

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT

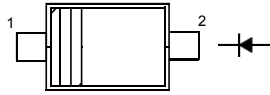


PLED

Product data sheet

**Features**

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



SOD-523

RNNING

PIN	DESCRIPTION
1	Cathode
2	Anode

MARK:T4

**Absolute Maximum Ratings (T<sub>a</sub> = 25 °C)**

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Reverse Voltage	V <sub>R</sub>	75	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	125	mA
Forward Continuous Current	I <sub>FM</sub>	250	mA
Non-repetitive Peak Forward Surge Current	I <sub>FSM</sub>	2 1	A
Power Dissipation	P <sub>tot</sub>	150	mW
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	833	°C/W
Operating Temperature Range	T <sub>j</sub>	- 65 to + 150	°C
Storage Temperature Range	T <sub>stg</sub>	- 65 to + 150	°C

**Characteristics at T<sub>a</sub> = 25 °C**

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at I <sub>R</sub> = 1 μA	V <sub>(BR)R</sub>	75	-	V
Forward Voltage at I <sub>F</sub> = 1 mA at I <sub>F</sub> = 10 mA at I <sub>F</sub> = 50 mA at I <sub>F</sub> = 150 mA	V <sub>F</sub>	- - - -	0.715 0.855 1 1.25	V
Peak Reverse Current at V <sub>R</sub> = 75 V at V <sub>R</sub> = 20 V at V <sub>R</sub> = 75 V, T <sub>J</sub> = 150 °C at V <sub>R</sub> = 25 V, T <sub>J</sub> = 150 °C	I <sub>R</sub>	- - - -	1 25 50 30	μA nA μA μA
Total Capacitance at V <sub>R</sub> = 0 V, f = 1 MHz	C <sub>T</sub>	-	2	pF
Reverse Recovery Time at I <sub>rr</sub> = 0.1 X I <sub>R</sub> , I <sub>F</sub> = I <sub>R</sub> = 10 mA, R <sub>L</sub> = 100 Ω	t <sub>rr</sub>	-	4	ns

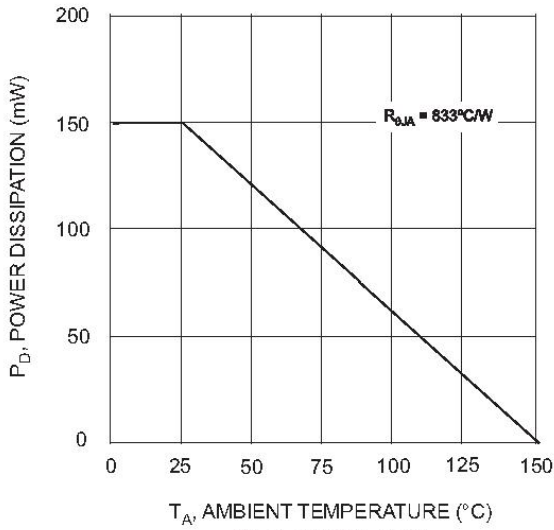


Fig. 1 Derating Curve

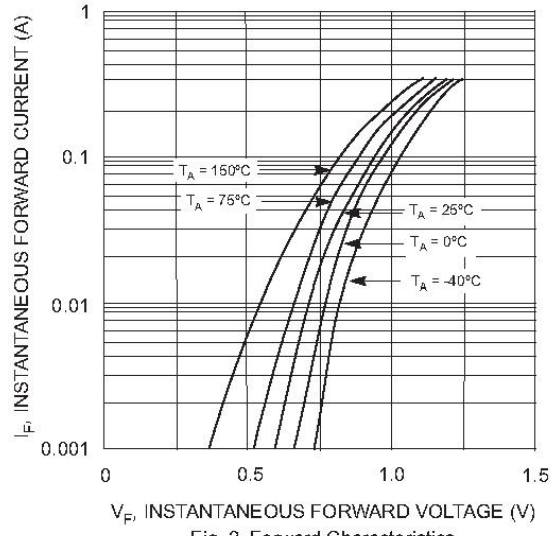


Fig. 2 Forward Characteristics

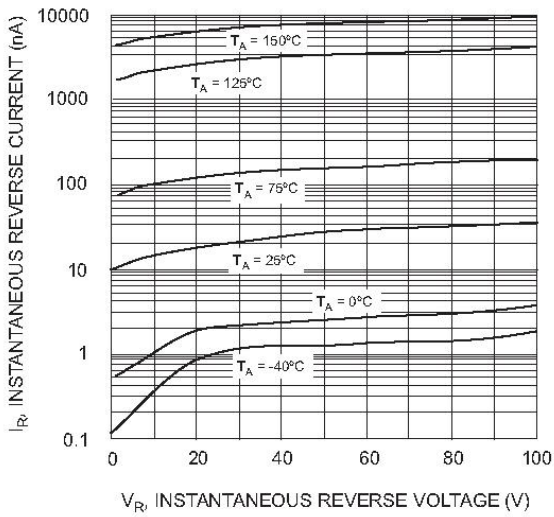


Fig. 3 Typical Reverse Characteristics

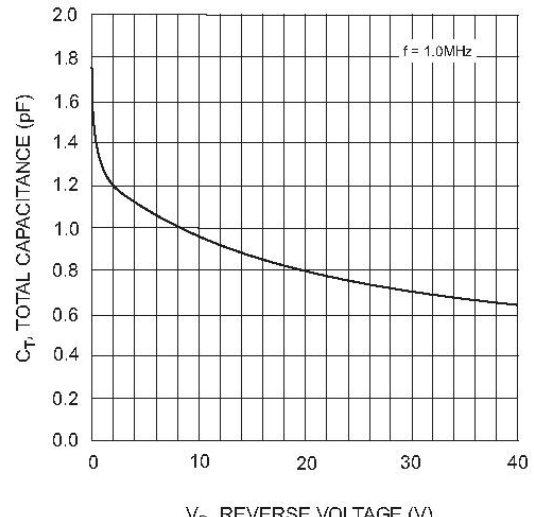
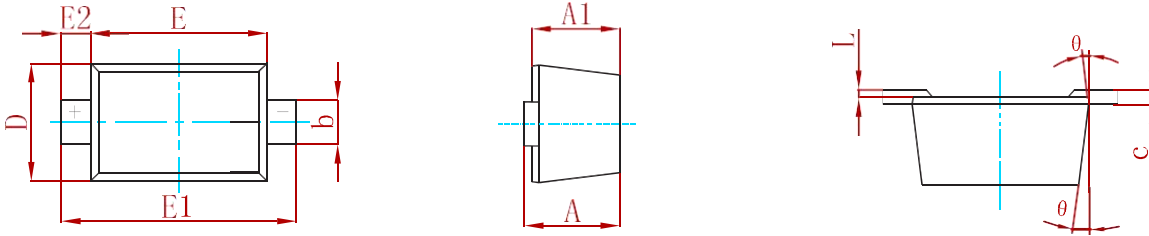


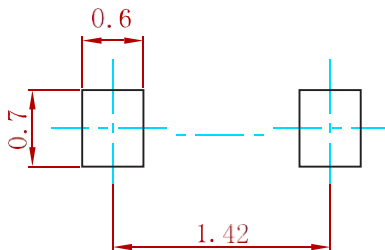
Fig. 4 Typical Capacitance vs. Reverse Voltage

**PACKAGE MECHANICAL DATA**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
0	7° REF		7° REF	

**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
1N4148WT-MS	SOD-523	3000

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