

MMSZ4678 THRU MMSZ4717

SURFACE MOUNT ZENER DIODES

SOD-123 SURFACE MOUNT SILICON ZENER DIODES

Features

- Low Zener Impedance
- Power Dissipation of 500mW
- High Stability and High Reliability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

Zener diode is generally used as reference voltage sources in regulated power supplies or as protective diode in overvoltage protection circuits.

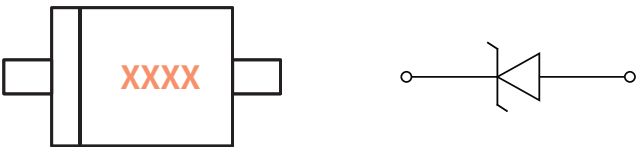
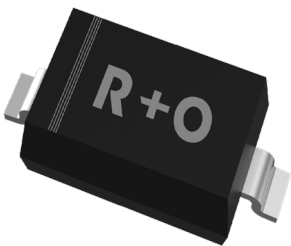
Mechanical Data

- Case: SOD-123
- Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Zener Diode
1.8 to 43 Volts
Power Dissipation
500 Milliwatts

SOD-123



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Power Dissipation	P_D	mW	500
Forward Voltage @ $I_F=10\text{mA}$	V_F	V	0.9
Storage Temperature	T_{stg}	°C	-55 ~+150
Junction Temperature	T_J	°C	-55 ~+150
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	357

Electrical Parameter

SYMBOL	PARAMETER
V_Z	Reverse zener voltage @ I_{ZT}
I_{ZT}	Reverse current
Z_{ZT}	Maximum Zener Impedance @ I_{ZT}
I_{ZK}	Reverse Current
Z_{ZK}	Maximum Zener Impedance @ I_{ZK}
I_R	Reverse leakage current @ V_R
V_R	Reverse voltage
I_F	Forward current
V_F	Forward voltage @ I_F

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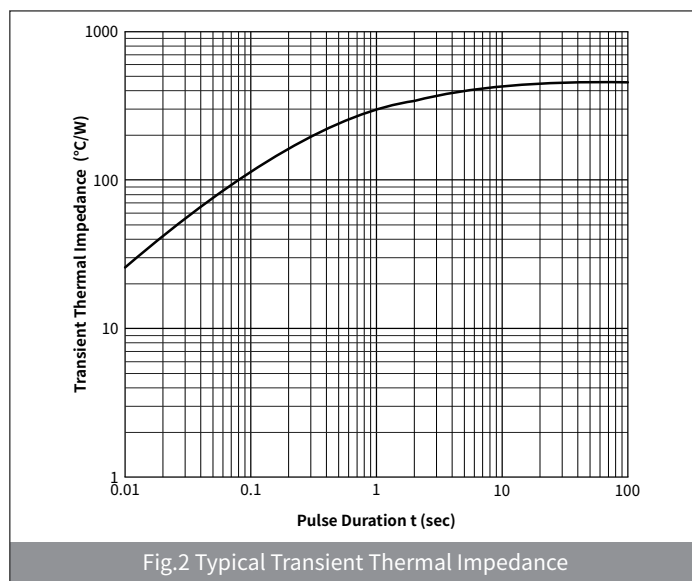
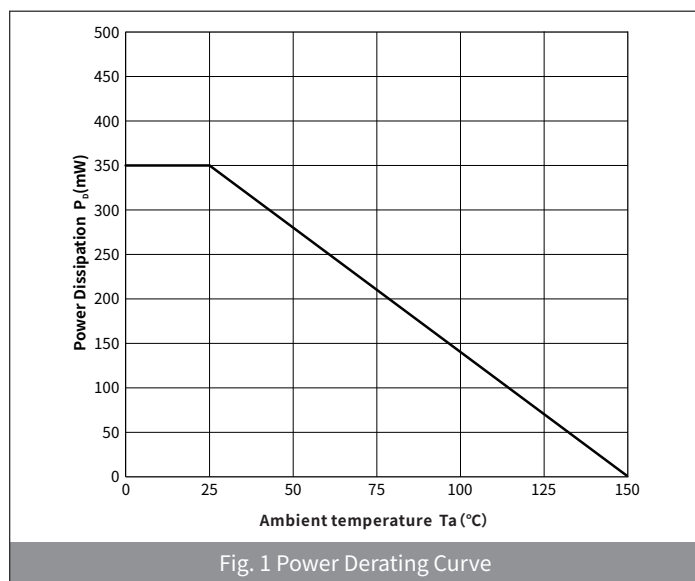
● Electrical Characteristics (Ta=25°C Unless otherwise noted)

