NEW PRODUCT

Features

- Ultra-Small Surface Mount Package (1.0 x 0.6 x 0.37mm)
- Flat-Lead, Thermally-Efficient Package Design
- Exposed, Easily Visible Terminals, No X-ray Inspection of Solder Joints Required (As for DFN Packages)
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

- Case: SOD923 (0.2mm Lead Width)
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Band
- Terminals: Finish – Matte Tin Annealed over Alloy 42 Leadframe. Solderable per MIL-STD-202, Method 208 (e3)
- Weight: 0.001 grams (Approximate)

SOD923 (0.2mm Lead Width)

Top View

Ordering Information (Note 4)

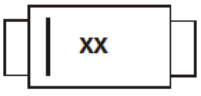
Part Number	Compliance	Case	Packaging
(Type Number)-7*	Standard	SOD923 (0.2mm Lead Width)	10,000/Tape & Reel

*Add "-7" to the appropriate type number in Electrical Characteristics Table, example: 6.2V Zener = DZ9F6V2S92-7.

Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
2. See http://www.diodes.com/quality/lead_free.html for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

Marking Information

SOD923 (0.2mm Lead Width)



XX = Product Type Marking Code
(See Electrical Characteristics Table)

NEW PRODUCT

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic		Symbol	Value	Unit
Forward Voltage	@ I_F = 10mA	V_F	0.9	V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5) Derate Above +25°C (Note 5)	P_D	200 2.0	mW mW/°C
Thermal Resistance, Junction to Ambient Air (Note 5)	$R_{\theta JA}$	625	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

Note: 5. Device mounted on FR-4 PCB with minimum recommended pad layout, as shown in Diodes Incorporated's Suggested Pad Layout document, which can be found on our website at http://www.diodes.com/package-outlines.html.

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Type Number	Marking Codes	Zener Voltage Range (Note 6)				Maximum Zener Impedance (Note 7)			Temperature Coefficient		Total Capacitance	Maximum Reverse Current (Note 6)	
		V_Z @ I_{ZT}			I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	T_C @ I_{ZT}		C_T @ f = 1MHz, V_R = 0V	I_R @ V_R	V_R
		Nom (V)	Min (V)	Max (V)	mA	Ω		mA	Min (mV/°C)	Max (mV/°C)	(pF)	µA	V
DZ9F2V7S92	ZB	2.7	2.57	2.84	5	100	1,000	1	−3.5	0	210	20	1
DZ9F3V0S92	ZC	3.0	2.85	3.15	5	100	1,000	1	−3.5	0	210	10	1
DZ9F3V3S92	ZD	3.3	3.14	3.47	5	100	1,000	1	−3.5	0	210	10	1
DZ9F3V6S92	ZE	3.6	3.42	3.78	5	100	1,000	1	−3.5	0	210	10	1
DZ9F3V9S92	ZF	3.9	3.71	4.10	5	100	1,000	1	−3.5	−2.5	210	5	1
DZ9F4V1S92	Z1	4.1	3.94	4.36	5	100	1,000	1	−3.5	0	210	5	1
DZ9F4V3S92	ZG	4.3	4.09	4.52	5	100	1,000	1	−3.5	0	210	5	1
DZ9F4V7S92	ZH	4.7	4.47	4.94	5	100	800	0.5	−3.5	0.2	150	2	1
DZ9F5V1S92	ZI	5.1	4.85	5.36	5	80	500	0.5	−2.7	1.2	130	2	1.5
DZ9F5V6S92	ZJ	5.6	5.32	5.88	5	60	200	0.5	−2.0	2.5	115	1	2.5
DZ9F6V2S92	ZK	6.2	5.89	6.51	5	60	100	0.5	0.4	3.7	110	1	3
DZ9F6V8S92	ZL	6.8	6.46	7.14	5	40	60	0.5	1.2	4.5	105	0.5	3.5
DZ9F7V5S92	ZM	7.5	7.13	7.88	5	30	60	0.5	2.5	5.3	100	0.5	4
DZ9F8V2S92	ZN	8.2	7.79	8.61	5	30	60	0.5	3.2	6.2	90	0.5	5
DZ9F9V1S92	ZO	9.1	8.65	9.56	5	30	60	0.5	3.8	7	80	0.5	6
DZ9F10S92	ZP	10	9.50	10.50	5	30	60	0.5	4.5	8	80	0.1	7
DZ9F11S92	ZQ	11	10.45	11.55	5	30	60	0.5	5.4	9	80	0.1	8
DZ9F12S92	ZR	12	11.40	12.60	5	30	80	0.5	6	10	80	0.1	9
DZ9F13S92	ZS	13	12.35	13.65	5	37	80	0.5	7	11	75	0.1	10
DZ9F15S92	ZT	15	14.25	15.75	5	42	80	0.5	9.2	13	70	0.1	11
DZ9F16S92	ZU	16	15.20	16.80	5	50	80	0.5	10.4	14	65	0.1	12
DZ9F18S92	ZV	18	17.10	18.90	5	50	80	0.5	12.4	16	60	0.1	14
DZ9F20S92	ZW	20	19.00	21.00	5	55	100	0.5	14.4	18	55	0.1	15.4
DZ9F22S92	ZX	22	20.90	23.10	5	55	100	0.5	15.4	20	55	0.1	16.8
DZ9F24S92	ZY	24	22.80	25.20	5	70	120	0.5	16.8	22	50	0.1	18.9

