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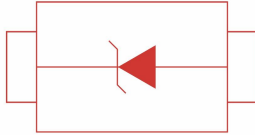

1N4148W-MS

Product specification

Features

- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications
- High conductance

Reference News

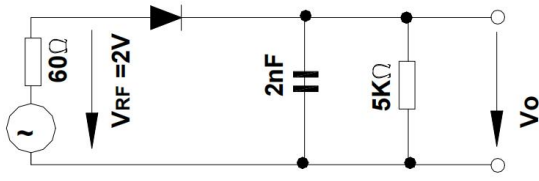
PACKAGE OUTLINE	P-Channel MOSFET	Marking
		
SOD-123		

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	150	A
Non-repetitive Peak Forward Surge Current at t = 1 μ s	I_{FSM}	2	A
Power Dissipation	P_{tot}	400	W
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	312	$^{\circ}C/W$
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^{\circ}C$

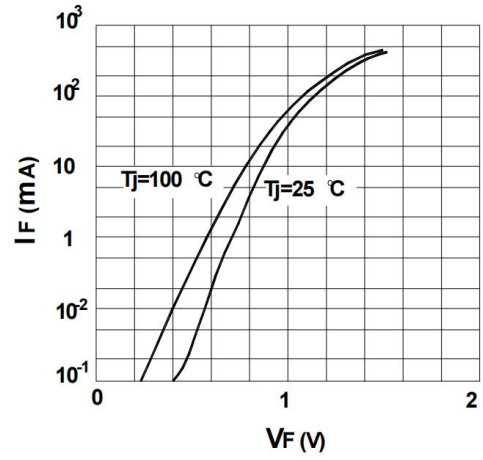
Characteristics at Ta = 25 °C

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 1 \mu\text{A}$	$V_{(BR)R}$	75	-	V
Forward Voltage at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 150 \text{ mA}$	V_F	- - - -	0.715 0.855 1 1.25	V
Peak Reverse Current at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}, T_J = 150 \text{ }^\circ\text{C}$ at $V_R = 25 \text{ V}, T_J = 150 \text{ }^\circ\text{C}$	I_R	- - - -	1 25 50 30	μA nA μA μA
Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_T	-	2	pF
Reverse Recovery Time at $I_{rr} = 0.1 \times I_R, I_F = I_R = 10 \text{ mA}, R_L = 100 \Omega$	t_{rr}	-	4	ns

