

Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Fast Switching Speed
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance(Note 2):625°C/W Junction to Ambient

MCC Part Number	Device Marking
1N4148X	T4

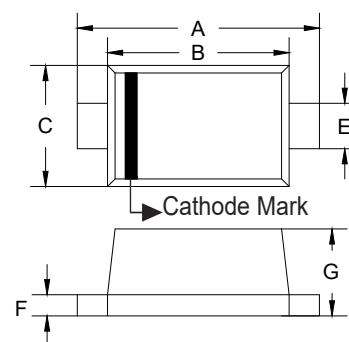
Parameter	Symbol	Value
Non-Repetitive Peak Reverse Voltage	V_{RM}	100V
Peak Repetitive Reverse Voltage	V_{RRM}	75V
Working Peak Reverse Voltage	V_{RWM}	75V
DC Blocking Voltage	V_R	75V
Forward Continuous Current	I_{FM}	300mA
Average Rectified Output Current	I_O	150mA
Peak Forward Surge Current ($t=1\mu s$)	I_{FSM}	2A
($t=1s$)		1A
Power Dissipation(Note 2)	P_D	200mW

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note: 2.Mounted on FR-4 PC Board with Recommended Pad Layout.

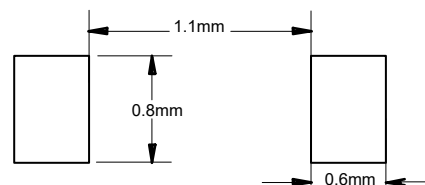
200mW Switching Diodes

SOD-523



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.043	0.051	1.10	1.30	
C	0.030	0.033	0.75	0.85	
E	0.010	0.014	0.25	0.35	
F	0.003	0.008	0.08	0.20	
G	0.020	0.026	0.50	0.65	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward Voltage	V_F	$I_F=1\text{mA}$			0.715	V
		$I_F=10\text{mA}$			0.855	V
		$I_F=50\text{mA}$			1	V
		$I_F=150\text{mA}$			1.25	V
Reverse Current	I_R	$V_R=20\text{V}, T_J=25^\circ\text{C}$			25	nA
		$V_R=75\text{V}, T_J=25^\circ\text{C}$			1	μA
		$V_R=75\text{V}, T_J=150^\circ\text{C}$			50	μA
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$			2	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10\text{mA},$ $I_{rr}=0.1 \cdot I_R, R_L=100\Omega$			4	ns

* Pulse Test: Pulse Width 300 μsec , Duty Cycle 2%

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

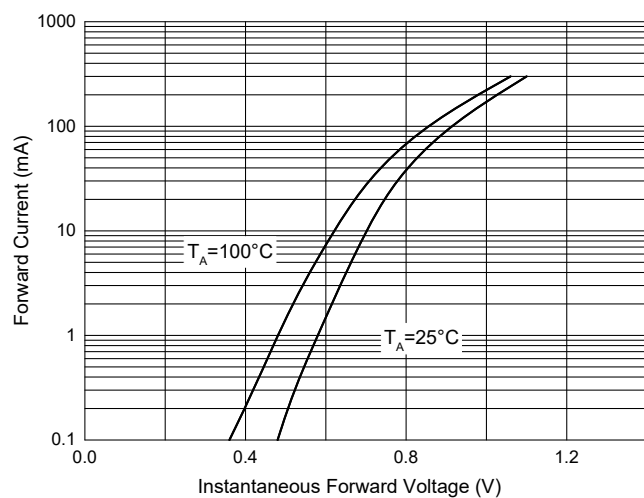


Fig. 2 - Typical Reverse Leakage Characteristics

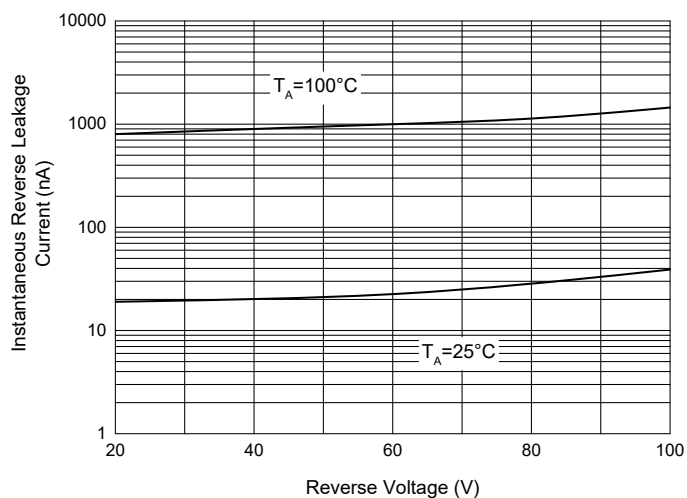


Fig. 3 - Power Derating Curve

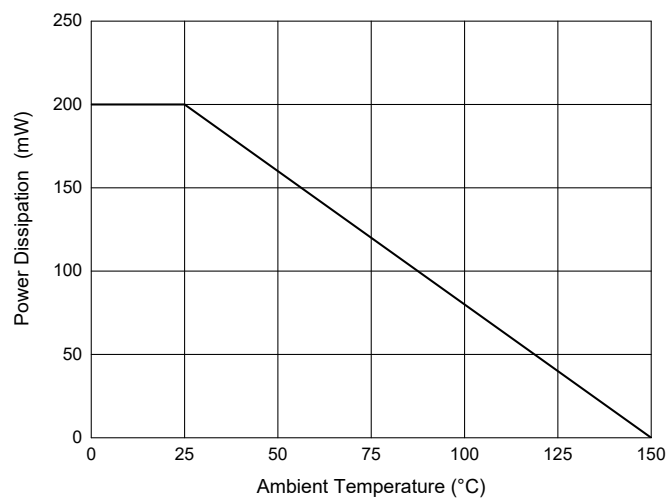
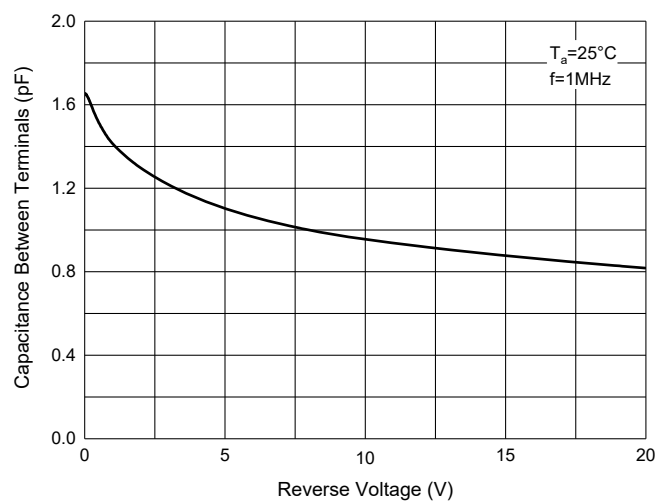


Fig. 4 - Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 8Kpcs/Reel
Part Number-T3P	Tape&Reel: 3Kpcs/Reel

For packaging details, go to our website at: <https://www.mccsemi.com/pdf/productpackaging/SOD-523%20Package.pdf>

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