Notes: 6. Short duration pulse test used to minimize self-heating effect.
7. f = 1kHz.

NEW PRODUCT

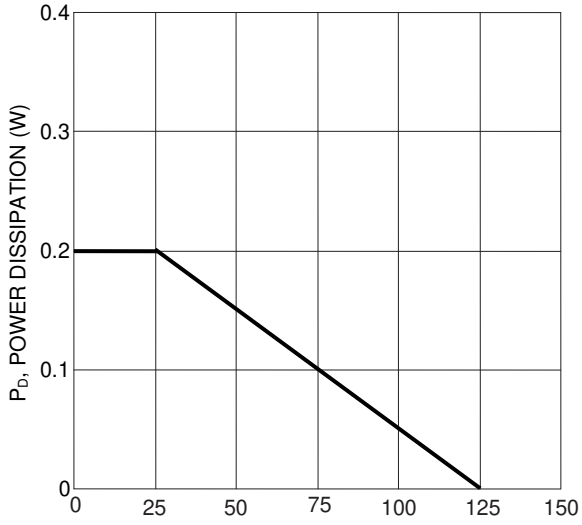


Figure 1 Power Derating Curve

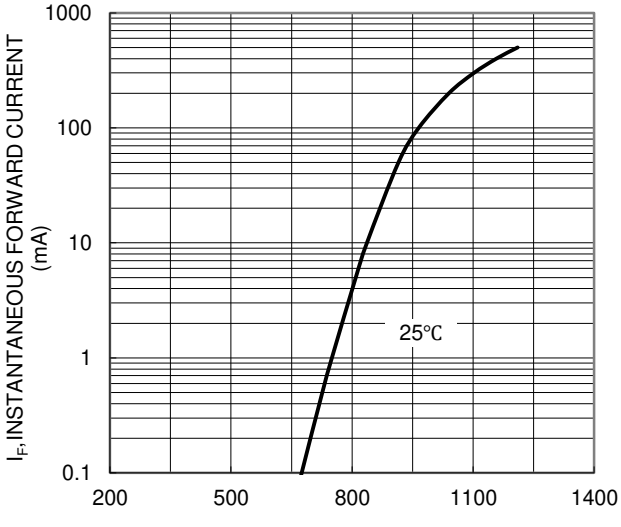


Figure 2 Typical Forward Characteristics

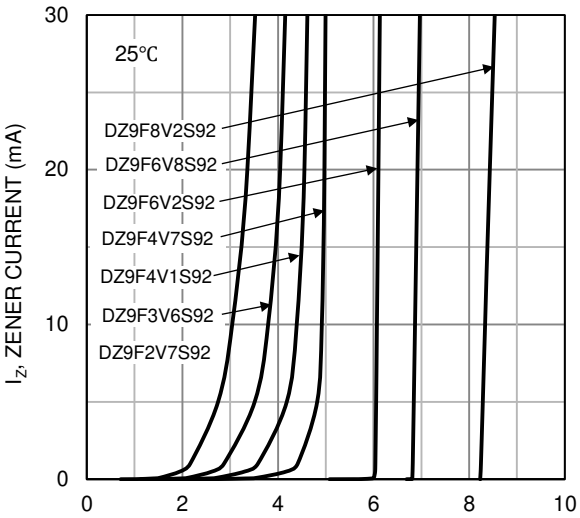


Figure 3 Typical Zener Breakdown Characteristics

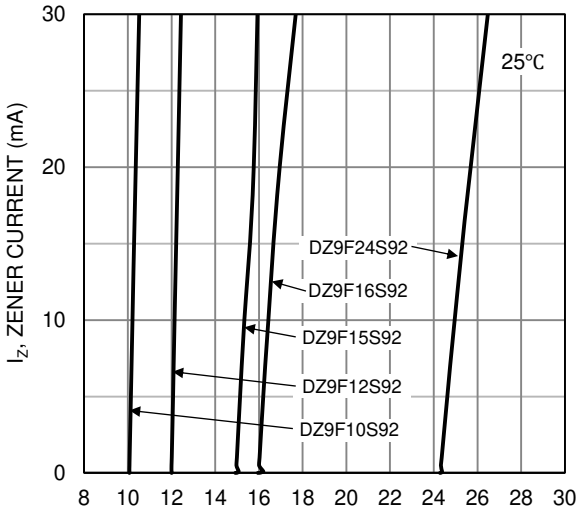


Figure 4 Typical Zener Breakdown Characteristics

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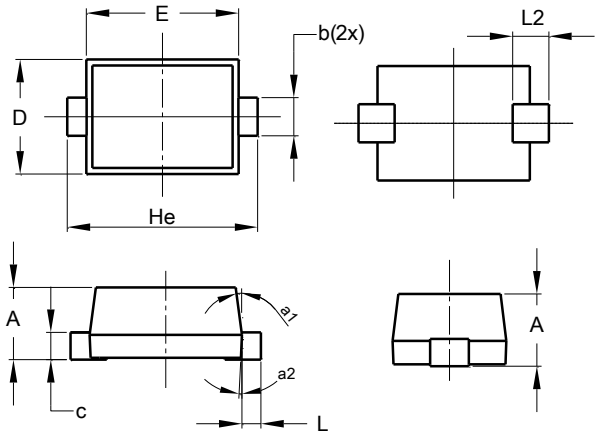
Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

SOD923 (0.2mm Lead Width)



SOD923 (0.2mm Lead Width)			
Dim	**Min**	**Max**	**Typ**
A	0.34	0.40	0.37
b	0.15	0.25	0.20
c	0.070	0.170	0.120
D	0.55	0.65	0.60
E	0.75	0.85	0.80
He	0.95	1.05	1.00
L	0.05	0.15	0.10
L2	0.190 REF		
a1	0°	8°	7°
a2	2°	4°	3°
All Dimensions in mm			

Suggested Pad Layout

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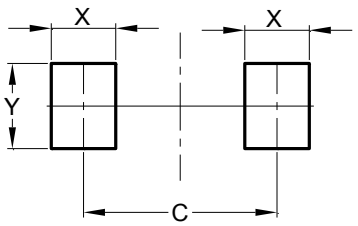
SOD923 (0.2mm Lead Width)



Dimensions	Value (in mm)
C	0.900
X	0.300
Y	0.400

NEW PRODUCT

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