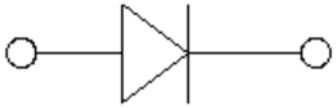
Zener Diodes



Features

- Moisture sensitivity level 1
- Zener voltage 1.8V~39V

Application

- Linear voltage regulator
- DC regulator
- Small-signal surge protection

Mechanical data

- **Package**: SOD-323
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Forward voltage @ I_F=10mA	V_F	V	0.95
Power dissipation	P_D	mW	300
Maximum regulator current	I_{ZM}	mA	P_D/ V_Z
Junction temperature	T_J	℃	-55 to +150
Storage temperature	T_{STG}	℃	-55 to +150

■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Type Number	Device Marking	V_Z @ I_{Zt}(V)				I_R(μA)@V_R	
		Min	Typ	Max	Izt(uA)	I_R(uA)	V_R (V)
BZX38450-C1V8	6R	1.71	1.8	1.89	50	7.5	1
BZX38450-C2V0	6S	1.90	2.0	2.10	50	5	1
BZX38450-C2V2	6T	2.09	2.2	2.31	50	4	1
BZX38450-C2V4	6U	2.28	2.4	2.52	50	2	1
BZX38450-C2V7	6V	2.565	2.7	2.835	50	1	1
BZX38450-C3V0	6W	2.85	3.0	3.15	50	0.8	1
BZX38450-C3V3	6X	3.135	3.3	3.465	50	7.5	1.5
BZX38450-C3V6	6Y	3.42	3.6	3.78	50	7.5	2.0
BZX38450-C3V9	6Z	3.705	3.9	4.095	50	5.0	2.0
BZX38450-C4V3	7A	4.085	4.3	4.515	50	4.0	2.0
BZX38450-C4V7	7B	4.465	4.7	4.935	50	10	3.0
BZX38450-C5V1	7C	4.845	5.1	5.355	50	10	3.0
BZX38450-C5V6	7D	5.32	5.6	5.88	50	10	4.0
BZX38450-C6V2	7E	5.89	6.2	6.51	50	10	5.0
BZX38450-C6V8	7F	6.46	6.8	7.14	50	10	5.1
BZX38450-C7V5	7G	7.125	7.5	7.875	50	10	5.7
BZX38450-C8V2	7H	7.79	8.2	8.61	50	1	6.2
BZX38450-C8V7	7L	8.265	8.7	9.135	50	1	6.6
BZX38450-C9V1	7J	8.645	9.1	9.555	50	1	6.9
BZX38450-C10	7K	9.50	10	10.5	50	1	7.6
BZX38450-C11	7M	10.45	11	11.55	50	0.05	8.4
BZX38450-C12	7N	11.40	12	12.6	50	0.05	9.1
BZX38450-C13	7P	12.35	13	13.65	50	0.05	9.8
BZX38450-C14	7Q	13.30	14	14.7	50	0.05	10.6
BZX38450-C15	7R	14.25	15	15.75	50	0.05	11.4
BZX38450-C16	7S	15.20	16	16.8	50	0.05	12.1

BZX38450-C17	7T	16.15	17	17.85	50	0.05	12.9
BZX38450-C18	7U	17.10	18	18.9	50	0.05	13.6
BZX38450-C19	7V	18.05	19	19.95	50	0.05	14.4
BZX38450-C20	7W	19.00	20	21	50	0.01	15.2
BZX38450-C22	7X	20.9	22	23.1	50	0.01	16.7
BZX38450-C24	7Y	22.8	24	25.2	50	0.01	18.2
BZX38450-C25	7Z	23.75	25	26.25	50	0.01	19.0
BZX38450-C27	8A	25.65	27	28.35	50	0.01	20.4
BZX38450-C28	8B	26.6	28	29.4	50	0.01	21.2
BZX38450-C30	8C	28.5	30	31.5	50	0.01	22.8
BZX38450-C33	8D	31.35	33	34.65	50	0.01	25
BZX38450-C36	8E	34.2	36	37.8	50	0.01	27.3
BZX38450-C39	8F	37.05	39	40.95	50	0.01	29.6

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	417
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	334

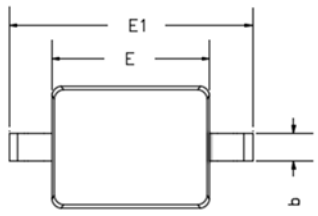
Note:

（1）Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas

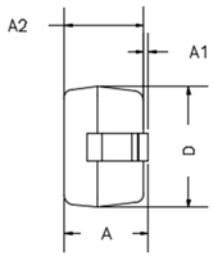
■Ordering Information

Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BZX38450-C1V8 THRU BZX38450-C39	F2	Approximate 0.0048	3000	30000	120000	7” reel
BZX38450-C1V8 THRU BZX38450-C39	F3	Approximate 0.0048	10000	/	210000	13” reel

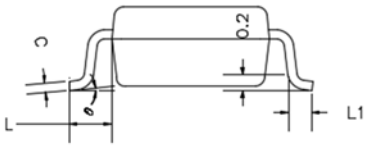
■ Outline Dimensions



TOP VIEW



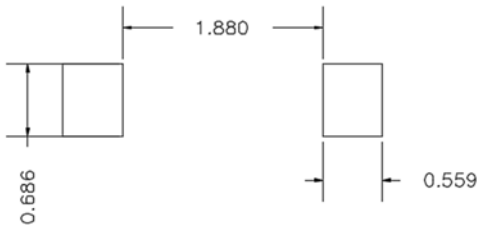
SIDE VIEW



SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
c	0.0031	0.0059	0.0800	0.1500
D	0.0472	0.0551	1.2000	1.4000
E	0.0629	0.0709	1.6000	1.8000
E1	0.0984	0.1063	2.5000	2.7000
L	0.0187TYP		0.475TYP	
L1	0.0098	0.0157	0.250	0.400
θ	0°	8°	0°	8°

■ Suggested Pad Layout



UNIT: mm

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