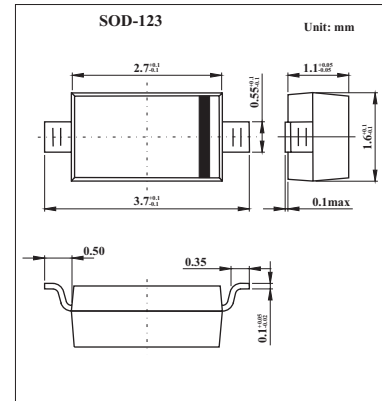


Surface Mount Fast Switching Diodes

1N4148W

■ Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

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

Parameter	Symbol	Rating	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive reverse voltage	V_{RRM}	75	V
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
RMS reverse voltage	$V_{R(RMS)}$	53	V
Average rectified output current	I_O	150	mA
Forward continuous current	I_{FM}	300	mA
Non-repetitive peak forward surge current @ $t = 1.0\text{s}$	I_{FSM}	1.0	A
@ $t = 1.0\ \mu\text{s}$		2.0	
Power dissipation	P_D	400	mW
Typical thermal resistance, junction to ambient air	$R_{\theta JA}$	315	$^\circ\text{C}/\text{W}$
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{STG}	-65 to 150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Forward voltage	V_{F1}	$I_F = 1\text{mA}$			0.715	V
	V_{F2}	$I_F = 10\text{mA}$			0.855	
	V_{F3}	$I_F = 50\text{mA}$			1.0	
	V_{F4}	$I_F = 150\text{mA}$			1.25	
Peak reverse current	I_{R1}	$V_R = 75\text{V}$			1	μA
	I_{R2}	$V_R = 20\text{V}$			25	μA
Capacitance	C_J	$V_R = 0, f = 1.0\text{MHz}$			2	pF
Reverse recovery time	t_{rr}	$I_F = I_{RM}, I_{rr} = 0.1 \times I_{RM}, R_L = 100\Omega$			4	ns

■ Marking

Marking	T4
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■ Typical Characteristic

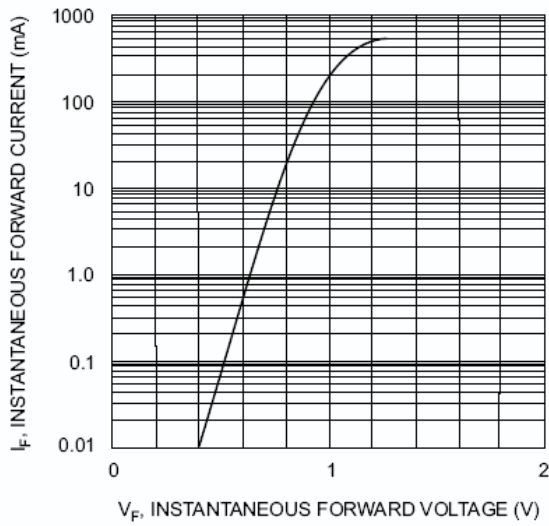


Fig. 1 Forward Characteristics

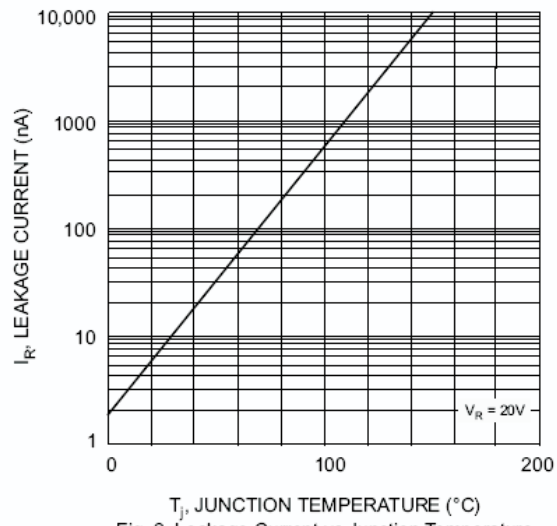


Fig. 2 Leakage Current vs Junction Temperature