/ Descriptions

SOD-123FL

Glass Passivated Junction Zener voltage regulator diodes,SOD-123FL thin package.

/ Features

3.3V 330V AEC-Q101

3.3V to 330V wide zener voltage range applications, Small plastic package suitable for surface mounted design, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

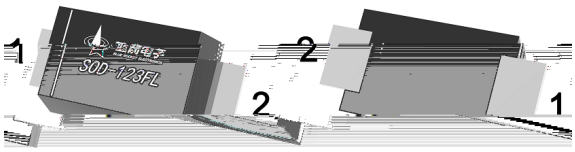
/ Applications

1W

1W power dissipation,automated assembly processes, Meet the stringent requirements of automotive applications.

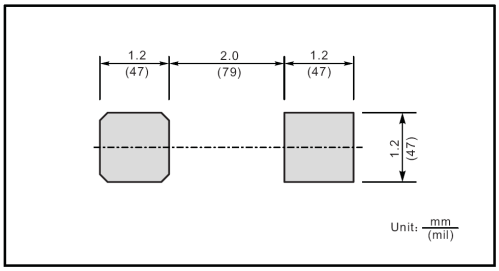
/ Equivalent Circuit

/ Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Power Dissipation at T_L=75	P_D	1.0	W
Forward Voltage at I_F = 200 mA	V_F	1.2	V
Typical thermal resistance junction to ambient (1)	$R_{\theta JA}$	55	/W
Operating and Storage Temperature Range	T_J,T_{stg}	-55~150	

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper areas pads

/ Electrical Characteristics(Ta=25)

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 ( )	Max A	V	I_{ZM} (mA)
BRMM1W3V3Q	FHDQ	3.10	3.3	3.50	75	10	100	1	285
BRMM1W3V6Q	FHEQ	3.40	3.6	3.80	69	10	100	1	263
BRMM1W3V9Q	FHFQ	3.70	3.9	4.10	64	9.0	50	1	243
BRMM1W4V3Q	FHGQ	4.06	4.3	4.56	58	9.0	25	1	219
BRMM1W4V7Q	FHJQ	4.50	4.7	4.93	53	8.0	10	1	203
BRMM1W5V1Q	FHKQ	4.84	5.1	5.36	49	7.0	10	1	186
BRMM1W5V6Q	FHLQ	5.32	5.6	5.92	45	5.0	10	2	170
BRMM1W6V2Q	FHNQ	5.86	6.2	6.51	41	2.0	10	3	154
BRMM1W6V8Q	FHOQ	6.46	6.8	7.18	37	3.5	10	4	140
BRMM1W7V5Q	FHQQ	7.12	7.5	7.88	34	4.0	10	5	127
BRMM1W8V2Q	FHRQ	7.79	8.2	8.67	31	4.5	10	6	116
BRMM1W9V1Q	FHTQ	8.60	9.0	9.59	28	5.0	10	7	104
BRMM1W10Q	FHUQ	9.50	10	10.5	25	7.0	10	7	95
BRMM1W11Q	FHVQ	10.4	11	11.6	23	8.0	5	8	86
BRMM1W12Q	FHWQ	11.4	12	12.6	21	9.0	5	9	79
BRMM1W13Q	FHXQ	12.4	13	14.1	19	10	5	10	71

/ Electrical Characteristics(Ta=25)

