WILLAS

RoHS COMPLIANT

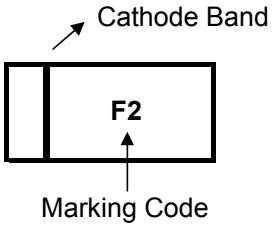
MMSZ5221BS THRU MMSZ5259BS

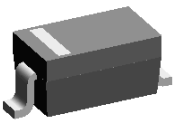
200mW SURFACE MOUNT SILICON ZENER DIODES 2.4V~39V

PRIMARY CHARACTERISTICS	
P_D	200mW
V_Z	2.4V~39V
I_{ZT}	Please refer to the specification
$T_{J,Max}$	150℃

SOD-323 PACKAGE

- **Body Marking: Please refer to the specification**
  Ex : MMSZ5237BS





FEATURES

- Planar Die construction
- 200mW Power Dissipation
- Zener Voltages from 2.4~39V
- Ideally Suited for Automated Assembly Processes
- Moisture Sensitivity Level 1

MECHANICAL DATA

- Case：Molded plastic,SOD-323
- Polarity：As Above Marked
- Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
- Epoxy : UL94-V0 rated flame retardant
- Mounting Position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation @ T_A= 25°C(Note A)	P_D	200	mW
Operating Junction and StorageTemperature Range	T_J	-55 to +150	°C

NOTE :

A. Mounted on 5.0mm²(.013mm thick) land areas.

200mW SURFACE MOUNT SILICON ZENER DIODES 2.4V~39V

Part No.	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code	Case
	V_Z @ I_{ZT}			Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R			
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V		
MMSZ5221BS	2.4	2.28	2.52	30	20.0	1200	0.25	100	1.0	C1	SOD-323
MMSZ5223BS	2.7	2.57	2.84	30	20.0	1300	0.25	75	1.0	C3	SOD-323
MMSZ5225BS	3.0	2.85	3.15	30	20.0	1600	0.25	50	1.0	C5	SOD-323
MMSZ5226BS	3.3	3.14	3.47	28	20.0	1600	0.25	25	1.0	G1	SOD-323
MMSZ5227BS	3.6	3.42	3.78	24	20.0	1700	0.25	15	1.0	G2	SOD-323
MMSZ5228BS	3.9	3.71	4.10	23	20.0	1900	0.25	10	1.0	G3	SOD-323
MMSZ5229BS	4.3	4.09	4.52	22	20.0	2000	0.25	5.0	1.0	G4	SOD-323
MMSZ5230BS	4.7	4.47	4.94	19	20.0	1900	0.25	5.0	2.0	G5	SOD-323
MMSZ5231BS	5.1	4.85	5.36	17	20.0	1600	0.25	5.0	2.0	E1	SOD-323
MMSZ5232BS	5.6	5.32	5.88	11	20.0	1600	0.25	5.0	3.0	E2	SOD-323
MMSZ5233BS	6.0	5.70	6.30	7	20.0	1600	0.25	5.0	3.5	E3	SOD-323
MMSZ5234BS	6.2	5.89	6.51	7	20.0	1000	0.25	5.0	4.0	E4	SOD-323
MMSZ5235BS	6.8	6.46	7.14	5	20.0	750	0.25	3.0	5.0	E5	SOD-323
MMSZ5236BS	7.5	7.13	7.88	6	20.0	500	0.25	3.0	6.0	F1	SOD-323
MMSZ5237BS	8.2	7.79	8.61	8	20.0	500	0.25	3.0	6.0	F2	SOD-323
MMSZ5238BS	8.7	8.27	9.14	8	20.0	600	0.25	3.0	6.5	F3	SOD-323
MMSZ5239BS	9.1	8.65	9.56	10	20.0	600	0.25	3.0	6.5	F4	SOD-323
MMSZ5240BS	10.0	9.50	10.50	17	20.0	600	0.25	3.0	8.0	F5	SOD-323
MMSZ5241BS	11.0	10.45	11.55	22	20.0	600	0.25	2.0	8.4	H1	SOD-323
MMSZ5242BS	12.0	11.40	12.60	30	20.0	600	0.25	1.0	9.1	H2	SOD-323
MMSZ5243BS	13.0	12.35	13.65	13	9.5	600	0.25	0.5	9.9	H3	SOD-323
MMSZ5244BS	14.0	13.30	14.70	15	9.0	600	0.25	0.1	10.5	H4	SOD-323
MMSZ5245BS	15.0	14.25	15.75	16	8.5	600	0.25	0.1	11.0	H5	SOD-323
MMSZ5246BS	16.0	15.20	16.80	17	7.8	600	0.25	0.1	12.0	J1	SOD-323
MMSZ5248BS	18.0	17.10	18.90	21	7.0	600	0.25	0.1	14.0	J3	SOD-323
MMSZ5250BS	20.0	19.00	21.00	25	6.2	600	0.25	0.1	15.0	J5	SOD-323
MMSZ5251BS	22.0	20.90	23.10	29	5.6	600	0.25	0.1	17.0	K1	SOD-323
MMSZ5252BS	24.0	22.80	25.20	33	5.2	600	0.25	0.1	18.0	K2	SOD-323
MMSZ5254BS	27.0	25.65	28.35	41	5.0	600	0.25	0.1	21.0	K4	SOD-323
MMSZ5255BS	28.0	26.60	29.40	44	4.5	600	0.25	0.1	21.0	K5	SOD-323
MMSZ5256BS	30.0	28.50	31.50	49	4.2	600	0.25	0.1	23.0	M1	SOD-323
MMSZ5257BS	33.0	31.35	34.65	58	3.8	700	0.25	0.1	25.0	M2	SOD-323
MMSZ5258BS	36.0	34.20	37.80	70	3.4	700	0.25	0.1	27.0	M3	SOD-323
MMSZ5259BS	39.0	37.05	40.95	80	3.2	800	0.25	0.1	30.0	M4	SOD-323

