BORN SEMICONDUCTOR

1N4148KE

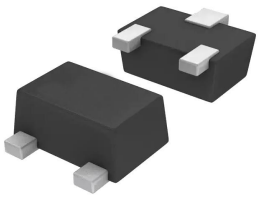
Fast Switching Diode

Features

- Fast Switching Device (T_{RR} <4.0 nS)
- Power Dissipation of 150mW
- High Stability and High Reliability
- Low reverse leakage

Package

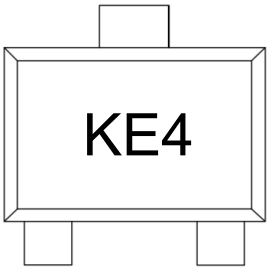
SOT-723



General Description

- SOT-723 Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
1N4148KE	SOT-723	KE4	10K	Tape and reel

Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_R	Maximum Recurrent Peak Reverse Voltage	75	V
V_{RM}	Maximum RMS Voltage	100	V
P_d	Power Dissipation	150	mW
I_O	Average Rectified Current	0.15	A
I_{FM}	Non-repetitive Peak Forward Current	0.3	A
I_{FSM}	Peak Forward Surge Current @t_p=1us; T_A=25°C	2.0	A
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	833	°C/W
T_J	Operating Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

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Revision: 2022-Jan-1-A

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Fast Switching Diode

Electrical Characteristics (@T_A=25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_B	Breakdown Voltage	I_R=100uA	100	–	–	V
		I_R=5uA	75	–	–	
I_R	Reverse Leakage Current	V_R=20V	–	–	25	nA
		V_R=75V	–	–	5	uA
V_F	Forward Voltage	I_F=1mA	–	–	0.72	V
		I_F=10mA	–	–	0.95	
		I_F=150mA	–	–	1.25	
T_{rr}	Reverse Recovery Time	I_F=I_R=10mA, I_{rr}=0.1xI_R, R_L=100Ω	–	–	4	nS
C_D	Diode Capacitance	V_R=0V, f=1MHZ	–	–	4	pF

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Fast Switching Diode

Typical Performance Characteristics (T_J = 25 °C, unless otherwise noted)

