



# 1SMB5921~1SMB5942

## SURFACE MOUNT SILICON ZENER DIODE

**VOLTAGE** 6.8 to 51 Volt **POWER** 1.5 Watt

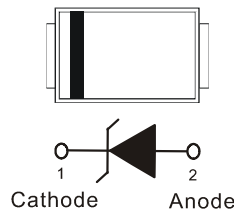
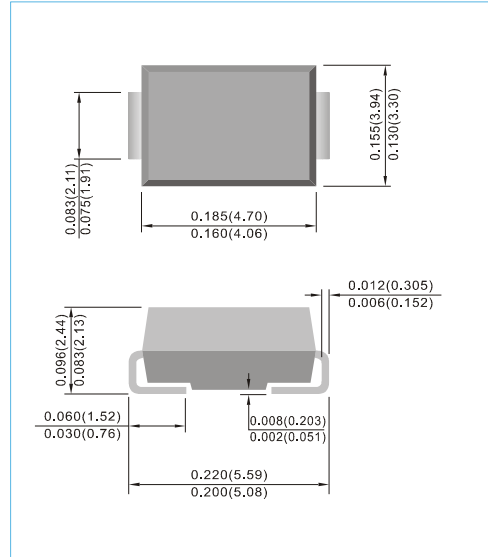
**SMB / DO-214AA** Unit : inch(mm)

### FEATURES

- For surface mounted applications in order to optimize board space.
- Low inductance
- Typical  $I_r$  less than 1 $\mu$ A above 12V
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- 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 Packaging: 12mm tape (EIA-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
Peak Pulse Power Dissipation on $T_L=75^\circ\text{C}$ (Notes A) Derate above 75°C	$P_D$	1.5	Watts
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	10	Amps
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	°C