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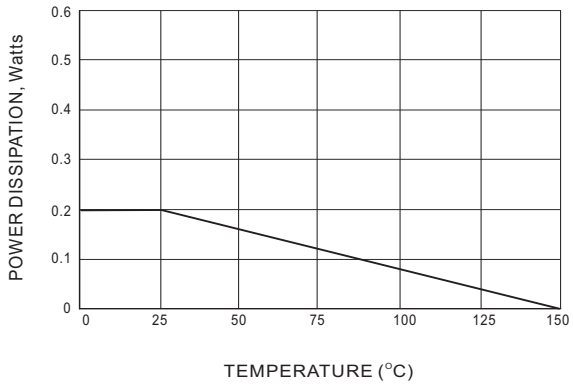


Fig.1 STEADY STATE POWER DERATING

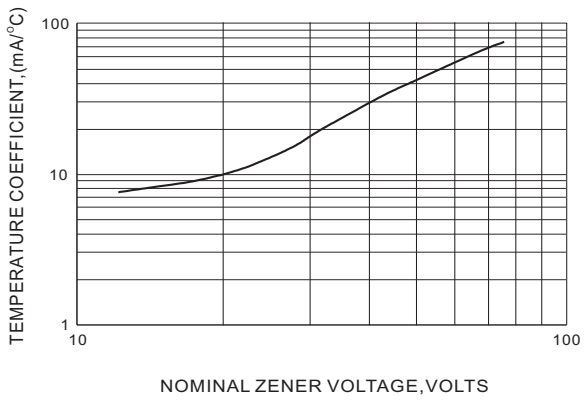


