

1SMB3EZ5.6-AU~1SMB3EZ51-AU

GLASS PASSIVATED JUNCTION SILICON ZENER DIODES

VOLTAGE

5.6 to 51 Volt

POWER

3 Watt

SMB / DO-214AA

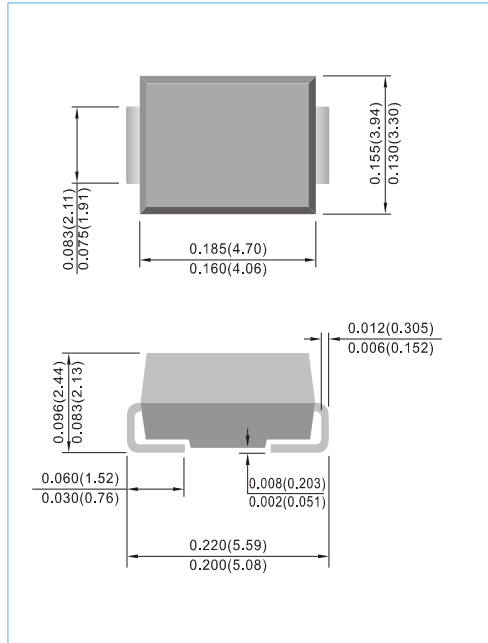
Unit : inch(mm)

FEATURES

- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: JEDEC DO-214AA, Molded plastic over passivated junction
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packing: 12mm tape (E1A-481)
- Weight: 0.0032 ounce, 0.092 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
Steady State Power Dissipation at $T_L=75^{\circ}\text{C}$ (Note 1)	P_D	3	W
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	15	A
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	$^{\circ}\text{C}$

NOTE :

1. Mounted on infinite heatsink.



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Part Number	Nominal Zener Voltage			Maximum Zener Impedance				Max Reverse Leakage Current		Marking Code
	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	
1SMB3EZ5.6-AU	5.6	5.32	5.88	2	134	700	1	5	3	5V6B
1SMB3EZ6.2-AU	6.2	5.89	6.51	2	120	700	1	5	4	6V2B
1SMB3EZ6.8-AU	6.8	6.46	7.14	2	110	700	1	5	4	6V8B
1SMB3EZ7.5-AU	7.5	7.13	7.88	2	100	700	0.5	5	5	7V5B
1SMB3EZ8.2-AU	8.2	7.79	8.61	2	91	700	0.5	5	6	8V2B
1SMB3EZ8.7-AU	8.7	8.27	9.14	2	85	700	0.5	4	6.6	8V7B
1SMB3EZ9.1-AU	9.1	8.65	9.56	3	82	700	0.5	3	7	9V1B
1SMB3EZ10-AU	10	9.5	10.5	4	75	700	0.25	3	7.6	10B
1SMB3EZ11-AU	11	10.45	11.55	4	68	700	0.25	1	8.4	11B
1SMB3EZ12-AU	12	11.4	12.6	5	63	700	0.25	1	9.1	12B
1SMB3EZ13-AU	13	12.35	13.65	5	58	700	0.25	0.5	9.9	13B
1SMB3EZ14-AU	14	13.3	14.7	5	53	700	0.25	0.5	10.6	14B
1SMB3EZ15-AU	15	14.25	15.75	6	50	700	0.25	0.5	11.4	15B
1SMB3EZ16-AU	16	15.2	16.8	6	47	700	0.25	0.5	12.2	16B
1SMB3EZ17-AU	17	16.15	17.85	6	44	750	0.25	0.5	13	17B
1SMB3EZ18-AU	18	17.1	18.9	6	42	750	0.25	0.5	13.7	18B
1SMB3EZ19-AU	19	18.05	19.95	7	40	750	0.25	0.5	14.4	19B
1SMB3EZ20-AU	20	19	21	7	37	750	0.25	0.5	15.2	20B
1SMB3EZ22-AU	22	20.9	23.1	8	34	750	0.25	0.5	16.7	22B
1SMB3EZ24-AU	24	22.8	25.2	9	31	750	0.25	0.5	18.2	24B
1SMB3EZ25-AU	25	23.75	26.25	10	30	750	0.25	0.5	19	25B
1SMB3EZ27-AU	27	25.65	28.35	10	28	750	0.25	0.5	20.6	27B
1SMB3EZ28-AU	28	26.6	29.4	12	27	750	0.25	0.5	21.3	28B
1SMB3EZ30-AU	30	28.5	31.5	16	25	1000	0.25	0.5	22.5	30B
1SMB3EZ33-AU	33	31.35	34.65	20	23	1000	0.25	0.5	25.1	33B
1SMB3EZ36-AU	36	34.2	37.8	22	21	1000	0.25	0.5	27.4	36B
1SMB3EZ39-AU	39	37.05	40.95	28	19	1000	0.25	0.5	29.7	39B
1SMB3EZ43-AU	43	40.85	45.15	33	17	1500	0.25	0.5	32.7	43B
1SMB3EZ47-AU	47	44.65	49.35	38	16	1500	0.25	0.5	35.8	47B
1SMB3EZ51-AU	51	48.45	53.55	45	15	1500	0.25	0.5	38.8	51B

