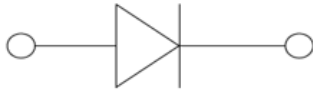


## High Speed Switching Diode



**SOD123**

### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- $V_R$  75V
- $I_{FAV}$  150mA
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

- Extreme fast switches

### Mechanical Data

- **Case:** SOD123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** T4

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Reverse Voltage	$V_R$	V		75
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		100
Average Forward Current	$I_{FAV}$	mA		150
Repetitive Peak Forward Current	$I_{FRM}$	mA		300
Peak Forward Surge Current	$I_{FSM}$	A	Pulse width=1 us Pulse width=1 s	2 1
Power Dissipation	$P_{tot}$	mW		400
Thermal Resistance Junction to Ambient	$R_{thJA}$	K/W		315
Maximum Junction Temperature	$T_j$	$^\circ\text{C}$		-55 to +150
Storage Temperature Range	$T_{stg}$	$^\circ\text{C}$		-55 to +150



# 1N4148WQ

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =1mA	0.715
			I <sub>F</sub> =10mA	0.855
			I <sub>F</sub> =50mA	1.0
			I <sub>F</sub> =150mA	1.25
Reverse Current	I <sub>R</sub>	μA	V <sub>R</sub> =20V	0.025
			V <sub>R</sub> =75V	1.0
Breakdown Voltage	V <sub>R</sub>	V	I <sub>R</sub> =10μA	75
Diode Capacitance	C <sub>D</sub>	pF	V <sub>R</sub> =V <sub>F</sub> =0V, f =1MHz	4
Reverse Recovery Time	t <sub>rr</sub>	ns	I <sub>F</sub> =10mA, I <sub>rr</sub> =0.1I <sub>R</sub> , R <sub>L</sub> =100Ω	4

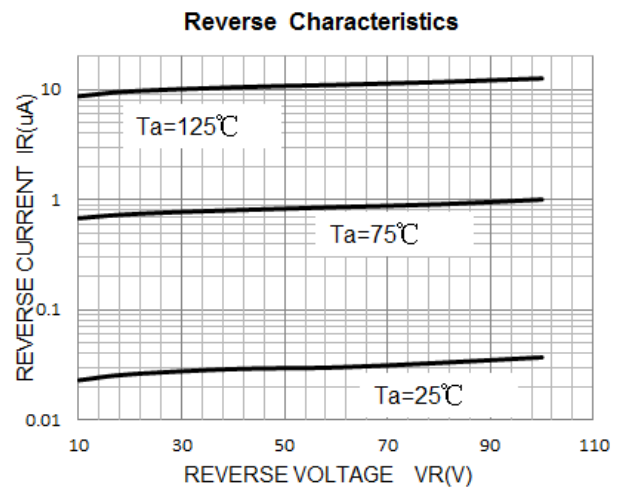
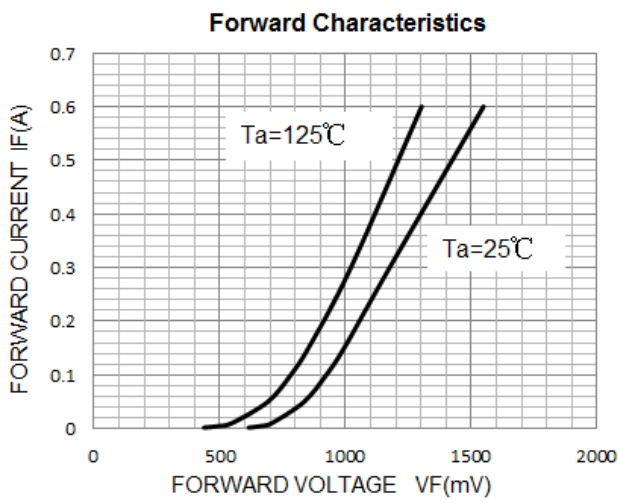
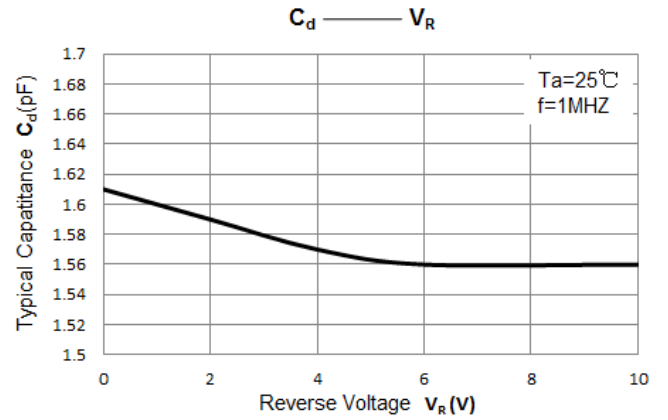
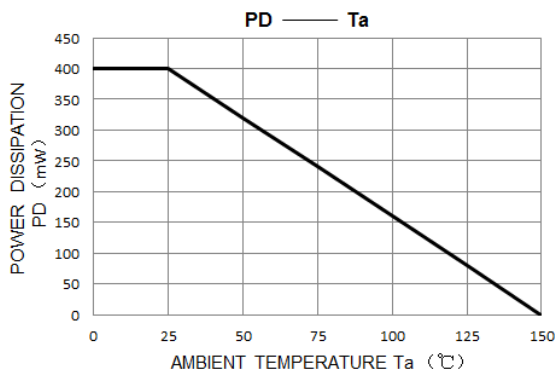
## ■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
1N4148WQ	F2	Approximate 0.010	3000	30000	120000	7" reel