Figure 1: Typical Forward Characteristics

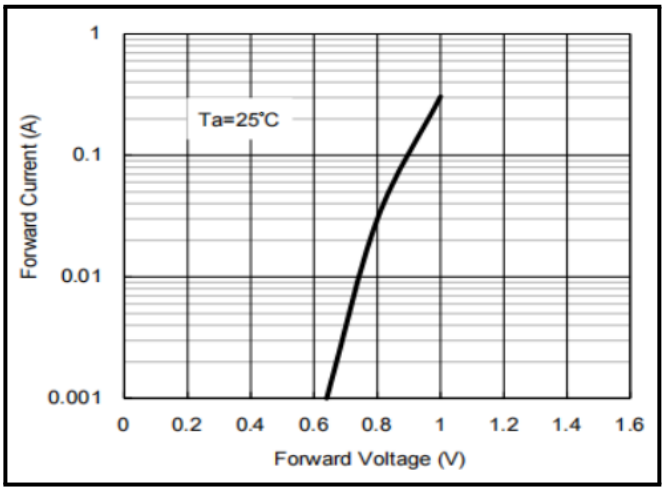


Figure 2: Reverse Current vs. Reverse Voltage

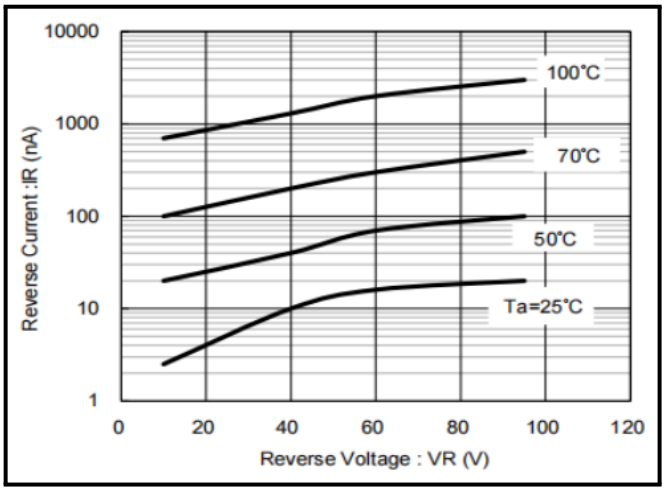


Figure 3: Admissible Power Dissipation Curve

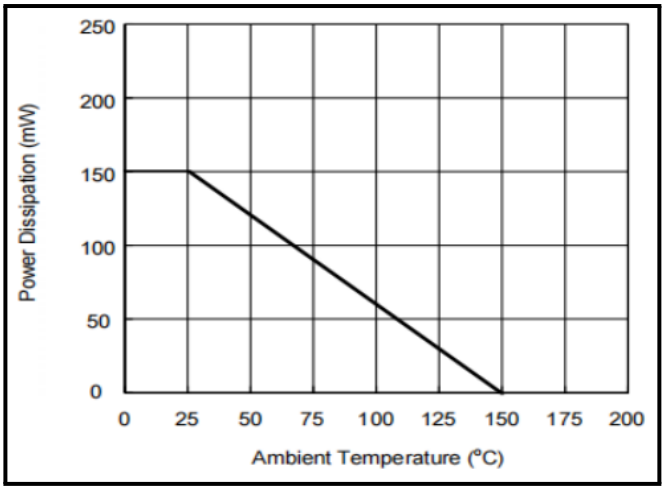
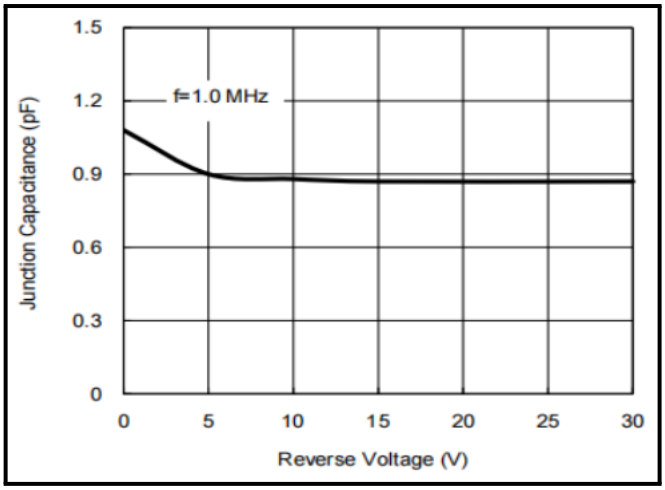


Figure 4: Typical Junction Capacitance



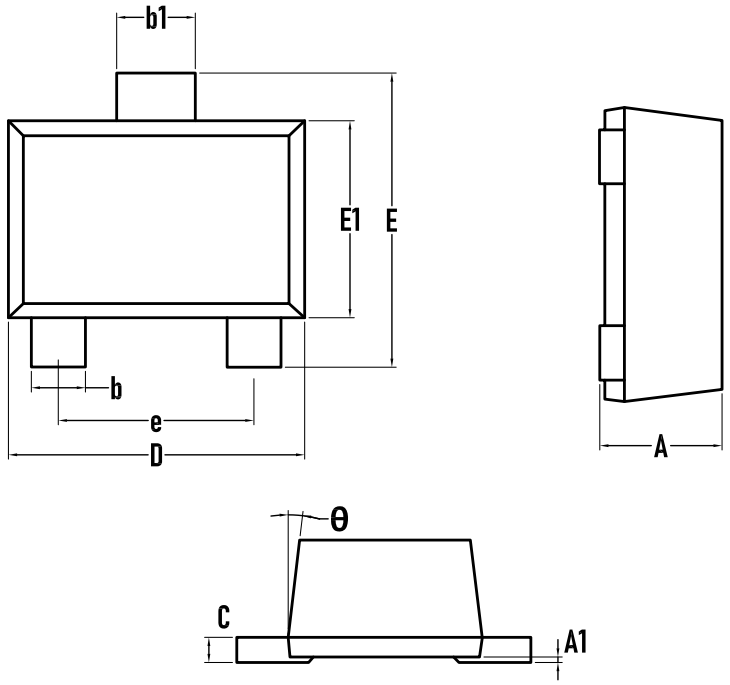
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Fast Switching Diode

Outline Drawing – SOT-723



SYMBOL	MILLIMETER	
	MIN.	MAX
A	0.430	0.500
A1	0.000	0.050
b	0.170	0.270
b1	0.270	0.370
C	0.080	0.150
D	1.150	1.250
E	1.150	1.250
E1	0.750	0.850
e	0.800TYP.	
θ	0°	7°

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