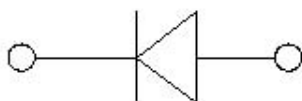
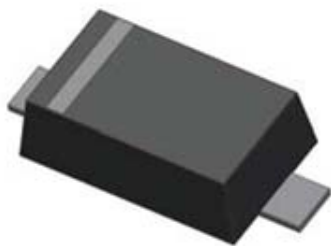


Small-Signal Fast Switching Diodes



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_R 100V
- I_{FAV} 150mA
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- Extreme fast switches
- Automotive

Mechanical Data

- **Case:** SOD523
- **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
Repetitive Peak Reverse Voltage	V_{RRM}	V		100
Reverse Voltage	V_R	V	$I_R=100\mu\text{A}$	100
Peak Forward Surge Current	I_{FSM}	A	Pulse width=1 μs Pulse width=1 s	2.5 1
Average Forward Current	I_{FAV}	mA		150
Power Dissipation	$P_{tot}^{(1)}$	mW		150
Thermal Resistance Junction to Ambient	$R_{thJA}^{(1)}$	$^\circ\text{C}/\text{W}$		833
Junction Temperature	T_J	$^\circ\text{C}$		-55 to +150
Storage Temperature Range	T_{stg}	$^\circ\text{C}$		-55 to +150

(1) Device mounted on an FR4 PCB (1.0 x 1.0 x 0.06 inch), single-sided copper, tin-plated and standard footprint.

■Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
Breakdown Voltage	V_R	V	$I_R=100\mu\text{A}$	100	
Forward Voltage	V_F	V	$I_F=5\text{mA}$		0.715
			$I_F=10\text{mA}$		0.855
			$I_F=100\text{mA}$		1.00
			$I_F=150\text{mA}$		1.25
Reverse Leakage Current	I_{R1}	nA	$V_R=20\text{V}$		25
	I_{R2}	μA	$V_R=75\text{V}$		1
Capacitance	C	pF	$V_R=0\text{V}$, $f=1\text{MHz}$		4
Reverse Recovery Time	T_{rr}	ns	$I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \cdot I_R$, $R_L=100\Omega$		4



1N4148WTQ

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
1N4148WTQ	F2	Approximate 0.002	8000	80000	320000	7" reel

■ Characteristics (Typical)