### NOTES :

A. Mounted on 5mm<sup>2</sup> (0.013mm thick) land areas.

B. Measured on 8.3ms, and single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

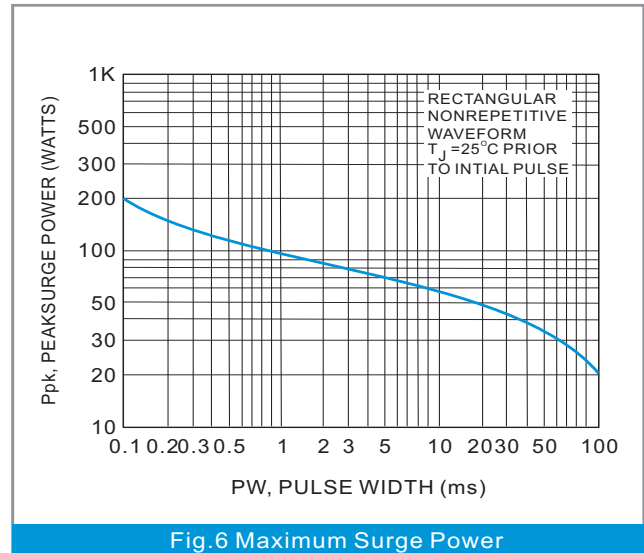
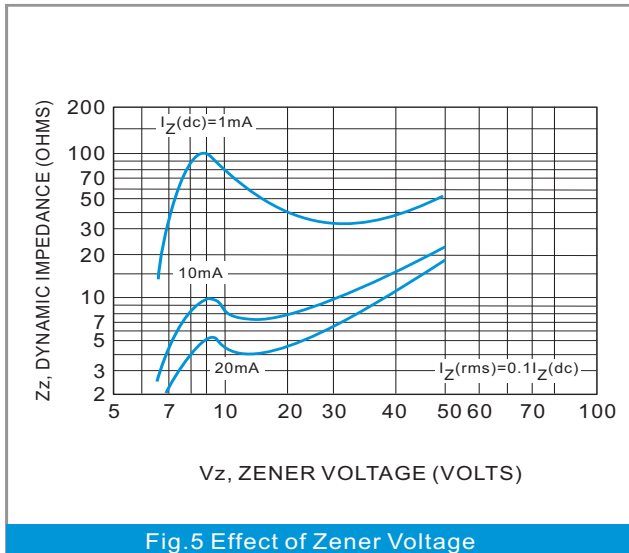
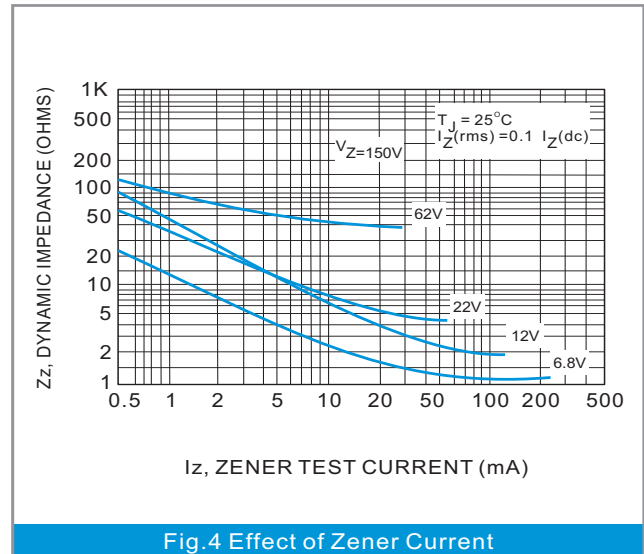
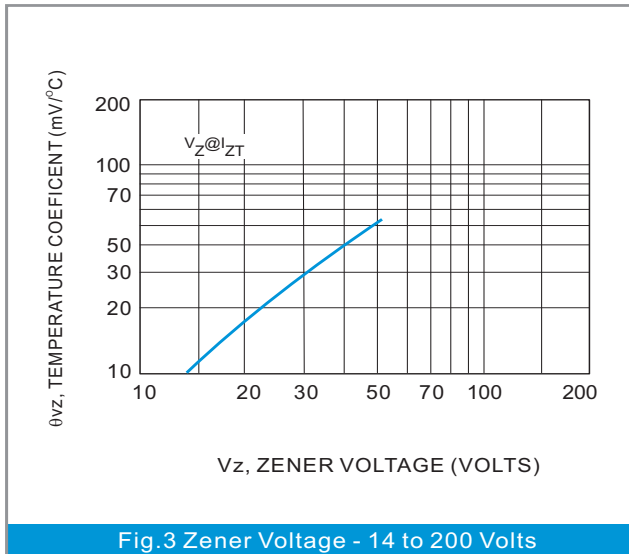
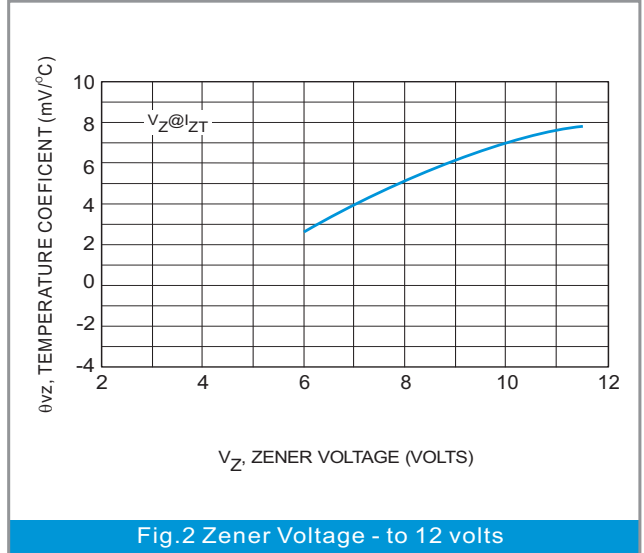
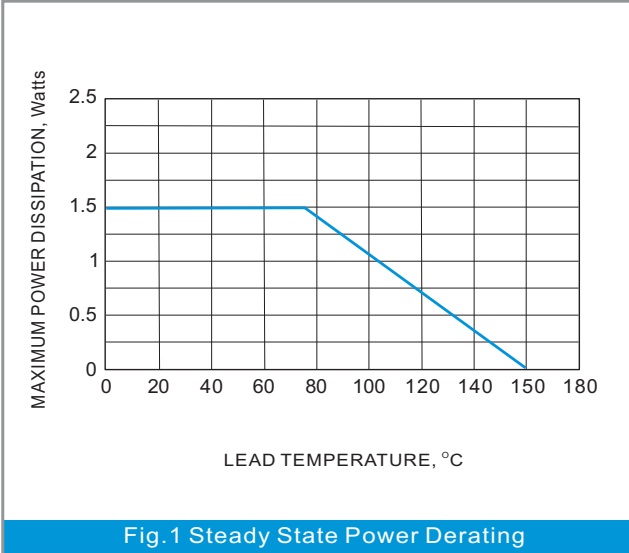