Fig.2 TEMPERATURE COEFFICENTS

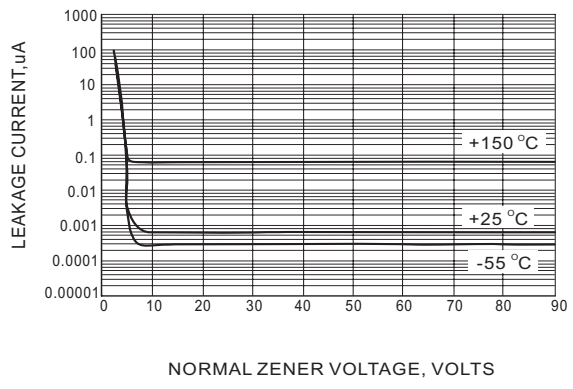


Fig.3 TYPICAL LEAKAGE CURRENT

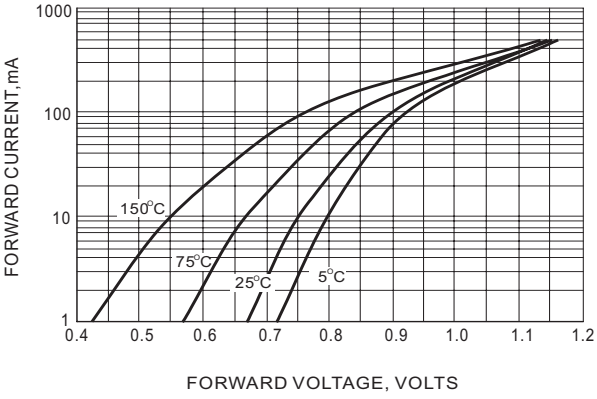
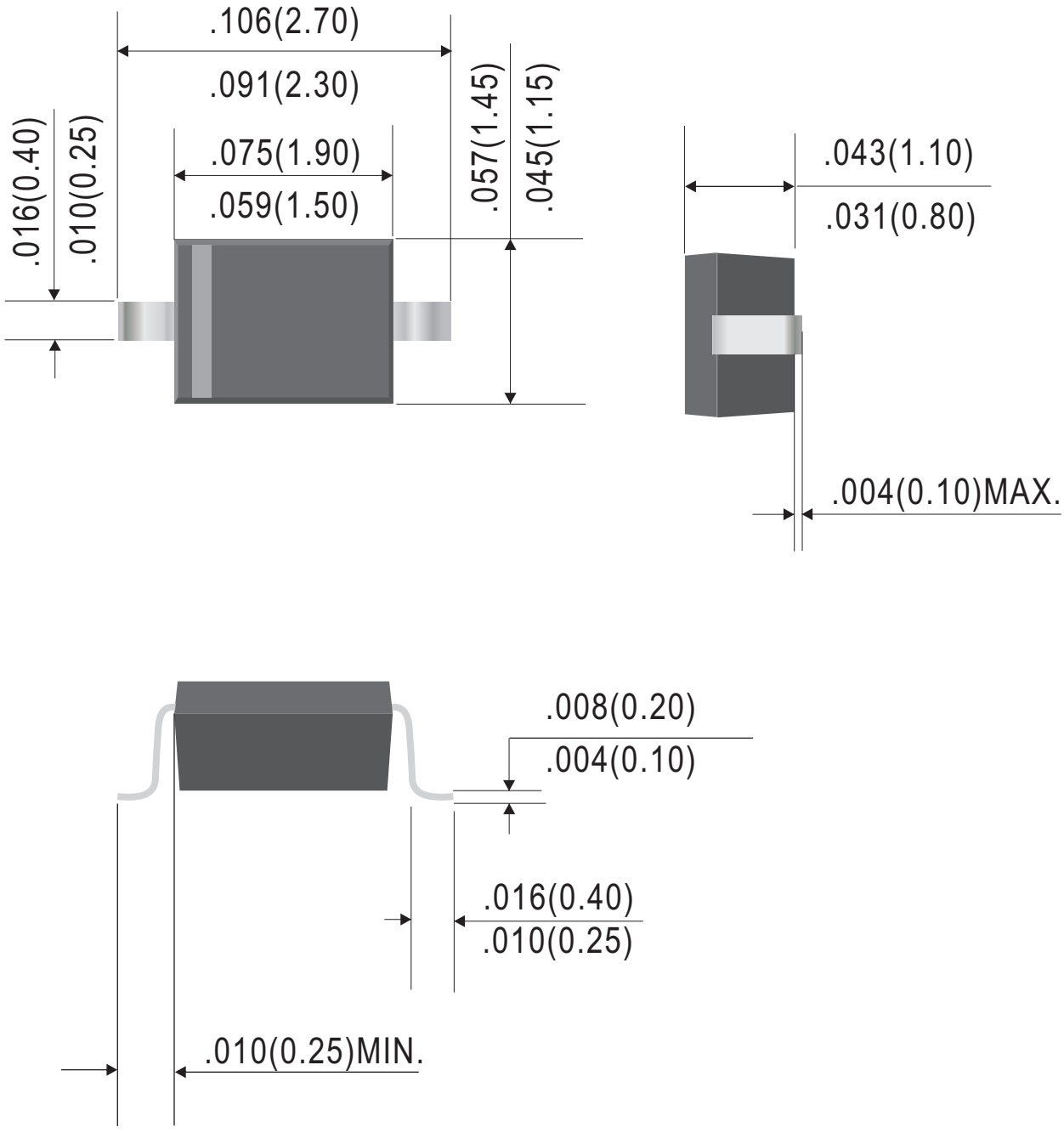


