FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Zener Diode
SOD123

SOD123

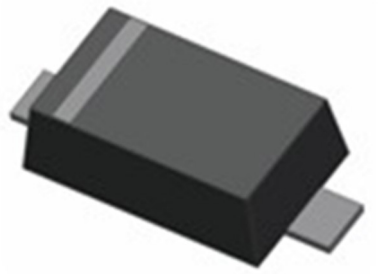
SPECIFICATION

601		MMSZ52__BW		SD13		E03
Type		Type		Package		Packing
601: Zener Diode		MMSZ52__BW		SOD123		E03: tape in reel (Embossed tape) for 3k pc (7'REEL)

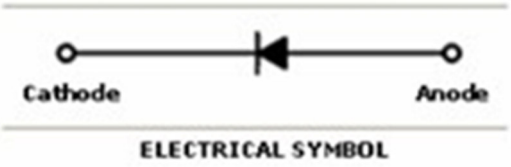
All products according to RoHS (2015/863/EU)

PACKAGE OUTLINE

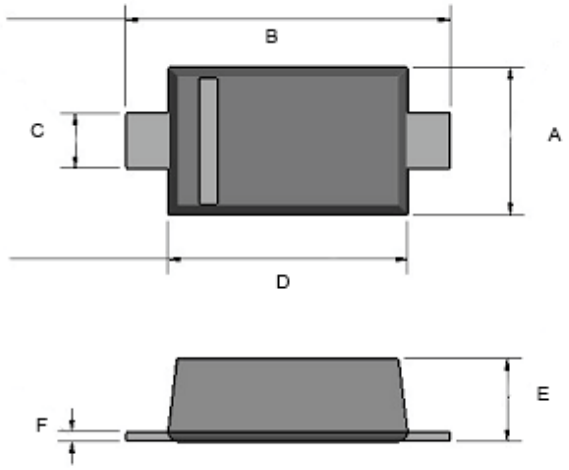
Green Product



SOD-123 Flat Lead



ELECTRICAL SYMBOL



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1,50	1,70	0,059	0,067
B	3,30	3,70	0,130	0,146
C	0,50	0,70	0,020	0,028
D	2,50	2,70	0,098	0,106
E	0,50	0,70	0,020	0,028
F	0,50	0,20	0,002	0,008

SOD123

Switch Diode

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	500	mW
T_{STG}	Storage Temperature Range	-65 to +150	°C
T_{OPR}	Operating Temperature Range	-65 to +150	°C

These ratings are limiting values above which the serviceability of the diode may be impaired.

