

Silicon Planar Zener Diodes

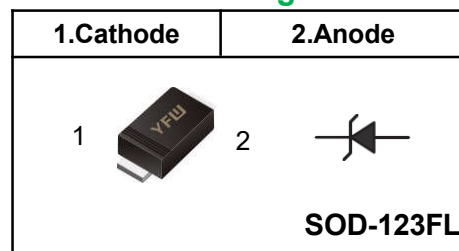
FEATURES

- ♦ Total power dissipation: Max. 500mW.
- ♦ Wide zener reverse voltage range 2.0V to 75V.
- ♦ Small plastic package suitable for surface mounted design.
- ♦ Tolerance approximately $\pm 5\%$.
- ♦ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ♦ Case: SOD-123FL
- ♦ Terminals: Solderable per MIL-STD-750, Method 2026
- ♦ Approx. Weight: 15mg / 0.00048oz

Pinning



Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	0.5	W
Forward Voltage at $I_F = 10\text{ mA}$	V_F	0.9	V
Typical thermal resistance junction to ambient ⁽¹⁾	$R_{\theta JA}$	90	°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150	°C

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

Fig.1 Maximum Continuous Power Derating

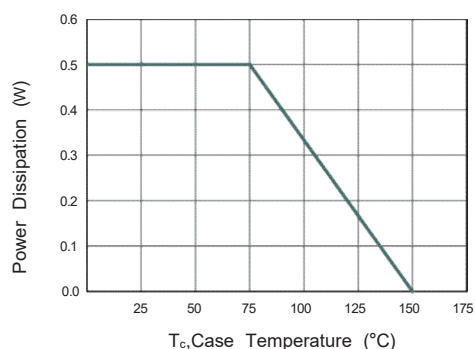
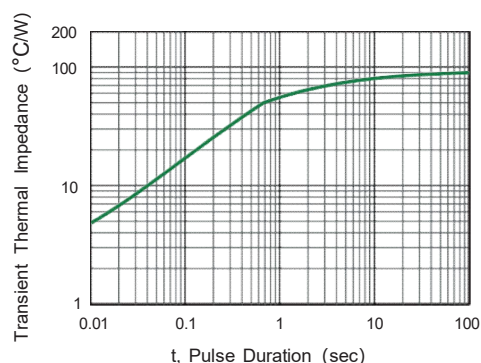


Fig.2 Typical Transient Thermal Impedance

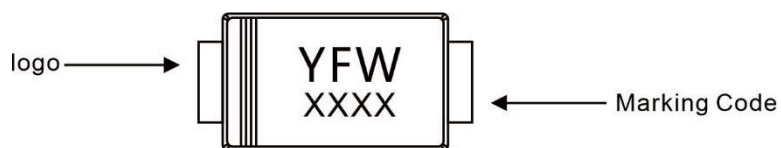


Characteristics at Ta = 25 °C

Type	Marking	Zener Voltage Range ⁽¹⁾				Dynamic Impedance	Reverse Current		Admissible Zener Current
		V _{ZT} (at I _{ZT})			I _{ZT}	Z _{ZT} (at I _{ZT})	I _R	at V _R	
		Min (V)	Nom (V)	Max (V)	(mA)	Max (Ω)	Max (μA)	(V)	I _{ZM} (mA)
MM1Z2V0	4A	1.8	2.0	2.15	5	100	120	0.5	230
MM1Z2V2	4B	2.08	2.2	2.33	5	100	120	0.7	210
MM1Z2V4	4C	2.28	2.4	2.56	5	100	120	1	190
MM1Z2V7	4D	2.5	2.7	2.9	5	110	120	1	170
MM1Z3V0	4E	2.8	3.0	3.2	5	120	50	1	155
MM1Z3V3	4F	3.1	3.3	3.5	5	130	20	1	140
MM1Z3V6	4H	3.4	3.6	3.8	5	130	10	1	130
MM1Z3V9	4J	3.7	3.9	4.1	5	130	5	1	120
MM1Z4V3	4K	4.0	4.3	4.6	5	130	5	1	110
MM1Z4V7	4M	4.4	4.7	5.0	5	130	2	1	100
MM1Z5V1	4N	4.8	5.1	5.4	5	130	2	1.5	90
MM1Z5V6	4P	5.2	5.6	6.0	5	80	1	2.5	85
MM1Z6V2	4R	5.8	6.2	6.6	5	50	1	3.0	75
MM1Z6V8	4X	6.4	6.8	7.2	5	30	0.5	3.5	70
MM1Z7V5	4Y	7.0	7.5	7.9	5	30	0.5	4	63
MM1Z8V2	4Z	7.7	8.2	8.7	5	30	0.5	5	57
MM1Z9V1	5A	8.5	9.1	9.6	5	30	0.5	6	52
MM1Z10	5B	9.4	10	10.6	5	30	0.1	7	47
MM1Z11	5C	10.4	11	11.6	5	30	0.1	8	43
MM1Z12	5D	11.4	12	12.7	5	35	0.1	9	40
MM1Z13	5E	12.4	13	14.1	5	35	0.1	10	35
MM1Z15	5F	13.8	15	15.6	5	40	0.1	11	32
MM1Z16	5H	15.3	16	17.1	5	40	0.1	12	29
MM1Z18	5J	16.8	18	19.1	5	45	0.1	13	26
MM1Z20	5K	18.8	20	21.2	5	50	0.1	15	23
MM1Z22	5M	2.08	22	23.3	5	55	0.1	17	21
MM1Z24	5N	22.8	24	25.6	5	60	0.1	19	19
MM1Z27	5P	25.1	27	28.9	5	70	0.1	21	17
MM1Z30	5R	28	30	32	5	80	0.1	23	15
MM1Z33	5X	31	33	35	5	80	0.1	25	14
MM1Z36	5Y	34	36	38	5	90	0.1	27	13
MM1Z39	5Z	37	39	41	2.5	100	2	30	12
MM1Z43	6A	40	43	46	2.5	130	2	33	12
MM1Z47	6B	44	47	50	2.5	150	2	36	10
MM1Z51	6C	48	51	54	2	180	1	39	10
MM1Z56	6D	52	56	60	2	180	1	43	8
MM1Z62	6E	58	62	66	2	200	0.2	47	7
MM1Z68	6F	64	68	72	2	250	0.2	52	6
MM1Z75	6H	70	75	79	2	300	0.2	57	6

(1) V_{ZT} is tested with pulses (20 ms)

Marking Diagram



Ordering information

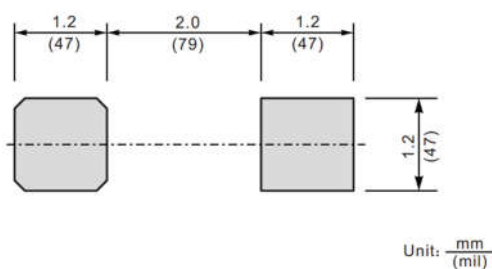
Package	Packing Description	Packing Quantity
SOD-123FL	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOD-123FL

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.3	35	43
C	0.12	0.20	4.7	7.9
D	2.6	2.9	102	114
E	1.7	1.9	67	75
e	0.8	1.1	31	43
g	0.7	0.9	28	35
HE	3.5	3.8	138	150
∠	7°			

The recommended mounting pad size



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