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 ( )	Max A	V	I_{ZM} (mA)
BRMM1W15Q	FHZQ	13.8	15	15.8	17	14	5	11	63
BRMM1W16Q	FJAQ	15.2	16	17.1	16	16	5	12	58
BRMM1W18Q	FJFQ	16.8	18	19.2	14	20	5	13	52
BRMM1W20Q	FJGQ	19.0	20	21.2	13	22	5	15	47
BRMM1W22Q	FJKQ	20.8	22	23.3	12	23	5	17	43
BRMM1W24Q	FJLQ	22.8	24	26.0	11	25	5	18	38
BRMM1W27Q	FJNQ	25.3	27	28.9	9.5	35	5	21	35
BRMM1W30Q	FJQQ	28.2	30	32.0	8.5	40	5	23	31
BRMM1W33Q	FJRQ	31.3	33	34.9	7.5	45	5	25	28
BRMM1W36Q	FJSQ	34.2	36	37.9	7.0	50	5	27	26
BRMM1W39Q	FJTQ	37.2	39	41.5	6.5	60	5	30	24
BRMM1W43Q	FLGQ	40.9	43	45.6	6.0	70	1	32	22
BRMM1W47Q	FLJQ	44.9	47	49.8	5.5	80	1	35	20
BRMM1W51Q	FLKQ	48.6	51	54.0	5.0	95	1	38	18
BRMM1W56Q	FLLQ	53.6	56	58.8	4.5	110	1	42	17
BRMM1W62Q	FLNQ	58.9	62	65.6	4.0	125	1	47	15
BRMM1W68Q	FLOQ	64.6	68	71.7	3.7	150	1	52	14
BRMM1W75Q	FLQQ	71.2	75	78.8	3.3	175	1	56	12
BRMM1W82Q	FLRQ	77.9	82	87.0	3.0	200	1	62	11
BRMM1W91Q	FLTQ	86.0	91	96.0	2.8	250	1	69	10
BRMM1W100Q	FLUQ	95.0	100	105	2.5	350	1	76	9.5
BRMM1W110Q	FLVQ	104	110	116	2.3	450	1	84	8.6
BRMM1W120Q	FLWQ	114	120	127	2.0	550	1	91	7.8
BRMM1W135Q	FLXQ	125	135	142	1.9	700	1	100	7.0

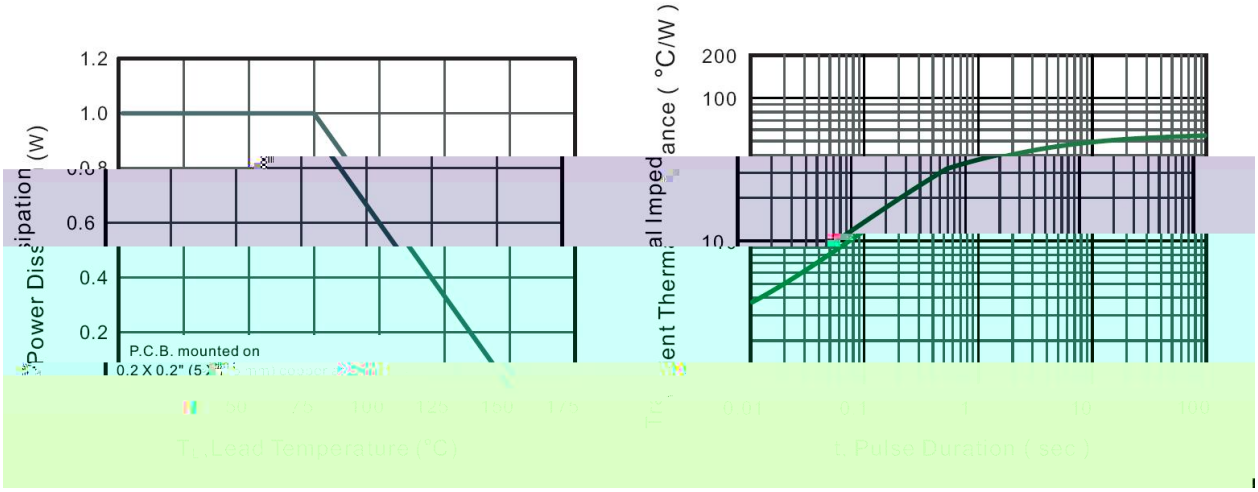
/ Electrical Characteristics(Ta=25)

