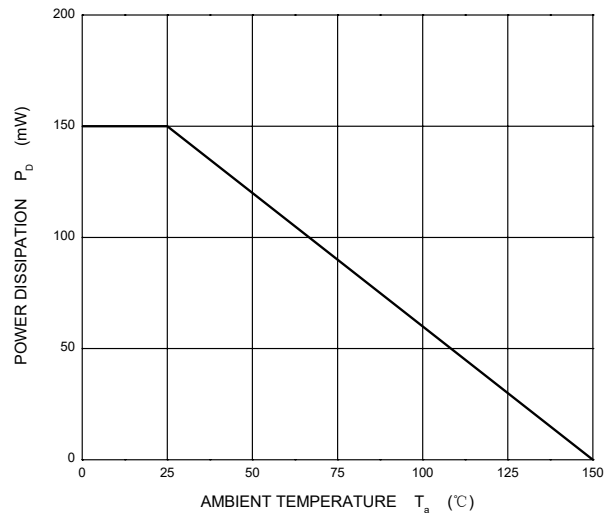
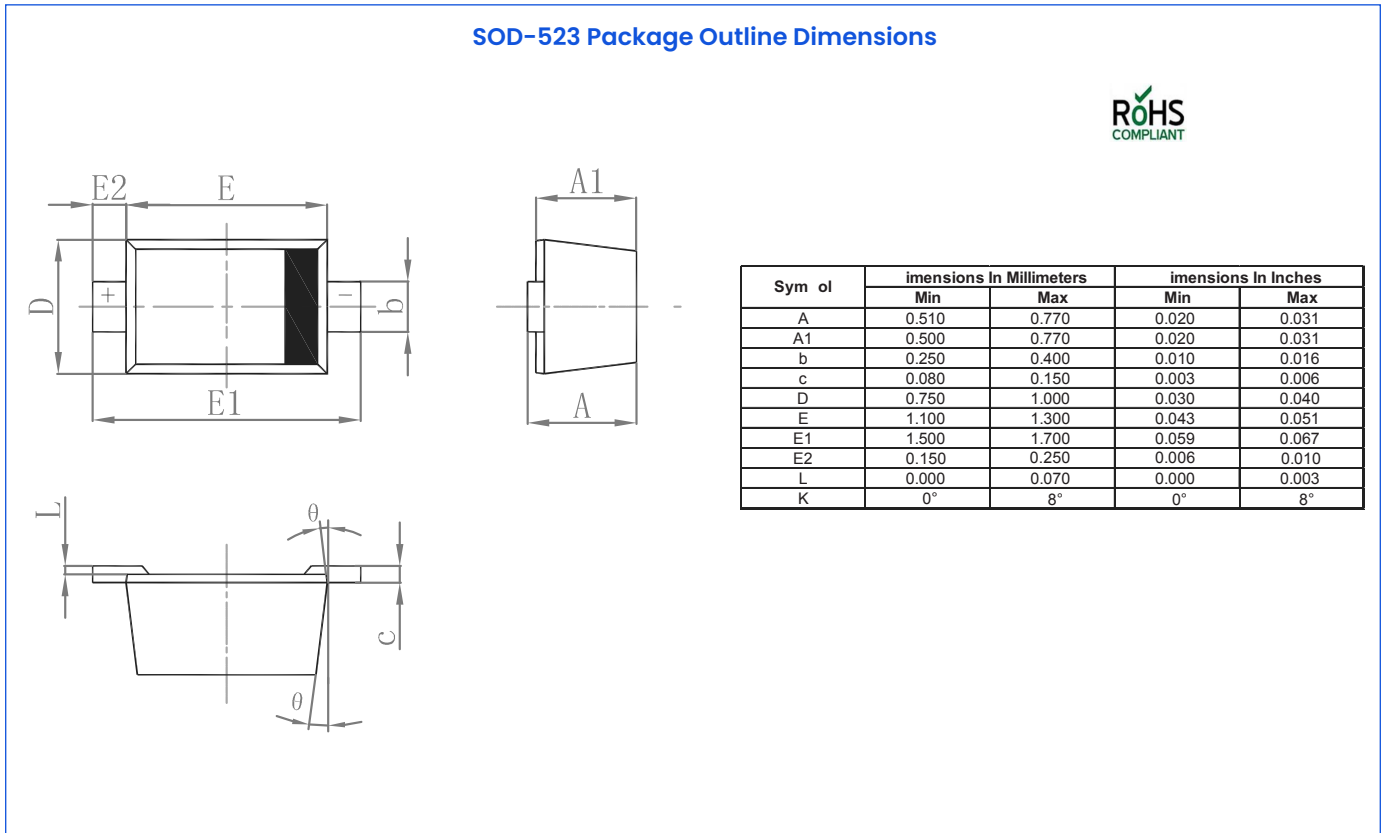


Figure 4. Power Derating Curve

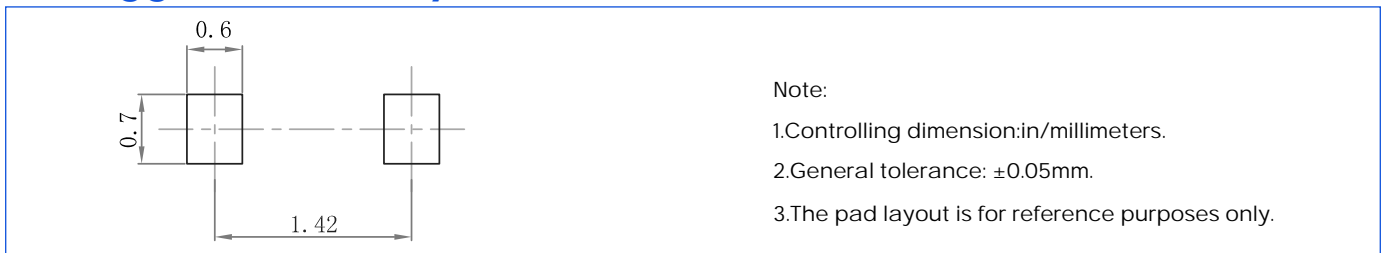
The curve above is for reference only.

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## 9. Outline Drawing



## 10. Suggested Pad Layout



## 11. PACKAGE SPECIFICATIONS

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
SOD-523	7'	178	3000	183×188×80	45,000	386×265×215	180,000

## 12.Important Notice and Disclaimer

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