## 1SMB5921~1SMB5942

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	MinV	Max V	Ω	mA	Ω	mA	μA	V	
1SMB5921	6.8	6.46	7.14	3	55.1	200	1	5	5.2	921B
1SMB5922	7.5	7.13	7.88	3	50	400	0.5	5	6	922B
1SMB5923	8.2	7.79	8.61	4	45.7	400	0.5	5	6.5	923B
1SMB5924	9.1	8.65	9.56	4	41.2	500	0.5	5	7	924B
1SMB5925	10	9.5	10.5	5	37.5	500	0.25	5	8	925B
1SMB5926	11	10.45	11.55	6	34.1	550	0.25	1	8.4	926B
1SMB5927	12	11.4	12.6	7	31.2	550	0.25	1	9.1	927B
1SMB5928	13	12.35	13.65	7	28.8	550	0.25	1	9.9	928B
1SMB5929	15	14.25	15.75	9	25	600	0.25	1	11.4	929B
1SMB5930	16	15.2	16.8	10	23.4	600	0.25	1	12.2	930B
1SMB5931	18	17.1	18.9	12	20.8	650	0.25	1	13.7	931B
1SMB5932	20	19	21	14	18.7	650	0.25	1	15.2	932B
1SMB5933	22	20.9	23.1	18	17	650	0.25	1	16.7	933B
1SMB5934	24	22.8	25.2	19	15.6	700	0.25	1	18.2	934B
1SMB5935	27	25.65	28.35	23	13.9	700	0.25	1	20.6	935B
1SMB5936	30	28.5	31.5	26	12.5	750	0.25	1	22.8	936B
1SMB5937	33	31.35	34.65	33	11.4	800	0.25	1	25.1	937B
1SMB5938	36	34.2	37.8	38	10.4	850	0.25	1	27.4	938B
1SMB5939	39	37.05	40.95	45	9.6	900	0.25	1	29.7	939B
1SMB5940	43	40.85	45.15	53	8.7	950	0.25	1	32.7	940B
1SMB5941	47	44.65	49.35	67	8	1000	0.25	1	35.8	941B
1SMB5942	51	48.45	53.55	70	7.3	1100	0.25	1	38.8	942B

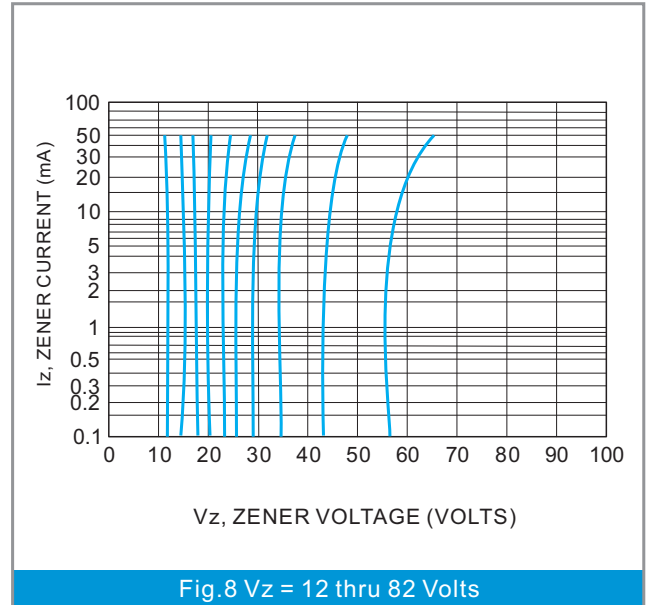
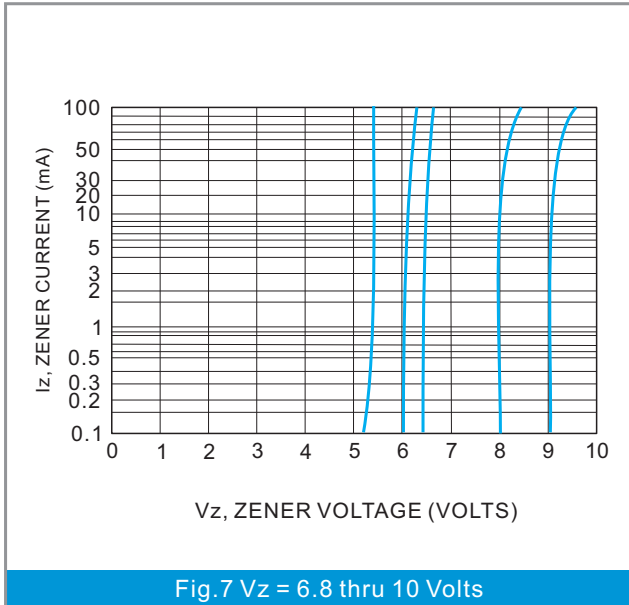