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 ( )	Max A	V	I_{ZM} (mA)
BRMM1W150Q	FLZQ	140	150	157	1.7	900	1	110	6.3
BRMM1W165Q	FPAQ	155	165	172	1.6	1100	1	120	5.8
BRMM1W180Q	FPFQ	170	180	191	1.4	1200	1	135	5.2
BRMM1W200Q	FPGQ	189	200	211	1.2	1400	1	150	4.7
BRMM1W220Q	FPKQ	209	220	231	1.0	1600	1	165	4.3
BRMM1W240Q	FPLQ	229	240	251	1.0	1800	1	180	3.9
BRMM1W260Q	FPMQ	249	260	271	1.0	2000	1	190	3.7
BRMM1W280Q	FPNQ	269	280	291	1.0	2100	1	205	3.4
BRMM1W300Q	FPQQ	289	300	315	1.0	2300	1	230	3.1
BRMM1W330Q	FPRQ	313	330	346	1.0	2500	1	250	2.8

Note:

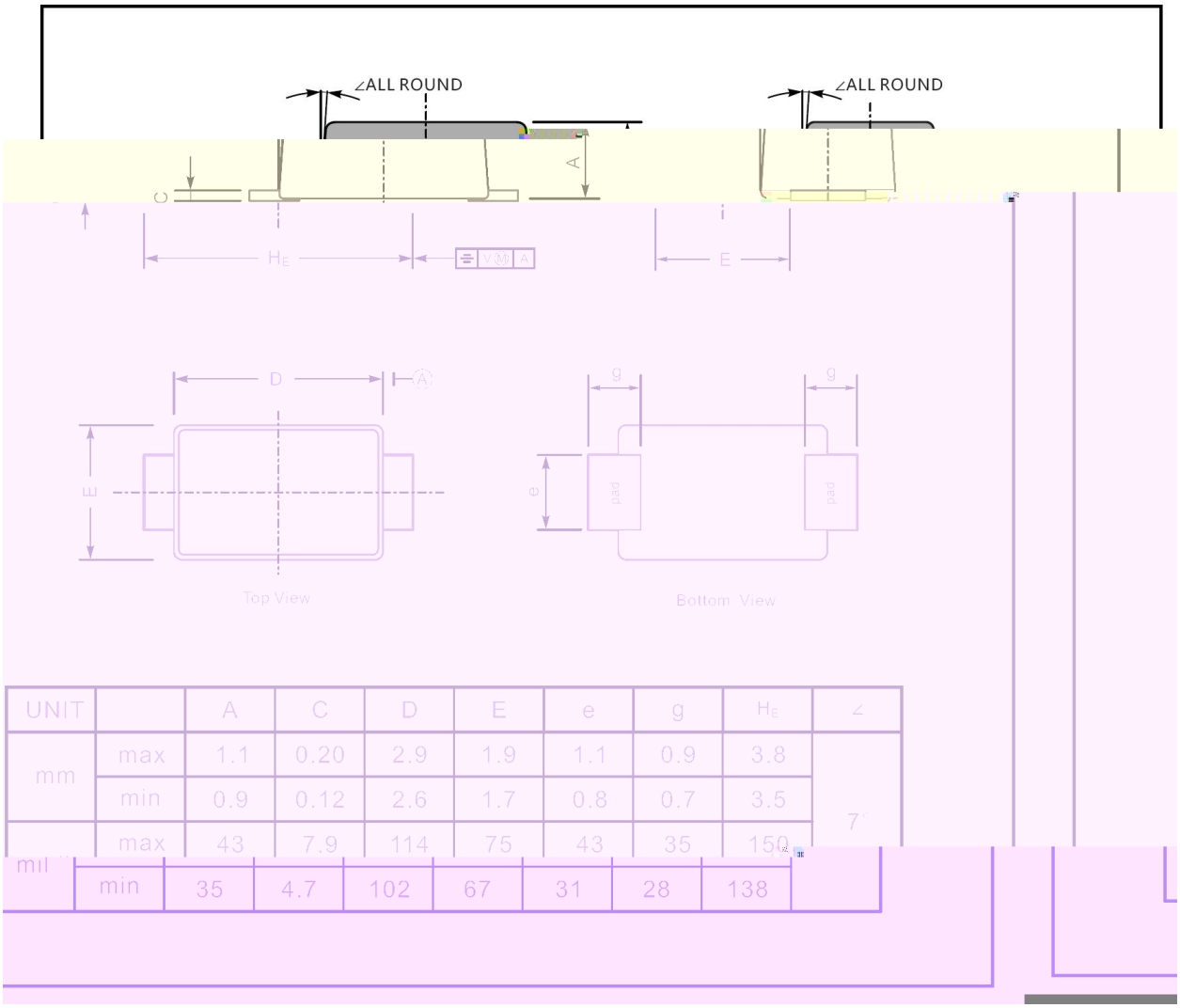
1 V_{ZT} is tested with pulses (20 ms)