Fig.4 TYPICAL FORWARD VOLTAGE

Outline Drawing

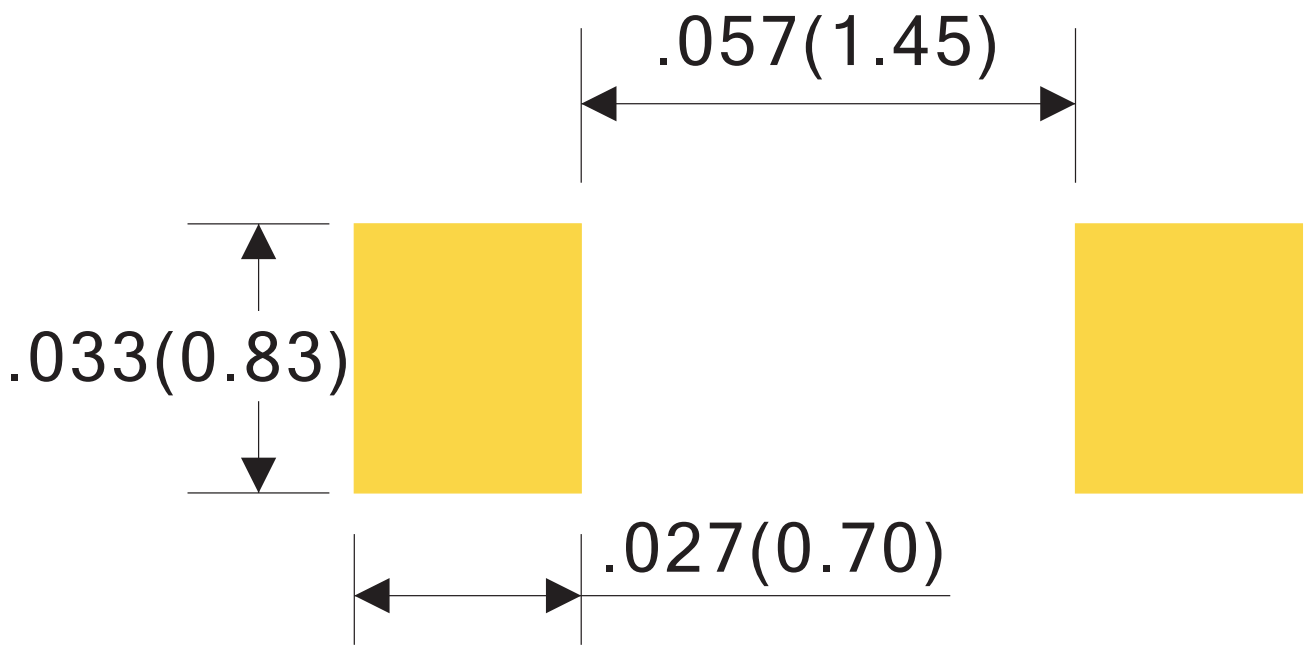
SOD-323



Dimensions in inches and (millimeters)

