



# 1SMB3EZ4.7-AU SERIES

## GLASS PASSIVATED JUNCTION SILICON ZENER DIODES

**VOLTAGE** 4.7 to 51 Volts **POWER** 3.0 Watts

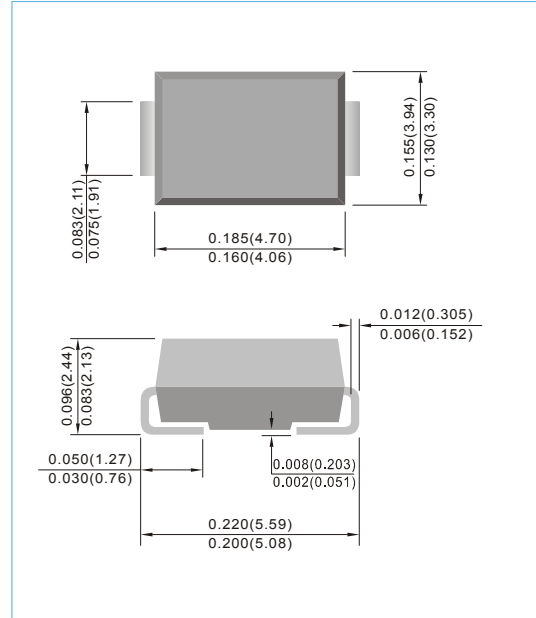
**SMB / DO-214AA** Unit : inch(mm)

### FEATURES

- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering : 260°C /10 seconds at terminals
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in comply with EU RoHS 2002/95/EC directives

### 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 $T_c=75^\circ\text{C}$ (Note 1)	$P_D$	3.0	Watts
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	15	Amps
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	$^\circ\text{C}$

NOTE :

1. Mounted on infinite heatsink.

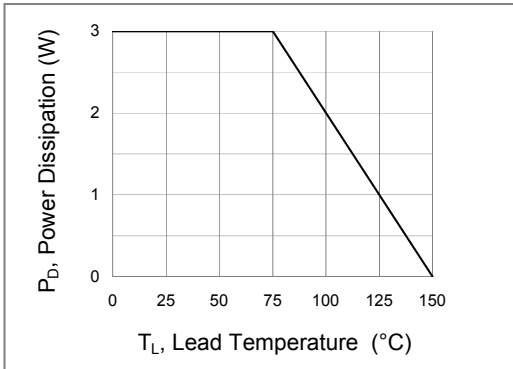


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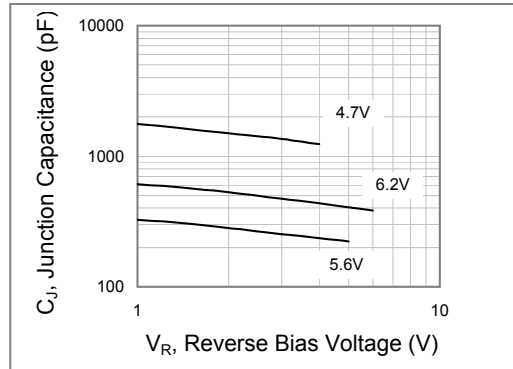
Part Number	Nominal Zener Voltage			Maximum Zener Impedance				Max Reverse Leakage Current		Marking Code
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub> @ V <sub>R</sub>		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
3.0 Watt ZENER										
1SMB3EZ4.7-AU	4.7	4.46	4.94	2	79.8	500	1	5	1.5	4V7B
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



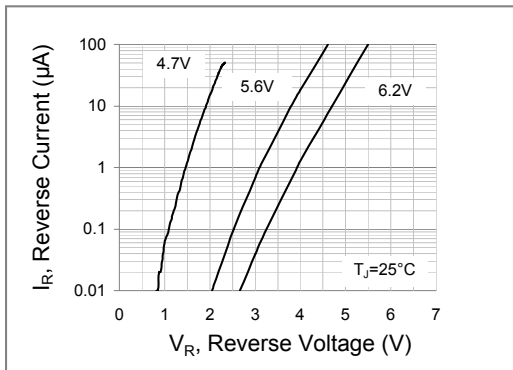
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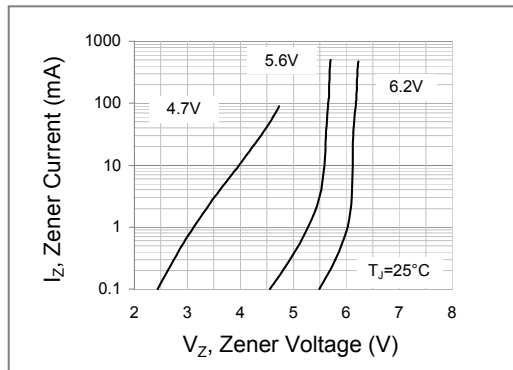
**Fig.1 Steady-State Power Derating Curve**