Type Number	Marking	Nominal Zener Voltage				Leakage Current	
		V _Z (V)			I _{ZT}	I _R @V _R	
		Min.	Nom.	Max.	(μA)	I _R (μA)	V _R (V)
MMSZ4678	CC	1.71	1.8	1.89	50	7.5	1.0
MMSZ4679	CD	1.90	2.0	2.10	50	5	1.0
MMSZ4680	CE	2.09	2.2	2.31	50	4	1.0
MMSZ4681	CF	2.28	2.4	2.52	50	2	1.0
MMSZ4682	CH	2.565	2.7	2.835	50	1	1.0
MMSZ4683	CJ	2.85	3.0	3.15	50	0.8	1.0
MMSZ4684	CK	3.13	3.3	3.47	50	7.5	1.5
MMSZ4685	CM	3.42	3.6	3.78	50	7.5	2.0
MMSZ4686	CN	3.70	3.9	4.10	50	5	2.0
MMSZ4687	CP	4.09	4.3	4.52	50	4	2.0
MMSZ4688	CT	4.47	4.7	4.94	50	10	3.0
MMSZ4689	CU	4.85	5.1	5.36	50	10	3.0
MMSZ4690	CV	5.32	5.6	5.88	50	10	4.0
MMSZ4691	CA	5.89	6.2	6.51	50	10	5.0
MMSZ4692	CX	6.46	6.8	7.14	50	10	5.1
MMSZ4693	CY	7.13	7.5	7.88	50	10	5.7
MMSZ4694	CZ	7.79	8.2	8.61	50	1	6.2
MMSZ4695	DC	8.27	8.7	9.14	50	1	6.6
MMSZ4696	DD	8.65	9.1	9.56	50	1	6.9
MMSZ4697	DE	9.50	10	10.50	50	1	7.6
MMSZ4698	DF	10.45	11	11.55	50	0.05	8.4
MMSZ4699	DH	11.40	12	12.60	50	0.05	9.1
MMSZ4700	DJ	12.35	13	13.65	50	0.05	9.8
MMSZ4701	DK	13.30	14	14.70	50	0.05	10.6
MMSZ4702	DM	14.25	15	15.75	50	0.05	11.4
MMSZ4703	DN	15.20	16	16.80	50	0.05	12.1
MMSZ4704	DP	16.15	17	17.85	50	0.05	12.9
MMSZ4705	DT	17.10	18	18.90	50	0.05	13.6
MMSZ4706	DU	18.05	19	19.95	50	0.05	14.4
MMSZ4707	DV	19.00	20	21.00	50	0.01	15.2
MMSZ4708	DA	20.90	22	23.10	50	0.01	16.7
MMSZ4709	DX	22.80	24	25.20	50	0.01	18.2
MMSZ4710	DY	23.75	25	26.25	50	0.01	19.0
MMSZ4711	EA	25.65	27	28.35	50	0.01	20.4
MMSZ4712	EC	26.60	28	29.40	50	0.01	21.2
MMSZ4713	ED	28.50	30	31.50	50	0.01	22.8
MMSZ4714	EE	31.35	33	34.65	50	0.01	25.0
MMSZ4715	EF	34.20	36	37.80	50	0.01	27.3
MMSZ4716	EH	37.05	39	40.95	50	0.01	29.6
MMSZ4717	EJ	40.85	43	45.15	50	0.01	32.6

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● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-123	R1	0.012	3000	45000	180000	7"

● Package Outline Dimensions (SOD-123)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.55	3.85	0.140	0.152
B	2.55	2.85	0.100	0.112
C	1.40	1.80	0.055	0.071
D	0.95	1.35	0.140	0.152
E	0.51	0.71	0.037	0.053
F	-	0.15	-	0.006
G	0.15	0.45	0.006	0.008
H	0.08	0.25	0.003	0.010
θ	-	8°	-	8°

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.91	-	0.036	-
K	-	2.36	-	0.092
M	1.22	-	0.048	-

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