

SINLOON®

貼片型穩壓二極管

Voltage Range: 6.2V - 200V

1SMB5920B-1SMB5956B

3.0W Surface Mount Zener Diode

Feature

- ◆ Glass Passivated Die Construction
- ◆ 3.0W Power Dissipation
- ◆ 6.2V - 200V Nominal Zener Voltage
- ◆ ±5% Standard Vz Tolerance
- ◆ Low Inductance
- ◆ Typical I<sub>r</sub> Less Than 0.5uA above 13V
- ◆ Plastic Case Material has UL Flammability Classification Rating 94V-0

Figure Case SMB/DO-214AA



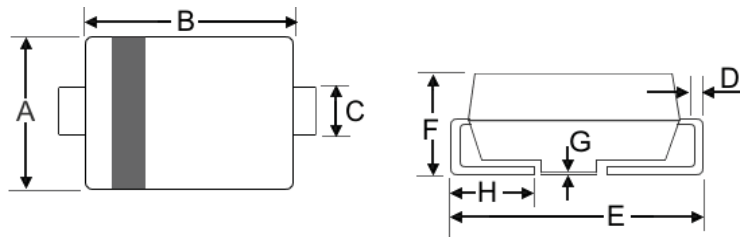
Mechanical Data

- ◆ Case: SMB/DO-214AA, Moldes Plastic
- ◆ Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026.
- ◆ Polarity: Cathode Band
- ◆ Weight: 0.094 grams (approx)
- ◆ Marking: Device Marking Code
- ◆ Lead Free: For RoHS / Lead Free Version Add "-LF" Suffix to part Number.

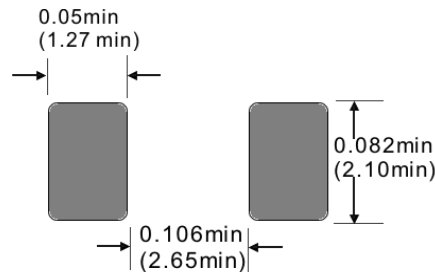
Dimension

Case: SMB/DO-214AA (mm)

Dim	Min	Max
A	3.3	3.94
B	4.1	4.7
C	1.91	2.11
D	0.152	0.305
E	5.1	5.59
F	2.1	2.44
G	0.051	0.203
H	0.76	1.27



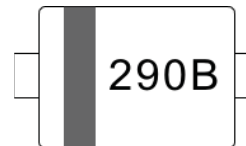
Recommended Footprint



Unit: inches(mm)

Marking Information

- Cathode = Polarity Band
- Body Top = Device Marking Code Number
- Polarity = As Marked Body



Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

CHARACTERISTIC	Symbol	Value	Unit
DC Power Dissipation at T <sub>L</sub> = 50°C (Note <sup>1</sup> )	Pd	3.0	W
Derated above 50°C.		40	mW/°C
Forward Voltage @I <sub>F</sub> = 200mA	V <sub>F</sub>	1.5	V
Thermal Resistance Junction to Ambient (Not <sup>2</sup> )	R <sub>θJA</sub>	226	°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG.</sub>	-65~+150	°C

