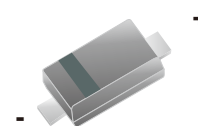


SMD Switching Diode

1N4148WT

RoHS Device

Halogen Free

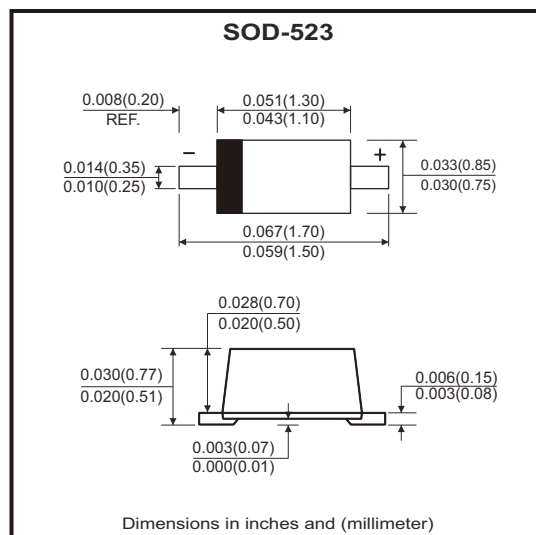


Features

- Fast switching device ($T_{rr} < 4.0\text{ns}$).
- Power dissipation of 150mW.
- High stability and high reliability.
- Low reverse leakage.

Mechanical data

- Case: SOD-523, molded plastic.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.



Circuit Diagram



Maximum Rating (at $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	75	V
Peak reverse voltage	V_{RM}	100	V
Power dissipation	P_D	150	mW
Operating junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Working inverse voltage	W_{IV}	75	V
Average rectified current	I_O	150	mA
Non-repetitive peak forward current	I_{FM}	300	mA
Peak forward surge current @ $t_p = 1\mu\text{s}$, $T_A = 25^\circ\text{C}$	I_{FSM}	2.0	A

SMD Switching Diode

Electrical Characteristics (at $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage	$I_R = 100\mu\text{A}$ $I_R = 5\mu\text{A}$	B_V	100 75			V
Reverse leakage current	$V_R = 20\text{V}$	I_R			25	nA
	$V_R = 75\text{V}$				1	μA
Forward voltage	$I_F = 1.0\text{mA}$	V_F			0.715	V
	$I_F = 10\text{mA}$				0.855	
	$I_F = 50\text{mA}$				1.00	
	$I_F = 150\text{mA}$				1.25	
Reverse recovery time	$I_F = I_R = 10\text{mA}$, $R_L = 100\Omega$ $I_{rr} = 0.1 \times I_R$	T_{RR}			4	nS
Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_T			2	pF

Rating and Characteristic Curves (1N4148WT)