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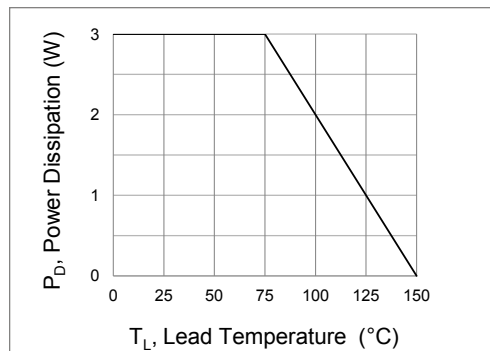


Fig.1 Steady-State Power Derating Curve

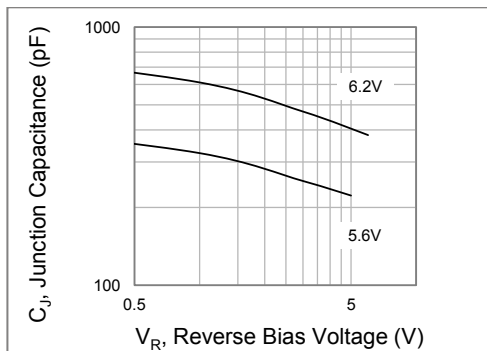


Fig.2 Typical Junction Capacitance

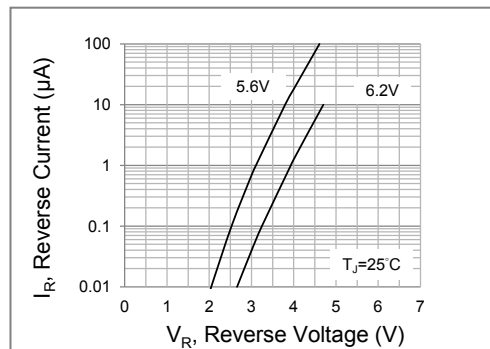


Fig.3 Typical Leakage Characteristics

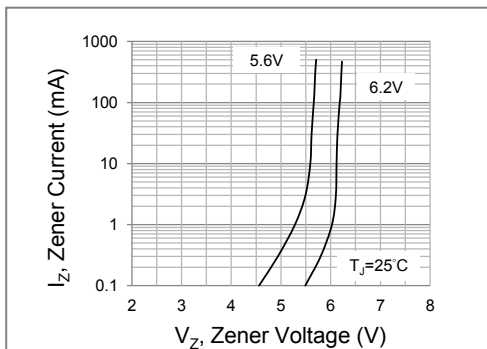


Fig.4 Typical Zener Characteristics

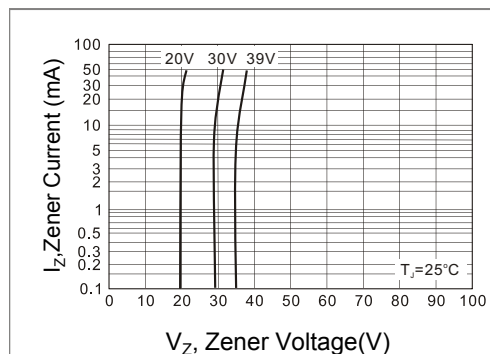


Fig.5 Typical Zener Characteristics

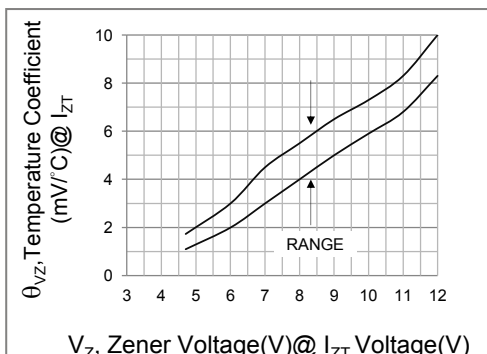


Fig.6 Units 5.6 To 12 Volts

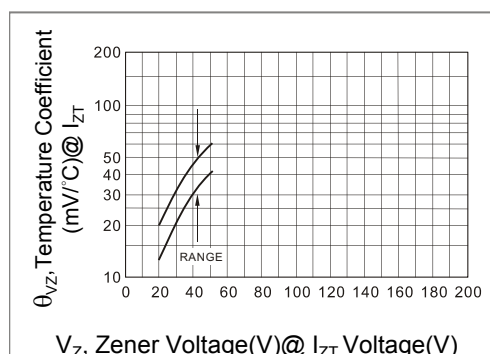
