

SINLOON®

貼片型穩壓二極管

Voltage Range: 6.2V - 200V

1SMA5920B-1SMA5956B

1.5W Surface Mount Zener Diode

Feature

- ◆ Glass Passivated Die Construction
- ◆ 1.5W Power Dissipation
- ◆ 6.2V - 200V Nominal Zener Voltage
- ◆ ±5% Standard Vz Tolerance
- ◆ Low Inductance
- ◆ Typical I<sub>r</sub> Less Than 0.5uA above 11V
- ◆ Plastic Case Material has UL Flammability Classification Rating 94V-0

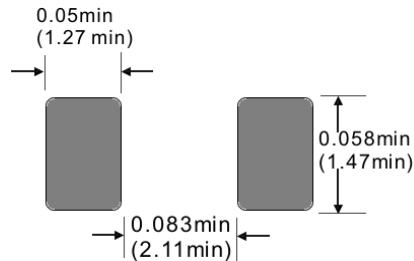
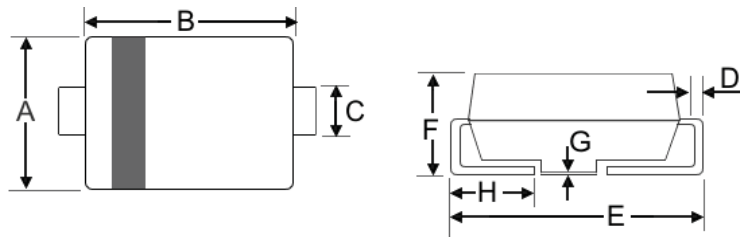
Mechanical Data

- ◆ Case: SMA/DO-214AC, Moldes Plastic
- ◆ Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026.
- ◆ Polarity: Cathode Band
- ◆ Weight: 0.064 grams (approx)
- ◆ Marking: Device Marking Code
- ◆ Lead Free: For **RoHS** / Lead Free Version Add "-LF" Suffix to part Number.

Dimension

Case: SMA/DO-214AC (mm)

Dim	Min	Max
A	2.5	2.9
B	4.0	4.6
C	1.2	1.6
D	0.152	0.305
E	4.8	5.28
F	2.0	2.44
G	0.051	0.203
H	0.76	1.52



Unit: inches(mm)

Recommended Footprint

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	1.5	W
Derated above 50°C.		20	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>	250	°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

Figure Case SMA/DO-214AC



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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)
1SMA5920B	820B	6.2	60.5	2.0	200	1.0	2.5	4.0	240
1SMA5921B	821B	6.8	55.1	2.5	200	1.0	2.5	502.0	220
1SMA5922B	822B	7.5	50.0	3.0	400	0.5	2.5	6.0	200
1SMA5923B	823B	8.2	45.7	3.5	400	0.5	2.5	6.5	182
1SMA5924B	824B	9.1	41.2	4.0	500	0.5	2.5	7.0	164
1SMA5925B	825B	10	37.5	4.5	500	0.25	2.5	8.0	150
1SMA5926B	826B	11	34.1	5.5	550	0.25	0.5	8.4	136
1SMA5927B	827B	12	31.2	6.5	550	0.25	0.5	9.1	125
1SMA5928B	828B	13	28.8	7.0	550	0.25	0.5	9.9	115
1SMA5929B	829B	15	25.0	9.0	600	0.25	0.5	11.4	100
1SMA5930B	830B	16	23.4	10.0	600	0.25	0.5	12.2	93
1SMA5931B	831B	18	20.8	12.0	650	0.25	0.5	13.7	83
1SMA5932B	832B	20	18.7	14.0	650	0.25	0.5	15.2	75
1SMA5933B	833B	22	17.0	17.5	650	0.25	0.5	16.7	68
1SMA5934B	834B	24	15.6	19.0	700	0.25	0.5	18.2	62
1SMA5935B	835B	27	13.9	23	700	0.25	0.5	20.6	55
1SMA5936B	836B	30	12.5	26	750	0.25	0.5	22.8	50
1SMA5937B	837B	33	11.4	33	800	0.25	0.5	25.1	45
1SMA5938B	838B	36	10.4	38	850	0.25	0.5	27.4	41
1SMA5939B	839B	39	9.6	45	900	0.25	0.5	29.7	38
1SMA5940B	840B	43	8.7	53	950	0.25	0.5	32.7	34
1SMA5941B	841B	47	8.0	67	1000	0.25	0.5	35.8	31
1SMA5942B	842B	51	7.3	70	1100	0.25	0.5	38.8	29
1SMA5943B	843B	56	6.7	86	1300	0.25	0.5	42.6	26
1SMA5944B	844B	62	6.0	100	1500	0.25	0.5	47.1	24
1SMA5945B	845B	68	5.5	120	1700	0.25	0.5	51.7	22
1SMA5946B	846B	75	5.0	140	2000	0.25	0.5	56.0	20
1SMA5947B	847B	82	4.6	160	2500	0.25	0.5	62.2	18
1SMA5948B	848B	91	4.1	200	3000	0.25	0.5	69.2	16
1SMA5949B	849B	100	3.7	250	3100	0.25	0.5	76.0	15
1SMA5950B	850B	110	3.4	300	4000	0.25	0.5	83.6	13
1SMA5951B	851B	120	3.1	380	4500	0.25	0.5	91.2	12
1SMA5952B	852B	130	2.9	450	5000	0.25	0.5	98.8	11
1SMA5953B	853B	150	2.5	600	6000	0.25	0.5	114.0	10
1SMA5954B	854B	160	2.3	700	6500	0.25	0.5	121.6	9
1SMA5955B	855B	180	2.1	900	7000	0.25	0.5	136.8	8
1SMA5956B	856B	200	1.9	1200	8000	0.25	0.5	152.0	7

Note:

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

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

<sup>3</sup>. 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.

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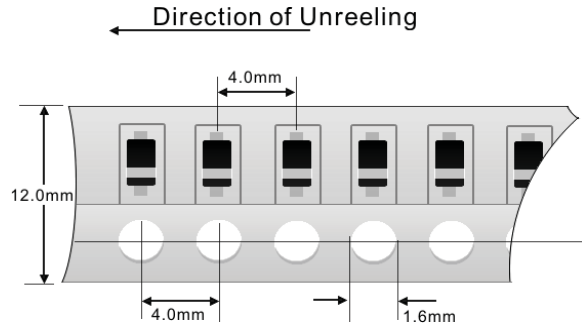
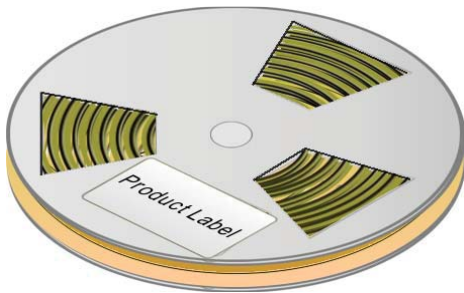
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Packaging Information

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	7,500	340 x 337 x 45 mm	15,000	370 x 370 x 420 mm	120,000	17.5kg

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

