



## Features

- Ideally Suited for Automatic Assembly
- Standard  $V_Z$  Tolerance is +/- 5%
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant t (Note 2) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 110°C/W Junction to Ambient
- Thermal Resistance: 9°C/W Junction to Soldering Point

Parameter	Symbol	Rating	Conditions
Zener Current	$I_{ZM}$	$P_d/V_z$ (mA)	
Power Dissipation	$P_{tot}$	1.0W	$T_A=50^\circ C$
Forward Voltage	$V_F$	1.2V	$I_F=200mA$

### Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

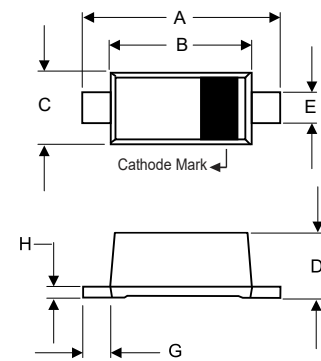
## Internal Structure

Description	Simplified outline	Graphic symbol
Uni-directional		

XXXX = Marking code

# 1 Watt Zener Diode 5.1V - 100V Volts

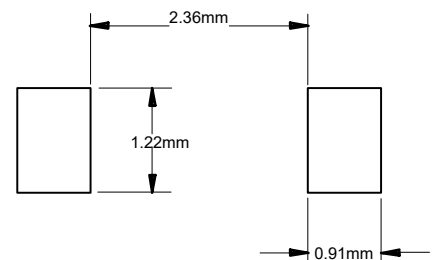
## SOD-123FL



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.130	0.152	3.30	3.85	
B	0.100	0.122	2.55	3.10	
C	0.055	0.075	1.40	1.90	
D	0.035	0.053	0.90	1.35	
E	0.020	0.041	0.50	1.05	
G	0.010	----	0.25	----	
H	----	0.010	----	0.25	

### SUGGESTED SOLDER PAD LAYOUT



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

MCC Part Number	Zener Voltage <sup>(3)</sup>			Maximum Zener Impedance	Maximum Reverse Current <sup>(3)</sup> I <sub>R</sub> @ V <sub>R</sub>		Temperature Coefficient		Marking Code	
	V <sub>Z</sub> @ I <sub>ZT</sub>				Z <sub>ZT</sub> @ I <sub>ZT</sub>	I <sub>R</sub>	V <sub>R</sub>	@ I <sub>ZTC</sub> %°C		
	Min.(V)	Nom(V)	Max.(V)	mA	Ω	μA	V	Min		Max
DFLZ5V1	4.8	5.1	5.4	49	7	10	1.0	-0.08	0.02	5V1
DFLZ5V6	5.3	5.6	5.9	45	5	10	2.0	-0.04	0.04	5V6
DFLZ6V2	5.8	6.2	6.4	100	3	5	2.0	-0.01	0.06	6V2
DFLZ6V8	6.4	6.8	7.2	100	3	5	3.0	0	0.07	6V8
DFLZ7V5	7.0	7.5	7.9	100	2	5	3.0	0	0.07	7V5
DFLZ8V2	7.7	8.2	8.7	100	2	5	3.0	0.03	0.08	8V2
DFLZ9V1	8.5	9.1	9.6	50	4	5	5.0	0.03	0.08	9V1
DFLZ10	9.4	10	10.6	50	4	5	7.5	0.05	0.09	Z10
DFLZ11	10.4	11	11.6	50	7	4	8.2	0.05	0.1	Z11
DFLZ12	11.4	12	12.7	50	7	3	9.1	0.05	0.1	Z12
DFLZ13	12.4	13	14.1	50	10	2	10.0	0.05	0.1	Z13
DFLZ15	13.8	15	15.6	50	10	1	11.0	0.05	0.1	Z15
DFLZ16	15.3	16	17.1	25	15	1	12.0	0.06	0.11	Z16
DFLZ18	16.8	18	19.1	25	15	1	13.0	0.06	0.11	Z18
DFLZ20	18.8	20	21.2	25	15	1	15.0	0.06	0.11	Z20
DFLZ22	20.8	22	23.3	25	15	1	16.0	0.06	0.11	Z22
DFLZ24	22.8	24	25.6	25	15	1	18.0	0.06	0.11	Z24
DFLZ27	25.1	27	28.9	25	15	1	20.0	0.06	0.11	Z27
DFLZ30	28.0	30	32.0	25	15	1	22.0	0.06	0.11	Z30
DFLZ33	31.0	33	35.0	25	15	1	24.0	0.06	0.11	Z33
DFLZ36	34.0	36	38.0	10	40	1	27.0	0.06	0.11	Z36
DFLZ39	37.0	39	41.0	10	40	1	30.0	0.06	0.11	Z39
DFLZ43	40.8	43	45.2	6.0	70	5	32.7	-	-	Z43
DFLZ47	44.6	47	49.4	5.5	80	5	35.8	-	-	Z47
DFLZ51	48.4	51	53.6	5.0	95	5	38.8	-	-	Z51
DFLZ56	53.2	56	58.8	4.5	110	5	42.6	-	-	Z56
DFLZ62	58.9	62	65.1	4.0	125	5	47.1	-	-	Z62
DFLZ68	64.6	68	71.4	3.7	150	5	51.7	-	-	Z68
DFLZ75	71.2	75	78.8	3.3	175	5	56.0	-	-	Z75
DFLZ82	77.9	82	86.1	3.0	200	5	62.2	-	-	Z82
DFLZ91	86.4	91	95.6	2.8	250	5	69.2	-	-	Z91
DFLZ100	95.0	100	105.0	2.5	350	5	76.0	-	-	Z100