Electrical Characteristics

T_A = 25°C unless otherwise noted

Device Type	Device Marking	V_Z @ I_{ZT} (Volts)			I_{ZT} (mA)	Z_{ZT} @ I_{ZT} (Ω) Max	Z_{ZK} @ I_{ZK} (Ω) Max	I_R @ V_R (µA) Max	V_R (Volts)
		Min	Nom	Max					
MMSZ5221BW	Z2V4	2,28	2,4	2,52	20	30	1200	100	1
MMSZ5222BW	Z2V5	2,38	2,5	2,63	20	30	1250	100	1
MMSZ5223BW	Z2V7	2,57	2,7	2,84	20	30	1300	75	1
MMSZ5224BW	Z2V8	2,66	2,8	2,94	20	30	1400	75	1
MMSZ5225BW	Z3V0	2,85	3,0	3,15	20	29	1600	50	1
MMSZ5226BW	Z3V3	3,14	3,3	3,47	20	28	1600	25	1
MMSZ5227BW	Z3V6	3,42	3,6	3,78	20	24	1700	15	1
MMSZ5228BW	Z3V9	3,71	3,9	4,10	20	23	1900	10	1
MMSZ5229BW	Z4V3	4,09	4,3	4,52	20	22	2000	5	1
MMSZ5230BW	Z4V7	4,47	4,7	4,94	20	19	1900	5	2
MMSZ5231BW	Z5V1	4,85	5,1	5,36	20	17	1600	5	2
MMSZ5232BW	Z5V6	5,32	5,6	5,88	20	11	1600	5	3
MMSZ5233BW	Z6V0	5,70	6,0	6,30	20	7	1600	5	3,5
MMSZ5234BW	Z6V2	5,89	6,2	6,51	20	7	1000	5	4
MMSZ5235BW	Z6V8	6,46	6,8	7,14	20	5	750	3	5
MMSZ5236BW	Z7V5	7,13	7,5	7,88	20	6	500	3	6
MMSZ5237BW	Z8V2	7,79	8,2	8,61	20	8	500	3	6,5
MMSZ5238BW	Z8V7	8,27	8,7	9,14	20	8	600	3	6,5
MMSZ5239BW	Z9V1	8,65	9,1	9,56	20	10	600	3	7
MMSZ5240BW	Z10V	9,50	10	10,50	20	17	600	3	8
MMSZ5241BW	Z11V	10,45	11	11,55	20	22	600	2	8,4
MMSZ5242BW	Z12V	11,40	12	12,60	20	30	600	1	9,1
MMSZ5243BW	Z13V	12,35	13	13,65	9,5	13	600	0,5	9,9
MMSZ5244BW	Z14V	13,30	14	14,70	9	15	600	0,1	10
MMSZ5245BW	Z15V	14,25	15	15,75	8,5	16	600	0,1	11
MMSZ5246BW	Z16V	15,20	16	16,80	7,8	17	600	0,1	12
MMSZ5247BW	Z17V	16,15	17	17,85	7,4	19	600	0,1	13
MMSZ5248BW	Z18V	17,10	18	18,90	7	21	600	0,1	14
MMSZ5249BW	Z19V	18,05	19	19,95	6,6	23	600	0,1	14
MMSZ5250BW	Z20V	19,00	20	21,00	6,2	25	600	0,1	15
MMSZ5251BW	Z22V	20,90	22	23,10	5,6	29	600	0,1	17

MMSZ5252BW	Z24V	22,80	24	25,20	5,2	33	600	0,1	18
MMSZ5253BW	Z25V	23,75	25	26,25	5	35	600	0,1	19
MMSZ5254BW	Z27V	25,65	27	28,35	4,6	41	600	0,1	21
MMSZ5255BW	Z28V	26,60	28	29,40	4,5	44	600	0,1	21
MMSZ5256BW	Z30V	28,50	30	31,50	4,2	49	600	0,1	23
MMSZ5257BW	Z33V	31,35	33	34,65	3,8	58	700	0,1	25
MMSZ5258BW	Z36V	34,20	36	37,80	3,4	70	700	0,1	27
MMSZ5259BW	Z39V	37,05	39	40,95	3,2	80	800	0,1	30
MMSZ5260BW	Z43V	40,85	43	45,15	3	93	900	0,1	33
MMSZ5261BW	Z47V	44,65	47	49,35	2,7	105	1000	0,1	36
MMSZ5262BW	Z51V	48,45	51	53,55	2,5	125	1100	0,1	39
MMSZ5263BW	Z56V	53,20	56	58,80	2,2	150	1300	0,1	43
MMSZ5264BW	Z60V	57,00	60	63,00	2,1	170	1400	0,1	46
MMSZ5265BW	Z62V	58,90	62	65,10	2,0	185	1400	0,1	47
MMSZ5266BW	Z68V	64,60	68	71,40	1,8	230	1600	0,1	52
MMSZ5267BW	Z75V	71,25	75	78,75	1,7	270	1700	0,1	56

VF Forward Voltage = 900mV Maximum @ **IF** = 10 mA for all types

Notes:

1. The zener voltage (VZ) is tested under pulse condition of 1mS.
2. The device numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to10% of the dc zener current (IZT or IZK) is superimposed to IZT or IZK.