Fig.1 - Forward Characteristics

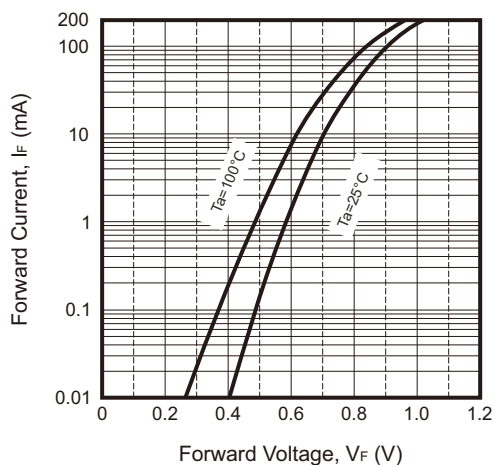


Fig.2 - Reverse Characteristics

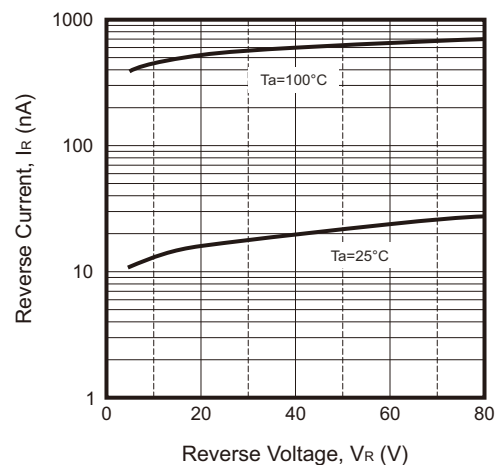


Fig.3 - Capacitance Characteristics

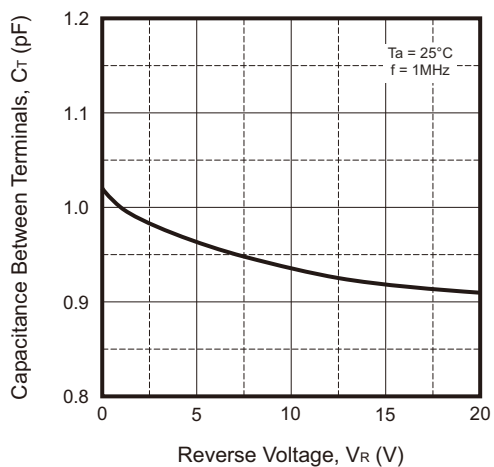
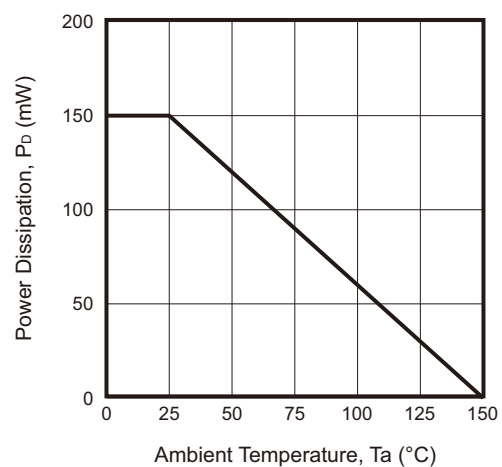
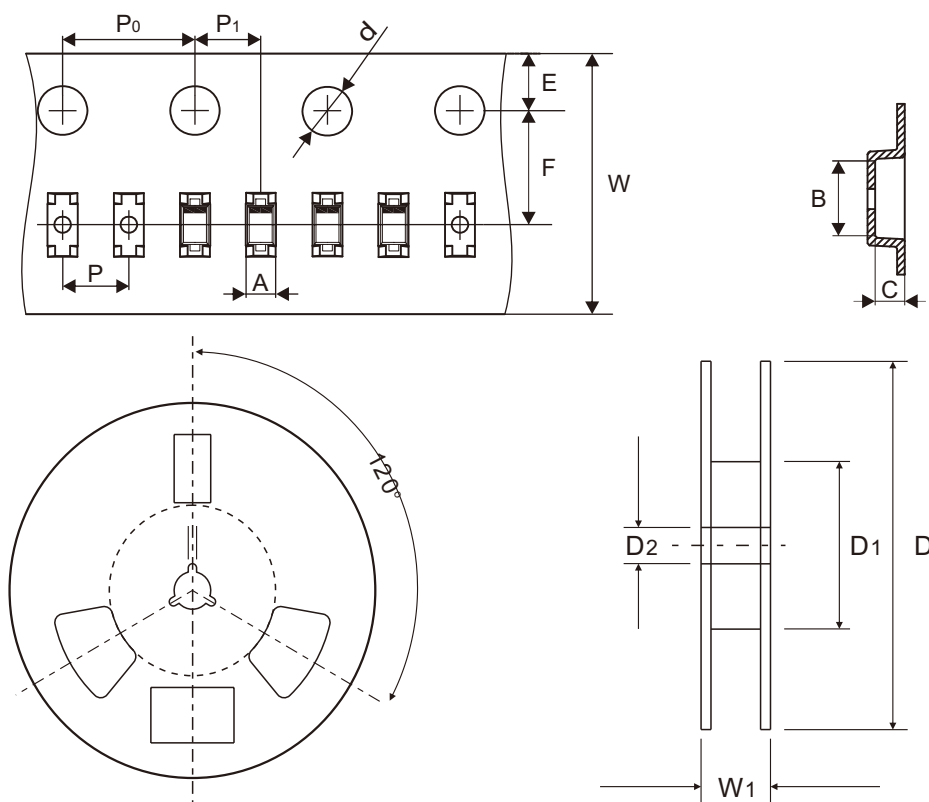
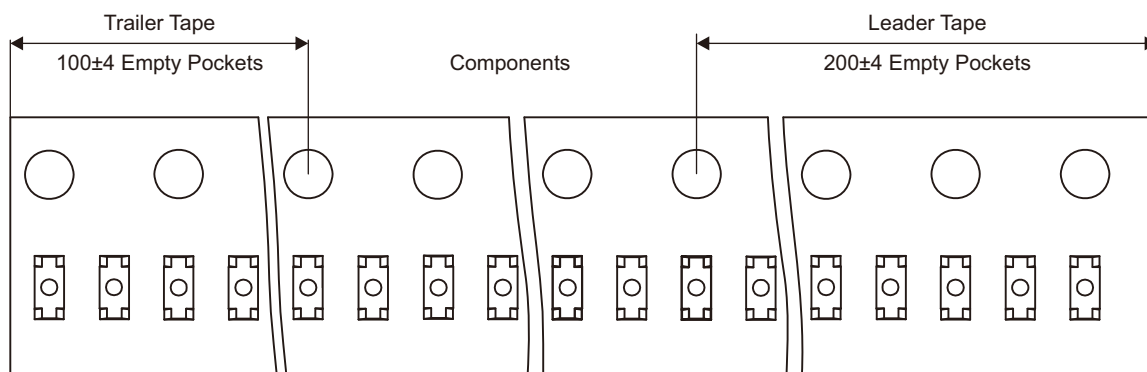


Fig.4 - Power Derating Curve



SMD Switching Diode

Reel Taping Specification



SOD-523	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.90 ± 0.05	1.94 ± 0.05	0.73 ± 0.05	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.035 ± 0.002	0.076 ± 0.002	0.029 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOD-523	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$8.00 + 0.30 - 0.10$	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.079 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.315 + 0.012 - 0.004$	0.484 ± 0.039

SMD Switching Diode

Marking Code

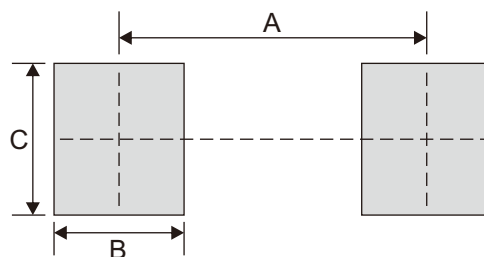
Part Number	Marking Code
1N4148WT	T4



■ = Cathode band

Suggested PAD Layout

SIZE	SOD-523	
	(mm)	(inch)
A	1.42	0.056
B	0.60	0.024
C	0.70	0.028



Note: 1. The pad layout is for reference purpose only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-523	3,000	7