Note : 3. Short Duration Pulse Test Used to Minimize Self-heating Effect.

**Curve Characteristics**

Fig. 1 - Pulse Derating Curve

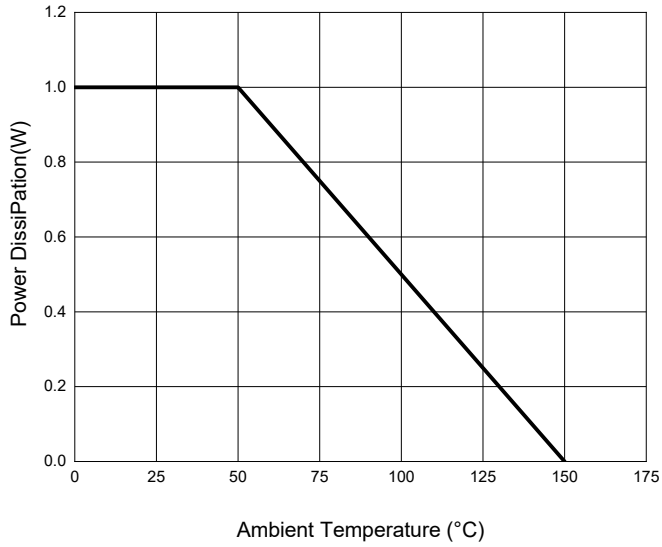


Fig. 2 - Typical Zener Breakdown Characteristics

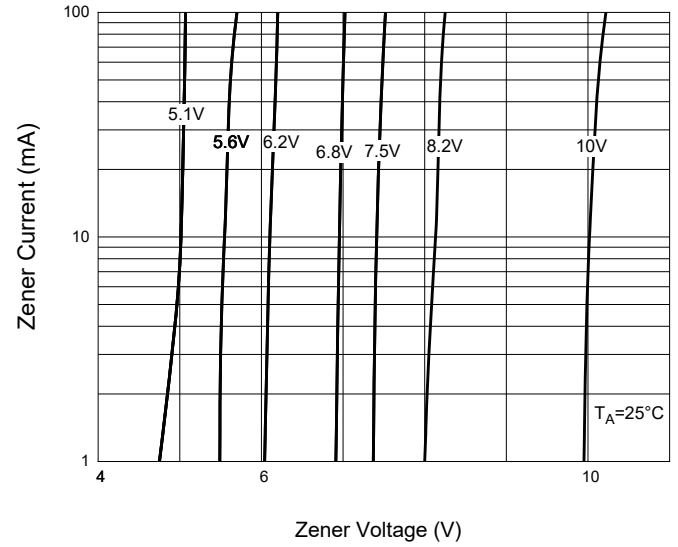


Fig. 3- Typical Zener Breakdown Characteristics