Note: <sup>1</sup> Measured at zero lead length

Note: <sup>2</sup> Mounted on FR-4 board with 25.4mm<sup>2</sup> copper pad



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Type Number (Note <sup>1</sup> )	Device Marking Code	Nominal Zener	Test Current	Maximum Zener Impedance (Note <sup>3</sup> )			Leakage Current		Max. DC Zener Current
		V <sub>Z</sub> @I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	@V <sub>R</sub>	I <sub>ZM</sub>
		(V) ±5%	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMB5920B	920B	6.2	121	1.5	700	1.0	50	3.0	735
1SMB5921B	921B	6.8	110	2.0	700	1.0	50	4.0	393
1SMB5922B	922B	7.5	100	2.0	700	0.5	50	5.0	360
1SMB5923B	923B	8.2	91	2.3	700	0.5	50	6.0	330
1SMB5924B	924B	9.1	82	2.5	700	0.5	50	7.0	397
1SMB5925B	925B	10	75	3.5	700	0.25	50	7.6	270
1SMB5926B	926B	11	68	4.0	700	0.25	50	8.4	246
1SMB5927B	927B	12	63	4.5	700	0.25	1.0	9.1	225
1SMB5928B	928B	13	58	4.5	700	0.25	0.5	9.9	208
1SMB5929B	929B	15	50	5.5	700	0.25	0.5	11.4	180
1SMB5930B	930B	16	47	5.5	700	0.25	0.5	12.2	169
1SMB5931B	931B	18	42	6.0	750	0.25	0.5	13.7	150
1SMB5932B	932B	20	37	7.0	750	0.25	0.5	15.2	135
1SMB5933B	933B	22	34	8.0	750	0.25	0.5	16.7	123
1SMB5934B	934B	24	31	9.0	750	0.25	0.5	18.2	112
1SMB5935B	935B	27	28	10	750	0.25	0.5	20.6	100
1SMB5936B	936B	30	25	16	1000	0.25	0.5	22.5	90
1SMB5937B	937B	33	23	20	1000	0.25	0.5	25.1	82
1SMB5938B	938B	36	21	22	1000	0.25	0.5	27.4	75
1SMB5939B	939B	39	19	28	1000	0.25	0.5	29.7	69
1SMB5940B	940B	43	17	33	1500	0.25	0.5	32.7	63
1SMB5941B	941B	47	16	38	1500	0.25	0.5	35.6	57
1SMB5942B	942B	51	15	45	1500	0.25	0.5	38.8	53
1SMB5943B	943B	56	13	50	2000	0.25	0.5	42.6	48
1SMB5944B	944B	62	12	55	2000	0.25	0.5	47.1	44
1SMB5945B	945B	68	11	70	2000	0.25	0.5	51.7	40
1SMB5946B	946B	75	10	85	2000	0.25	0.5	56.0	36
1SMB5947B	947B	82	9.1	95	3000	0.25	0.5	62.2	33
1SMB5948B	948B	91	8.2	115	3000	0.25	0.5	69.2	30
1SMB5949B	949B	100	7.5	160	3000	0.25	0.5	76.0	27
1SMB5950B	950B	110	6.8	225	4000	0.25	0.5	83.6	25
1SMB5951B	951B	120	6.3	300	4500	0.25	0.5	91.2	22
1SMB5952B	952B	130	5.8	375	5000	0.25	0.5	98.8	21
1SMB5953B	953B	150	5.0	550	6000	0.25	0.5	114.0	18
1SMB5954B	954B	160	4.7	625	6500	0.25	0.5	121.6	17
1SMB5955B	955B	180	4.2	700	7000	0.25	0.5	136.8	15
1SMB5956B	956B	200	3.7	875	8000	0.25	0.5	152.0	13

Note:

1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%.

2. Measured under thermal equilibrium and DC (I<sub>ZT</sub>) test condition.

3. The zener impedance is derived from the 60Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.



品質承諾標誌  
QUALITY COMMITMENT

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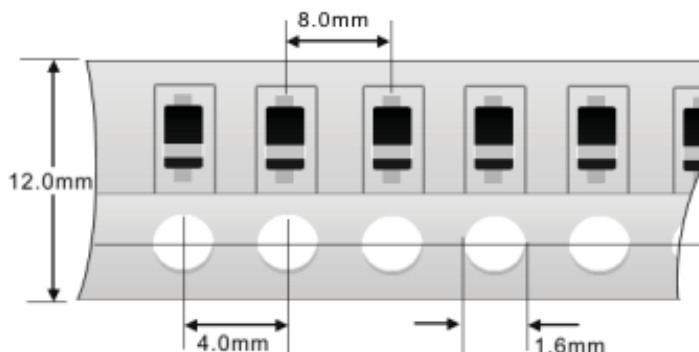
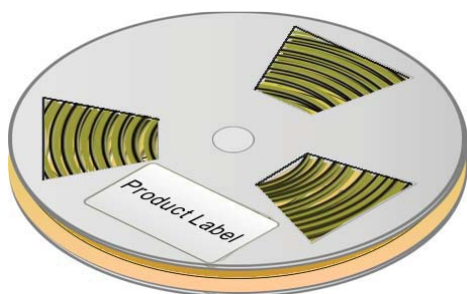
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Packaging Information

Dimension Reel Tape	Quantity (Pcs)	Inner Box Size L x W x H	Quantity (Pcs)	Carton Size L x W x H	Quantity (Pcs)	Gross Weight
330 mm	3,000	340 x 337 x 45 mm	6,000	370 x 370 x 420 mm	48,000	14.5kg

Note: 1. Paper Reel, White or gray color.  
2. Components are packed in accordance with EIA standard 481- and 481-2

Tape Reel 330 x 12mm



Carton:



**SINLOON®**

※美隆公司產品規格及其特性參數的改變或更新恕不另行通知。

※Mayloon characteristic parameters of electronic product specification changes or updates without notice to improve