Fig.1: P_D-T_A

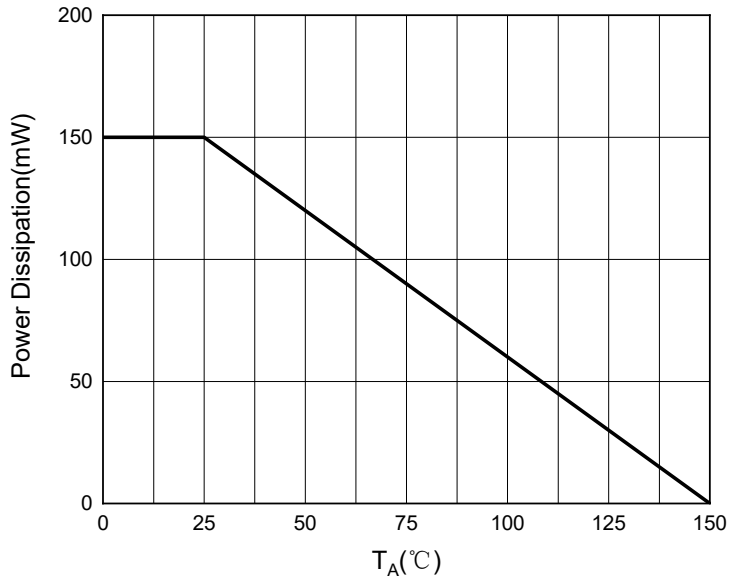


Fig.2: Capacitance Characteristics

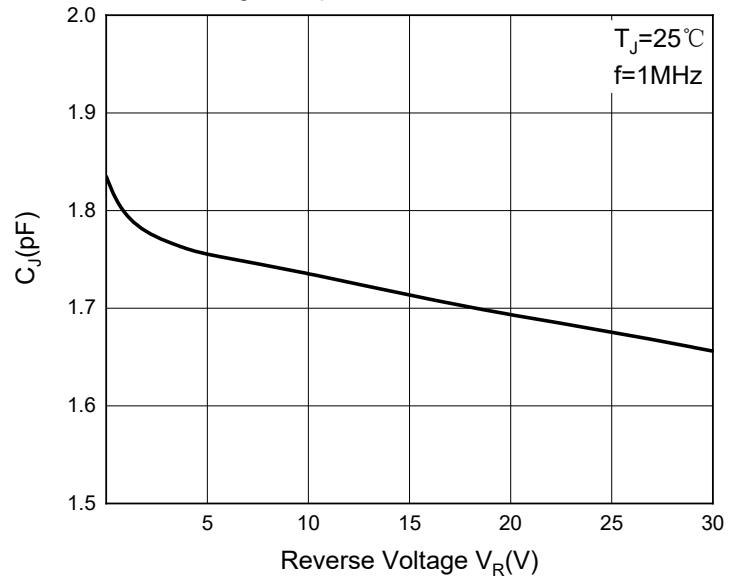


Fig3: Forward Characteristics

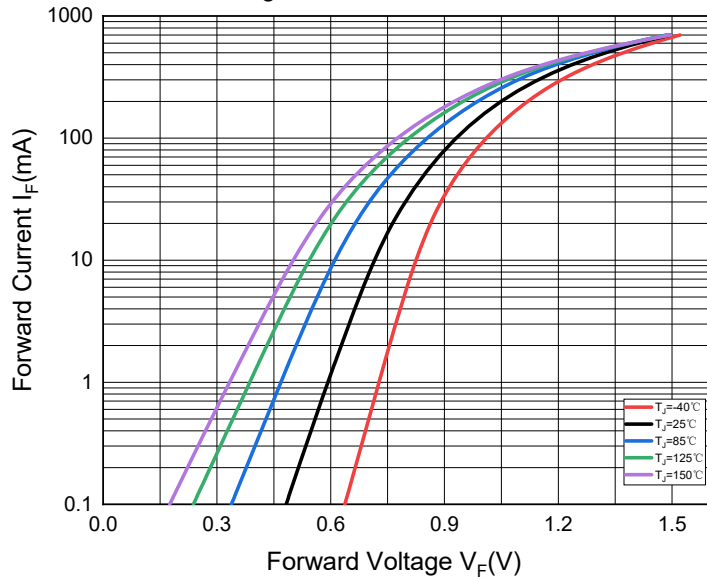
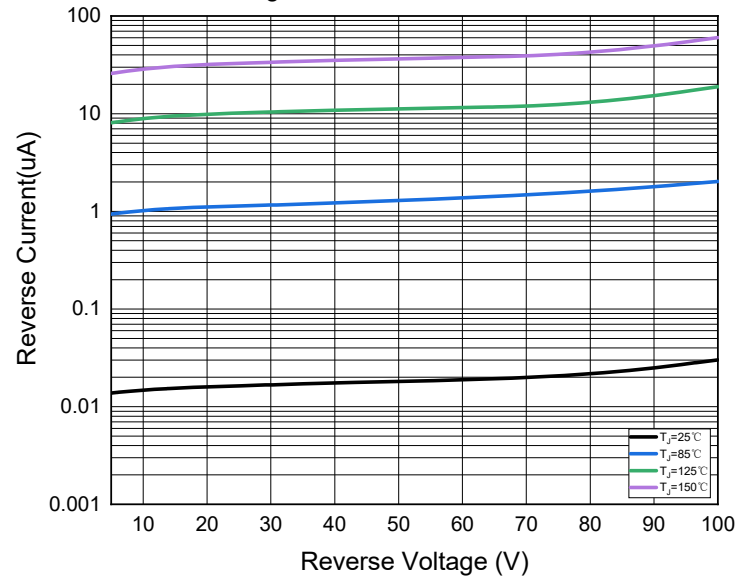


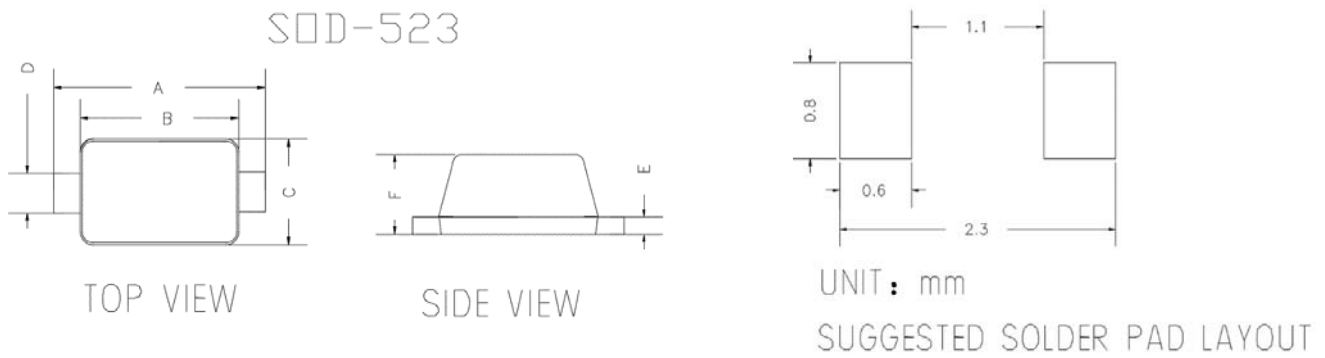
Fig.4: Reverse Characteristics





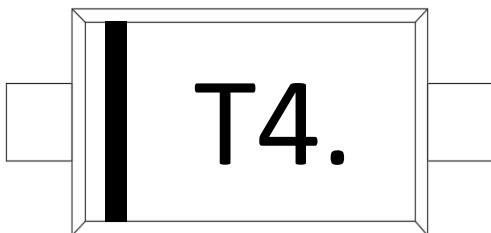
1N4148WTQ

■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.059	0.067	1.500	1.700
B	0.043	0.051	1.100	1.300
C	0.028	0.035	0.700	0.900
D	0.010	0.014	0.250	0.350
E	0.002	0.008	0.050	0.200
F	0.020	0.028	0.500	0.700

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black



1N4148WTQ

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