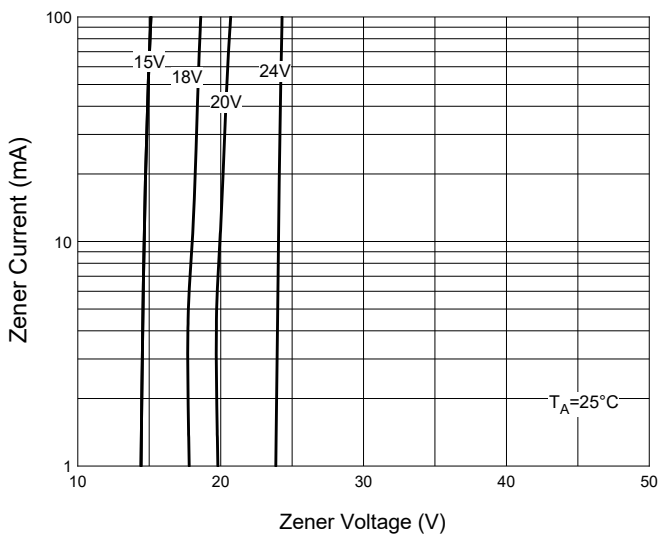


Fig. 4- Typical Zener Breakdown Characteristics

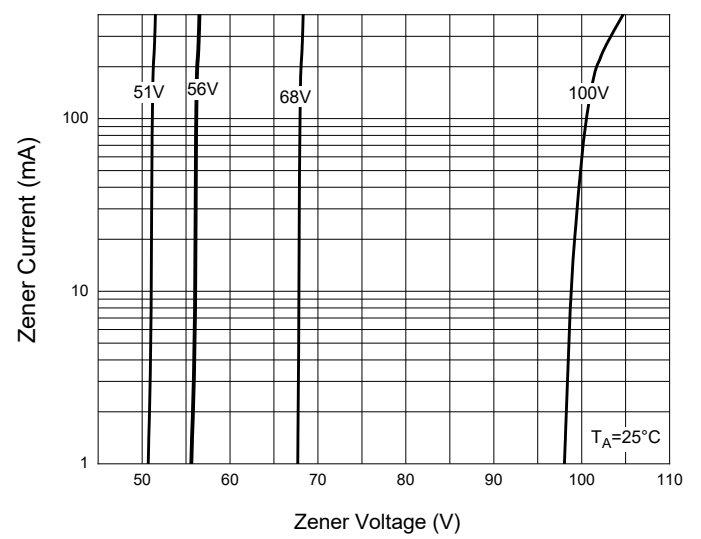
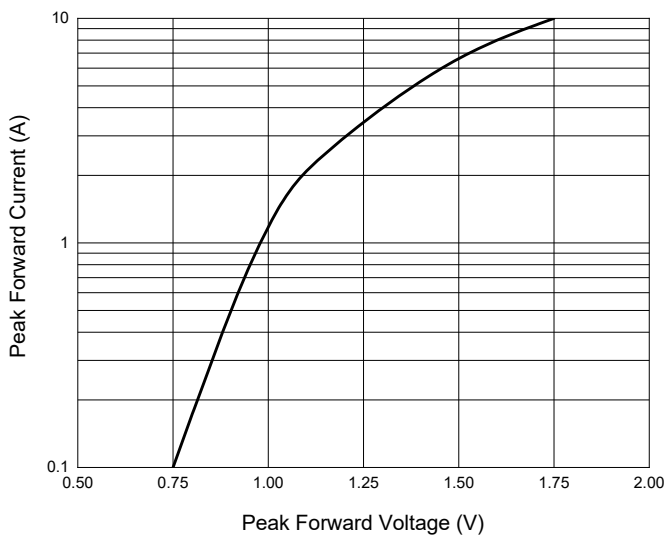


Fig. 5- Typical Forward Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:2.5Kpcs/Reel

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