30V, 0.1A Schottky Barrier Diode

Product Summary

Parameter	Rating
V_{RRM}	30 V
V_F Max @ 10mA	0.45 V
$I_{F(AV)}$	100 mA
I_R Max @ V_R = 10 V	0.5 μA





SOD-923

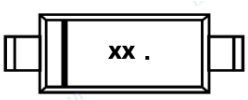
Features

- High Reliability
- Low Reverse Current and Low Forward Voltage
- Small Surface Mount Type

Mechanical Data

- Package: SOD-923
- Moisture Sensitivity: Level 1, per J-STD-020
- Halogen Free. “Green” Device (Note1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish & RoHS Compliant
- Weight: 0.0006 g (approximate)

Body Marking and Pin Layout

Body Marking	Internal structure
 **XX**: Device Marking Code[1] **Bar**: Cathode Pin indicator **Dot**(optional): Manufacturing Site Marking [1] | Refer to the ordering information for the specific device code.	

Ordering Information

Ordering Product Name	Device Marking Code	Reel Size	Packing Type	Qty/Reel
Product Name-TP	E	7”	Tape & Reel	8,000

For packaging details, visit our website at https://www.mccsemi.com/Package/List

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Maximum Ratings (T_A=25℃ unless otherwise specified)

Parameter		Symbol	Rating	Unit
Peak Repetitive Reverse Voltage		V_{RRM}	30	V
RMS Reverse Voltage		$V_{R(RMS)}$	21	V
Reverse Voltage		V_R	30	V
Average Forward Current		$I_{F(AV)}$	100	mA
Non-Repetitive Peak Surge Current	t_p= 8.3ms Half Sine Wave, T_J = 25℃	I_{FSM}	0.5	A
Power Dissipation (Note 2)		P_D	150	mW
Operating Junction Temperature Range		T_J	-55 to +125	℃
Storage Temperature Range		T_{STG}	-55 to +155	℃

Notes:
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Device mounted on an FR4 Printed-Circuit Board (PCB) with the recommended pad layout.

Thermal characteristics (T_A=25℃ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Thermal Resistance from Junction to Ambient (Note 2)	$R_{\theta JA}$	667	℃/W

Electrical Characteristics (T_A=25℃ unless otherwise specified)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage	I_R=100 μA (pulse test)	V_{BR}	30			V
Forward Voltage	I_F = 5 mA	V_F			0.38	V
	I_F = 10 mA				0.45	
	I_F = 100 mA			0.6		
Reverse Current	V_R = 10 V	I_R			0.5	μA
Junction Capacitance	V_R=0 V, f=1.0MHz	C_J			15	pF
Reverse Recovery Time	I_F=10mA, I_R=10mA, I_{rr}=0.1 x I_R, R_L=100Ω	t_{rr}			8	ns

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Curve Characteristics

Fig.1 - Typical Instantaneous Forward Characteristics (per diode)

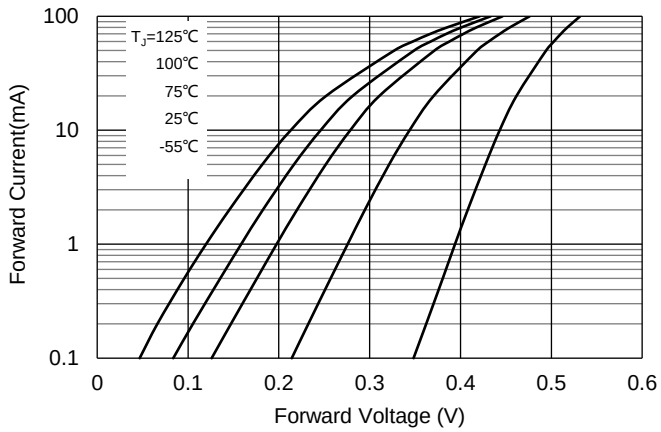


Fig.2 - Typical Reverse Leakage Characteristics (per diode)

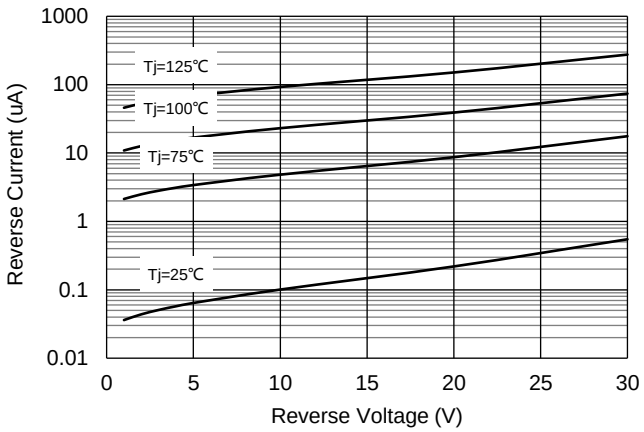


Fig.3 - Typical Capacitance Characteristics (per diode)