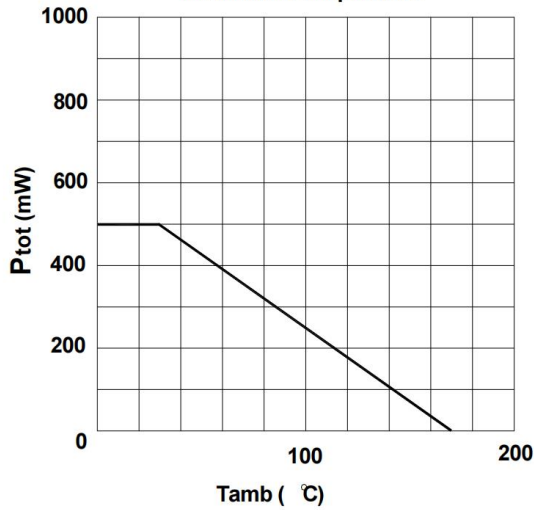


Rectification Efficiency Measurement Circuit

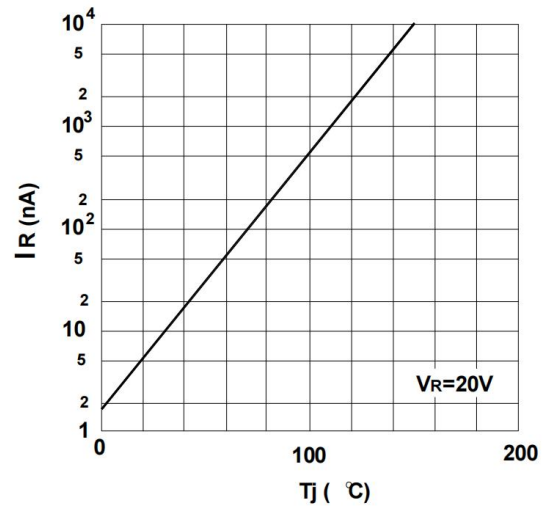
Forward characteristics



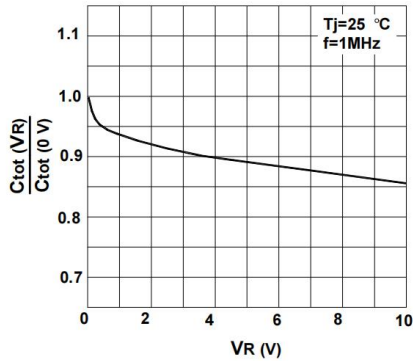
Amissible power dissipation vs. ambient temperature



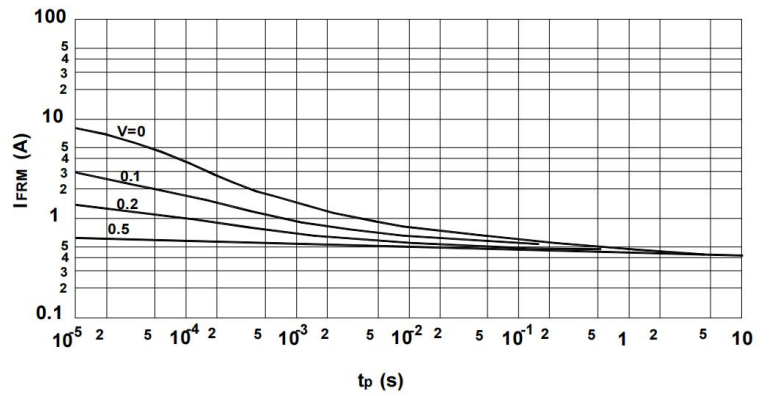
Leakage current vs. junction temperature



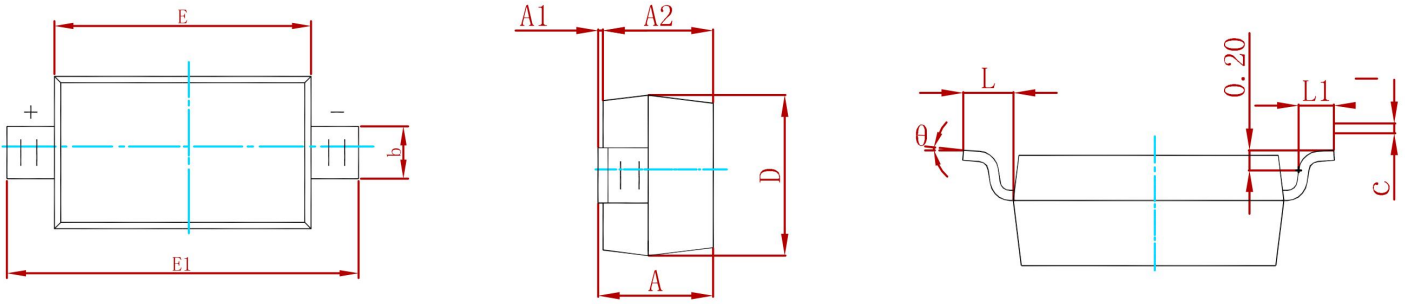
Reverse capacitance vs. reverse voltage



Amissible repetitive peak forward current vs. pulse duration

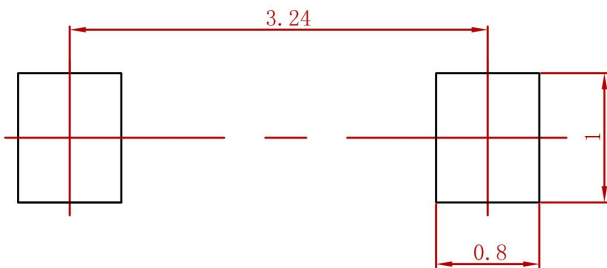


PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
1N4148W-MS	SOD-123	3000

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