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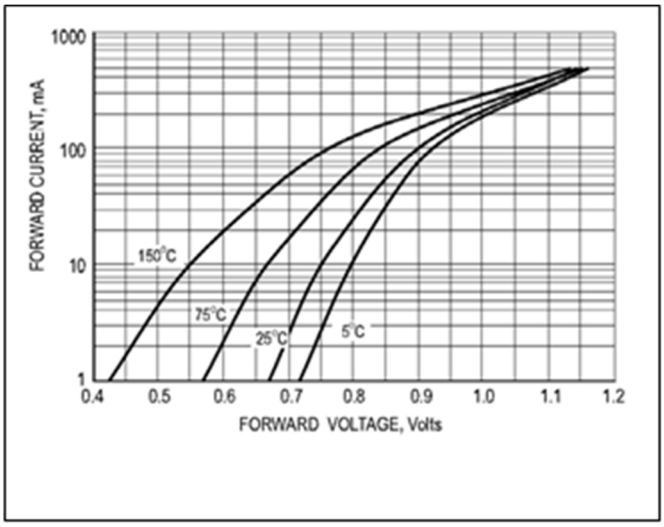
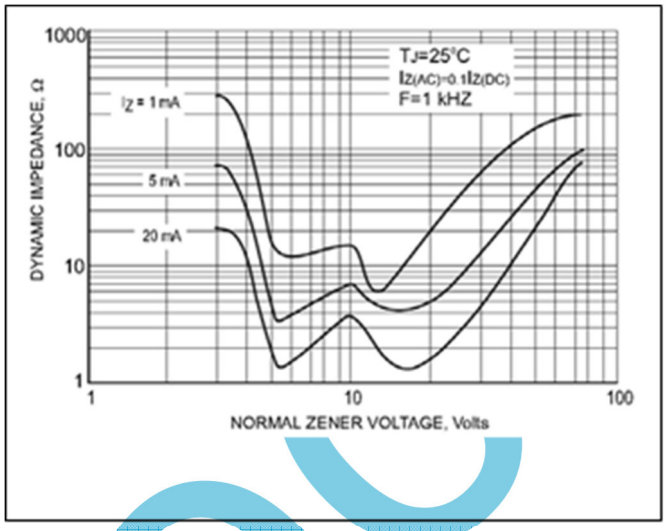
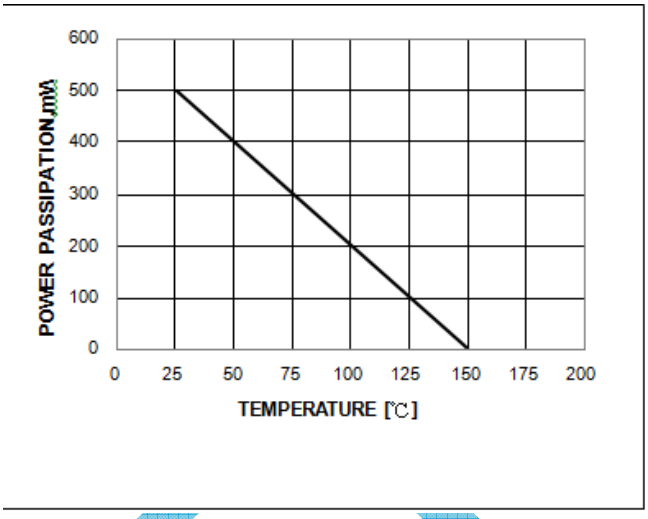
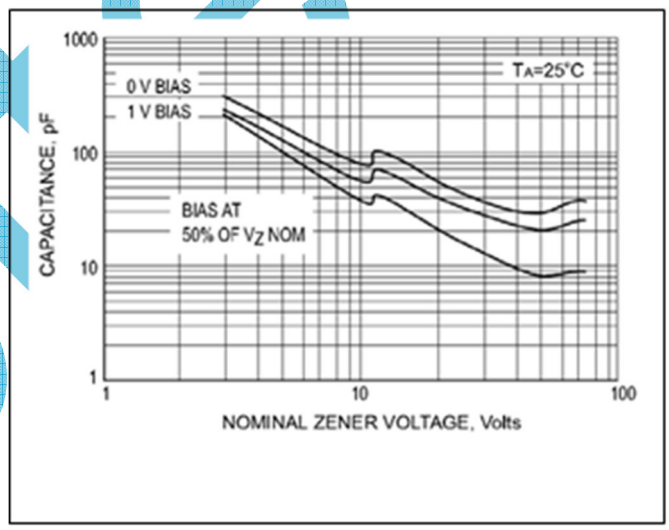
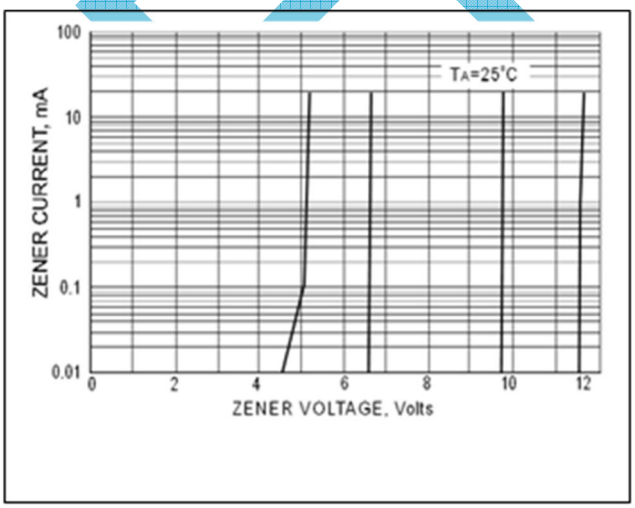
Rating and Characteristic Curves