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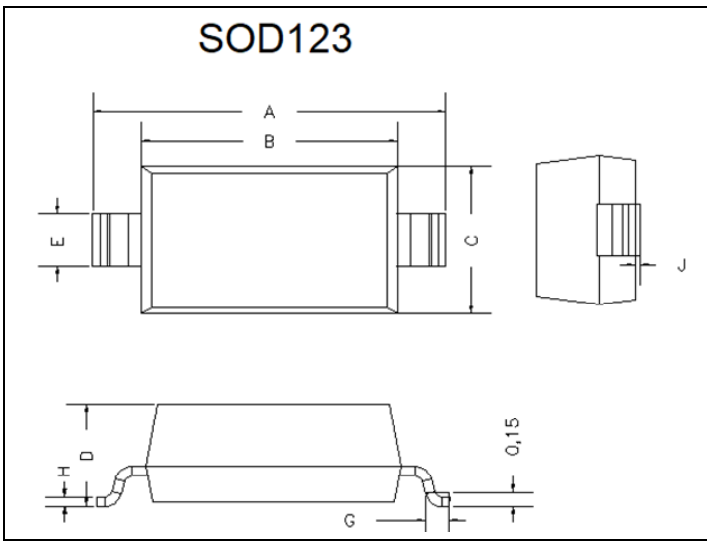
## ■ Characteristics (Typical)





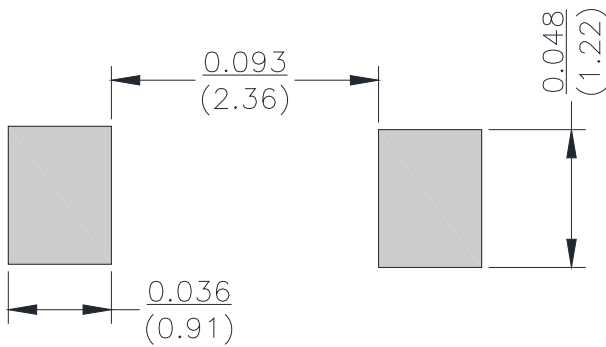
# 1N4148WQ

## ■ Outline Dimensions



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	-	0.053	-	1.35	
E	0.012	0.031	0.30	0.78	
G	0.006	-	0.15	-	
H	-	0.010	-	0.25	
J	-	0.006	-	0.15	

## ■ Soldering Footprint



Unit:  $\frac{\text{inch}}{\text{mm}}$



## 1N4148WQ

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