# 1SMB5921~1SMB5942





## 1SMB5921~1SMB5942



**NOTE 3. ZENER VOLTAGE ( $V_z$ ) MEASUREMENT**

Nominal zener voltage is measured with the device function in thermal equilibrium with ambient temperature at 25°C

**NOTE 4. ZENER IMPEDANCE ( $Z_z$ ) DERIVATION**

$Z_{zt}$  and  $Z_{zk}$  are measured by dividing the ac voltage drop across the device by the ac current applied. The specified limits are for  $I_z(ac) = 0.1 I_z, (dc)$  with the ac frequency = 60Hz

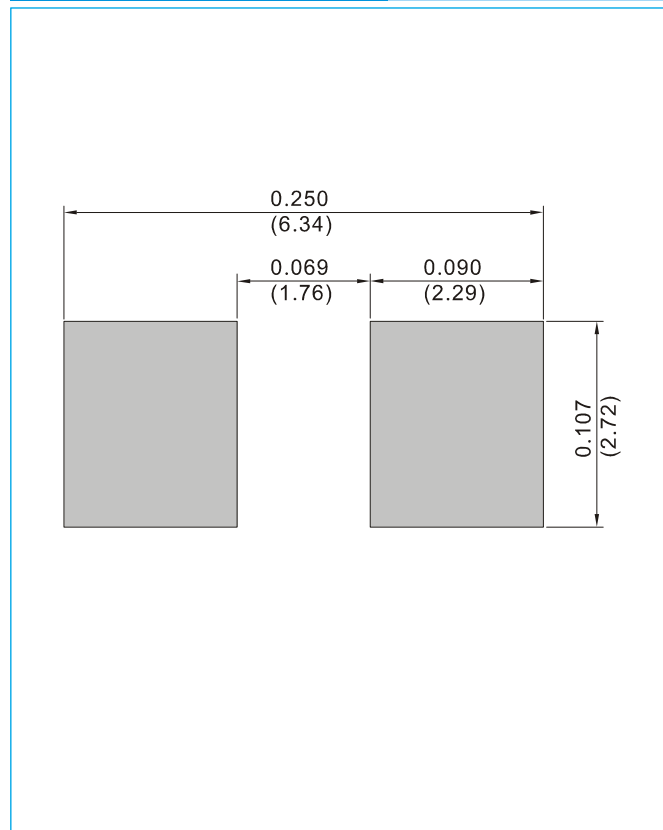


## 1SMB5921~1SMB5942

### 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



## 1SMB5921~1SMB5942

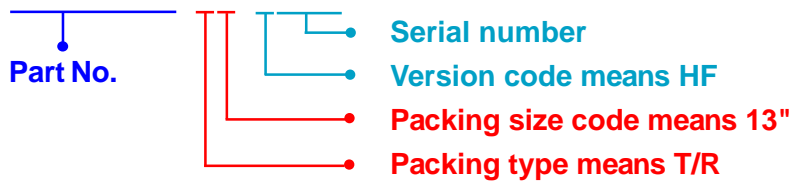
### Part No\_packing code\_Version

1SMB5921\_R1\_00001

1SMB5921\_R2\_00001

### 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>			



## 1SMB5921~1SMB5942

---

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Panjit:

[1SMB5928\\_R1\\_00001](#) [1SMB5928\\_R2\\_00001](#)