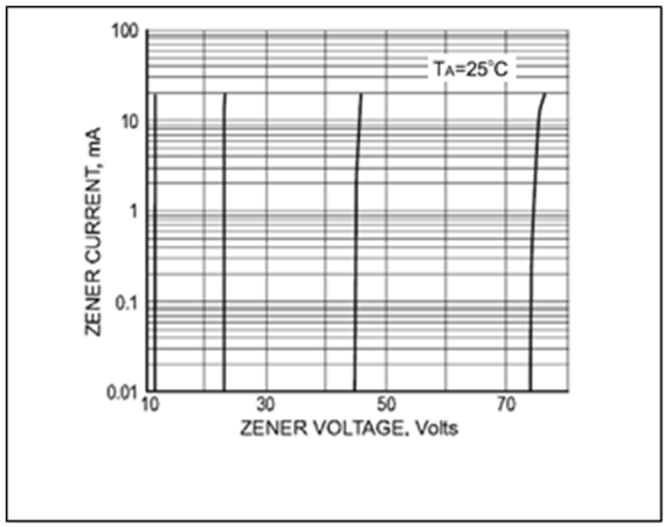


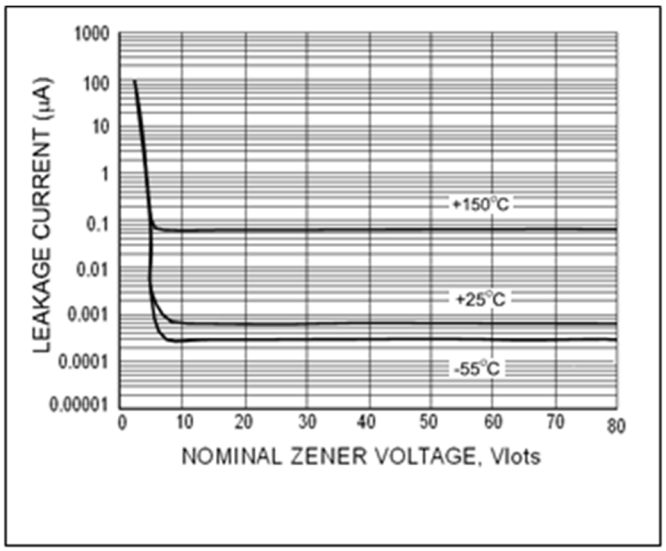












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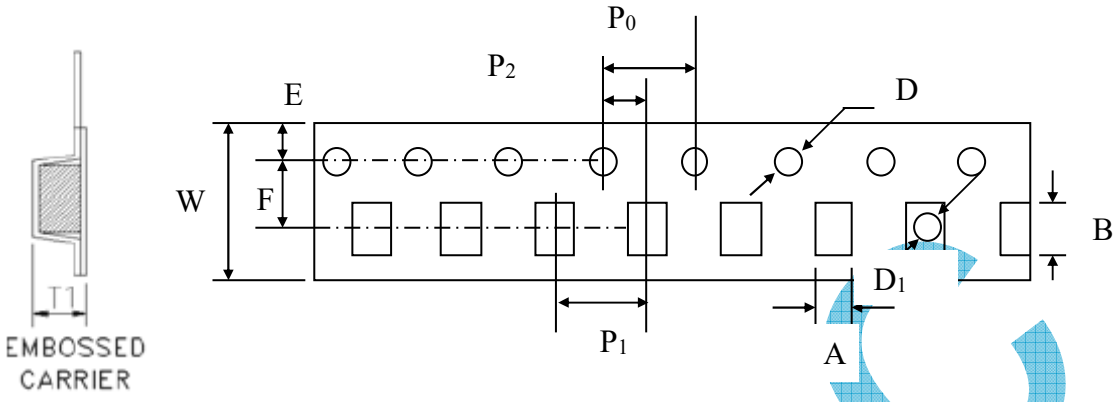
SPECIFICATION