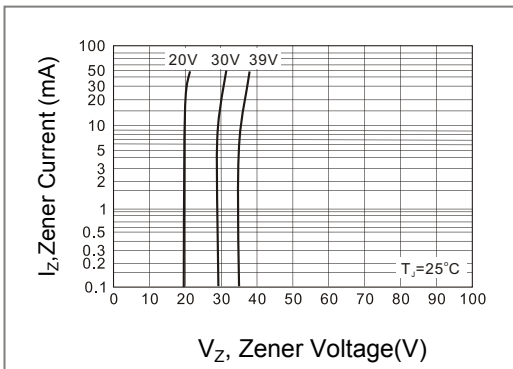
**Fig.2 Typical Junction Capacitance**



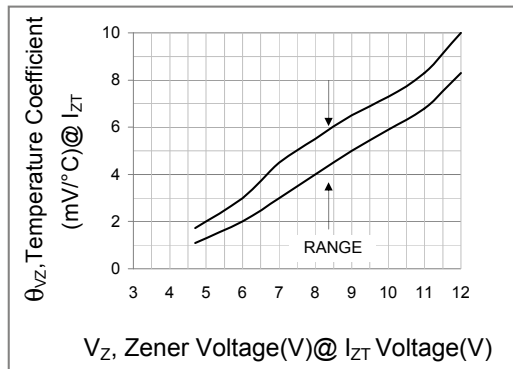
**Fig.3 Typical Leakage Characteristics**



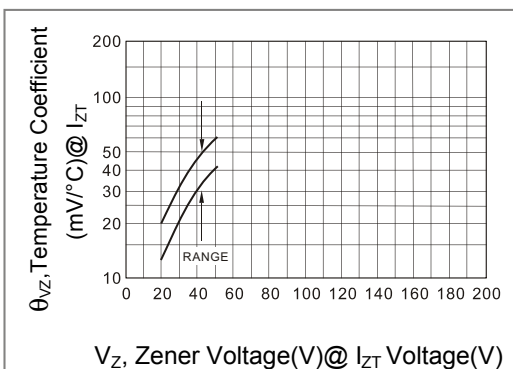
**Fig.4 Typical Zener Characteristics**



**Fig.5 Typical Zener Characteristics**



**Fig.6 Units 4.7 To 12 Volts**

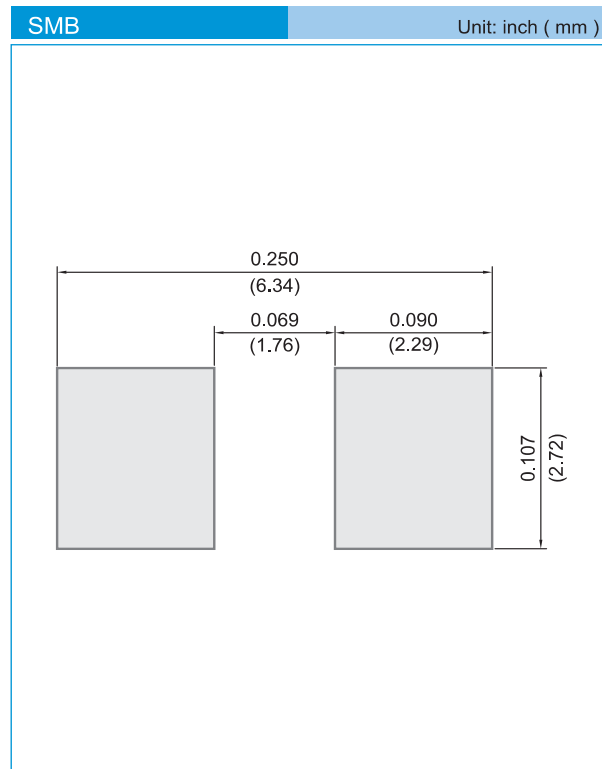


**Fig.7 Units 10 To 51 Volts**



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.5Kper 7" plastic Reel



## 1SMB3EZ4.7-AU SERIES

### Part No\_packing code\_Version

1SMB3EZ4.7-AU\_R1\_000A1  
 1SMB3EZ4.7-AU\_R1\_100A1  
 1SMB3EZ4.7-AU\_R2\_000A1  
 1SMB3EZ4.7-AU\_R2\_100A1

For example :

**RB500V-40\_R2\_00001**



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



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