/ Electrical Characteristic Curve



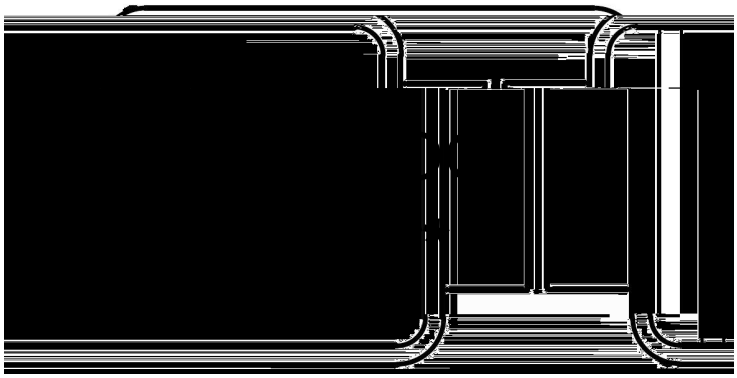
/ Package Dimensions

SOD-123FL



UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

/ Marking Instructions



FHO

Q

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Note:

FHO	Product Type Code
Q:	Automobile halogen-free product Code
****	Lot No. Code, code change with Lot No

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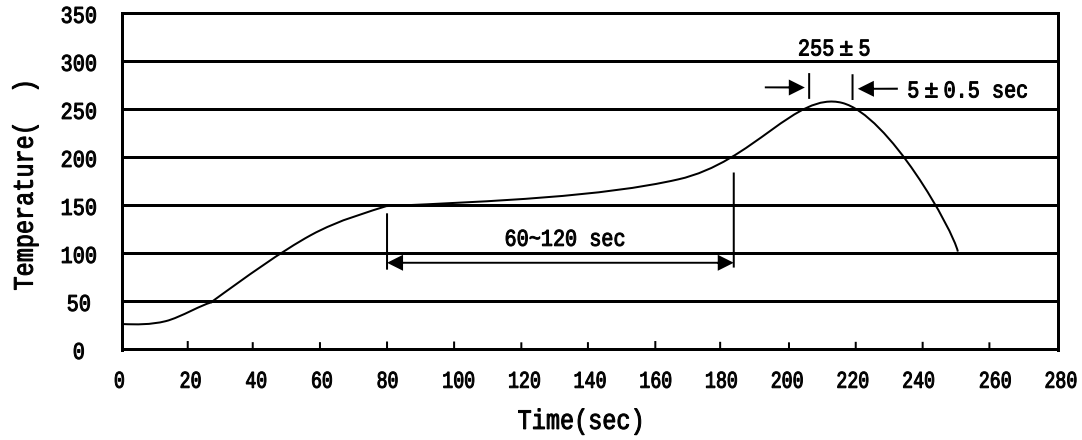

Note:

1		150	200		60	120sec;	1.Preheating:150~200 , Time:60~120sec.
2		255±5				5±0.5sec;	2.Peak Temp.:255±5 , Duration:5±0.5sec.
3				2	10	/sec.	3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension		(unit mm³)
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOD-123FL	3,000	8	24,000	6	144,000	7 ×8	185×180×105	390×385×205

/ Notices