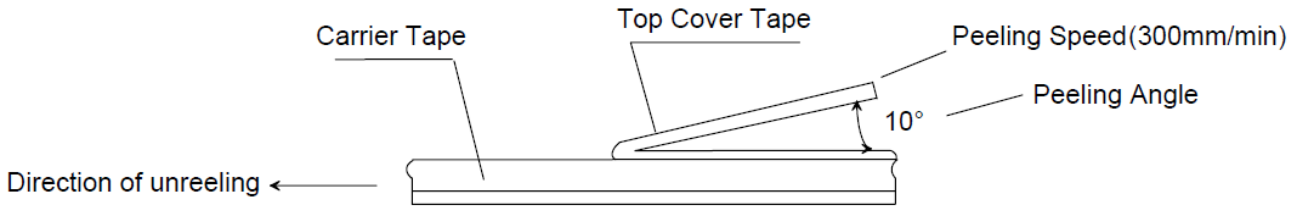
Tape And Reel Package

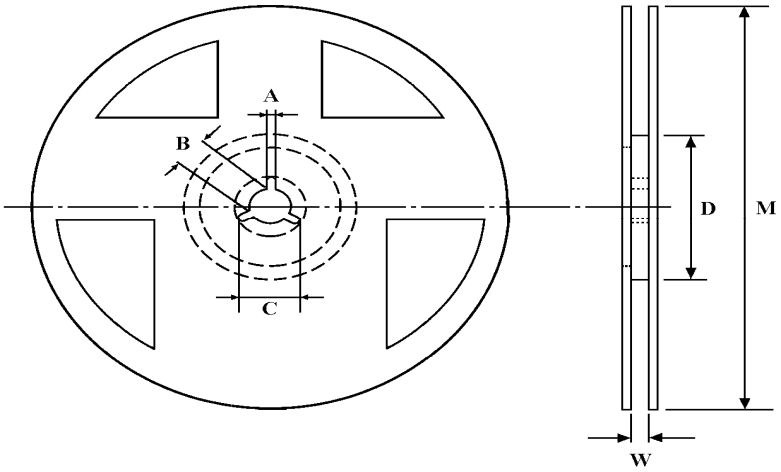


Type	A	B	W	E	F	P_0	P_1	P_2	ΦD	$ΦD_1$	T1
	1,85 ±0,1	3,94 ±0,1	8 ±0,30	1,75±0,01	3,5 ±0,05	4,00±0,10	4,00±0,10	2,00±0,05	1,55±0,03	1,5	1,58 ±0,1

Cover Tape Peel off Strength

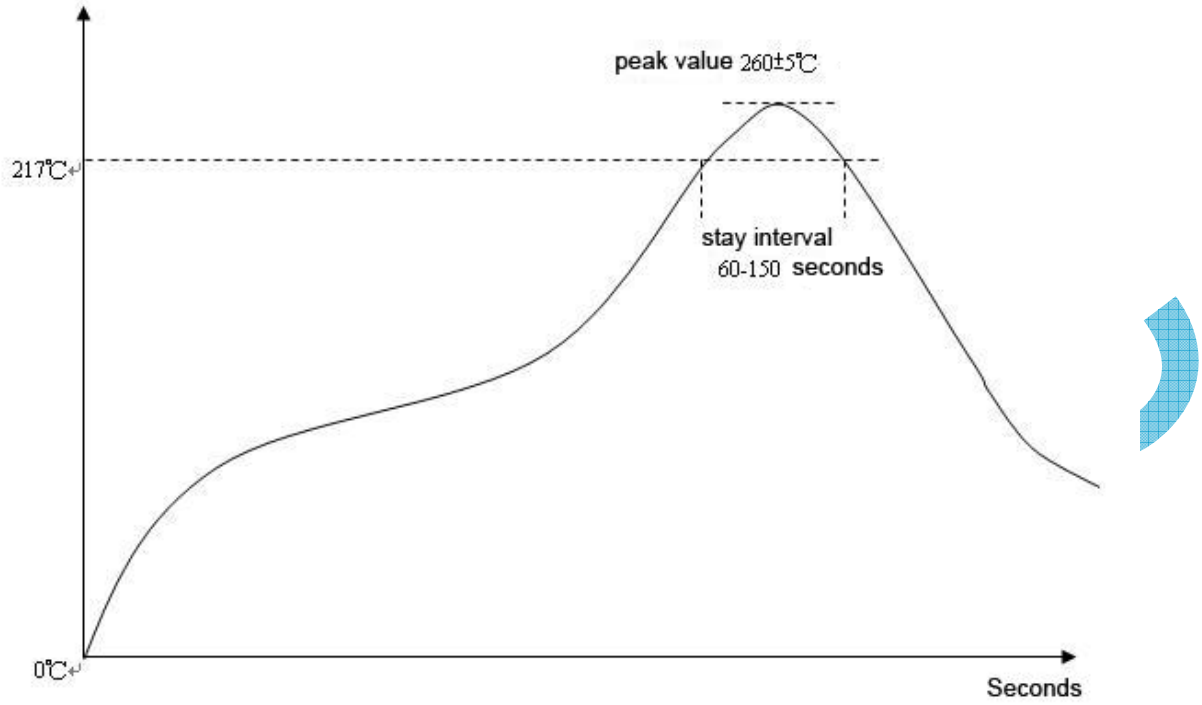
Specifications: peel force of top cover tape shall be between 8 to 40g
The peel speed shall be about 300mm/min±5%





Type	Packaging	M	A	B	C	D	W	T
	Embossed	178,0±1,0	2±0,5	13,5±0,7	21±0,5	60,0+1,0	13,5±1,0	15,5±1,0

Lead Free Reflow Soldering Profile



Stock period
The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 25°C ± 3°C and a relative humidity less than 80%RH

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