Rev.C

Suggested Soldering Pad Layout	SOD-323

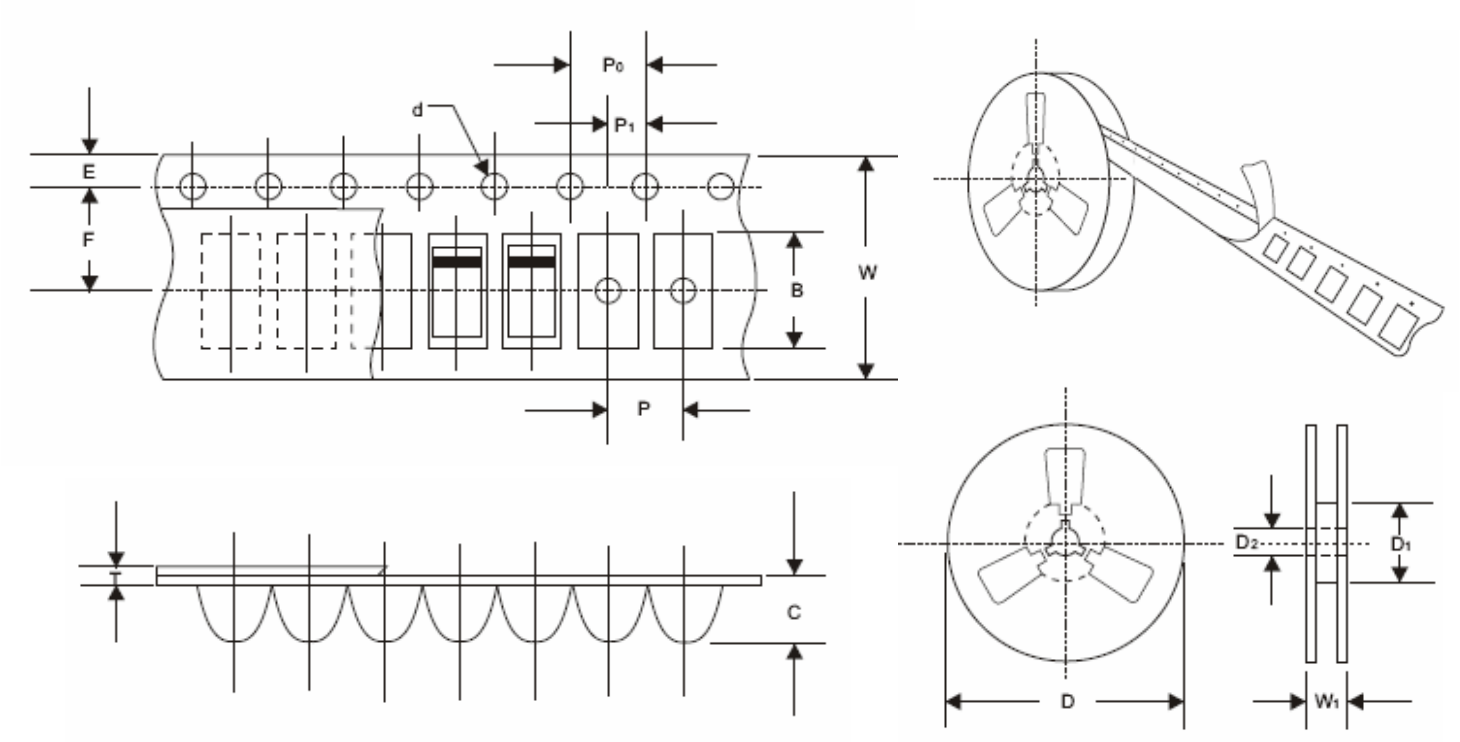


Dimensions in inches and (millimeters)

RevA

Reel Taping Specification - Surface Mount Device/SOD-323

PACKAGE	PER REEL EA	REEL DIA (m/m)	PER BOX EA	PER CARTION EA
SOD-323	3000	178	30000	240,000



ITEM	SYMBOL	SPECIFICATIONS(mm) SOD-323	SPECIFICATIONS(inch) SOD-323
Carrier length	B	4.5max.	0.177max.
Carrier depth	C	2.4max.	0.094max.
Sprocket hole	d	1.55±0.1	0.061±0.004
Reel outside diameter	D	178max.	7max.
Reel inner diameter	D_1	50min.	1.969min.
Feed hole diameter	D_2	13.0±0.2	0.512±0.008
Sprocket hole position	E	1.75±0.1	0.069±0.004
Punch hole position	F	3.5±0.05	0.1378±0.002
Punch hole pitch	P	4.0±0.1	0.157±0.004
Sprocket hole pitch	P_0	4.0±0.1	0.157±0.004
Embossment center	P_1	2.0±0.05	0.079±0.002
Overall tape thickness	T	0.4max.	0.016max.
Tape width	W	8.0±0.3	0.315±0.012
Reel width	W_1	14.4max.	0.567max.

Ordering Information:

Device PN	Packing
Part Number -T1[(1)]G[(2)]-WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel

(2) RoHS product for packing code suffix "G"；Halogen free product for packing code suffix "H"