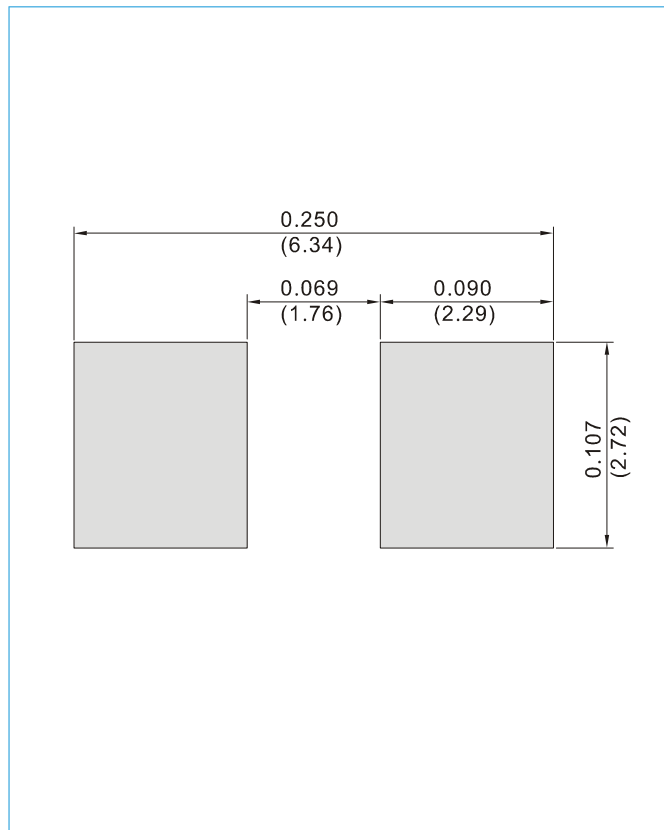


Fig.7 Units 10 To 51 Volts

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MOUNTING PAD LAYOUT

SMB / DO-214AA Unit : inch(mm)



ORDER INFORMATION

- Packing information
 - T/R - 3K per 13" plastic Reel
 - T/R - 0.8K per 7" plastic Reel

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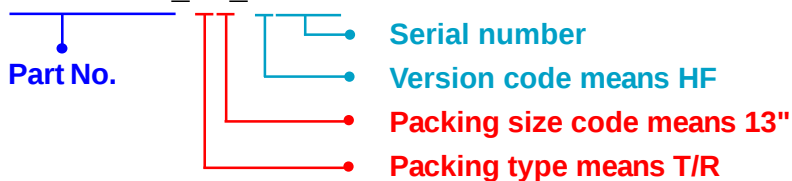
Part No_packing code_Version

1SMB3EZ5.6-AU_R1_000A1

1SMB3EZ5.6-AU_R2_000A1

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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