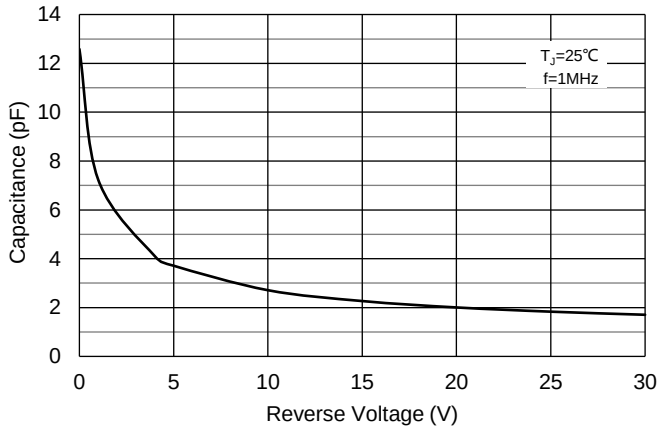
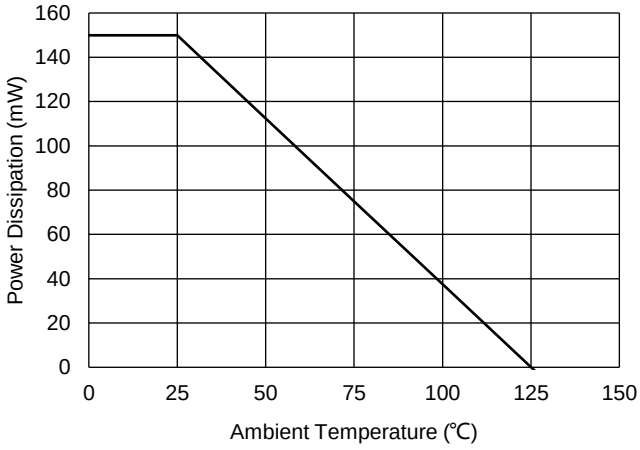
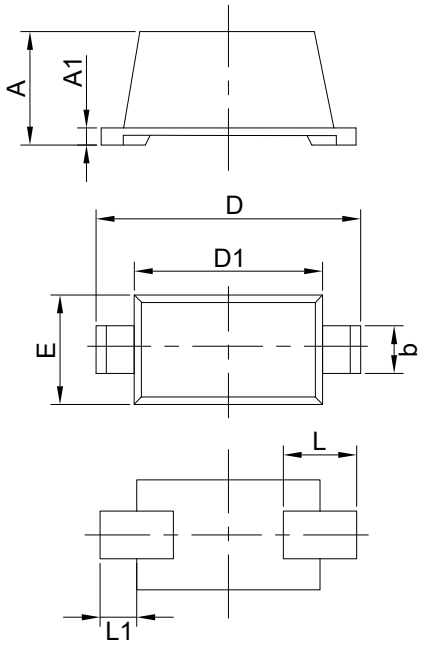


Fig.4 - Power Derating Curve



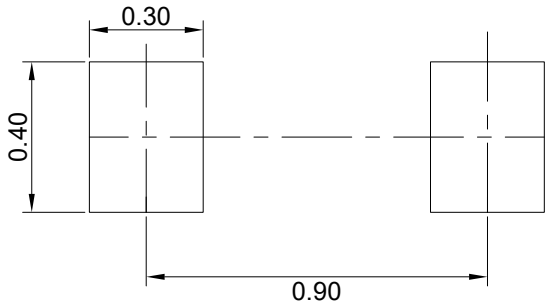
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Package Outline



DIM	INCH		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.014	0.021	0.36	0.52	
A1	0.003	0.007	0.07	0.17	
b	0.006	0.010	0.15	0.25	
D	0.037	0.041	0.95	1.05	
D1	0.030	0.033	0.75	0.85	
E	0.022	0.026	0.55	0.65	
L	0.007		0.19		TYP
L1	0.002	0.006	0.05	0.15	

Suggested Pad Layout (Unit:mm)



Notes:

1. The suggested land pattern dimensions have been provided for reference only.
2. For further information, please refer to document IPC-7351A.

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