



New Product Announcement

1SMB59xxB

Expansion of the 1SMB59xxB 3W SMB Power Zener Diode Range

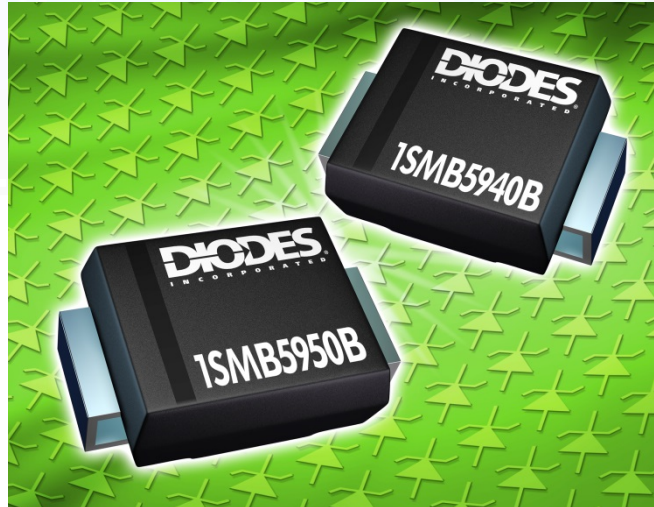
The 1SMB59xxB series of zener diodes from Diodes Incorporated comprises a range of 42 power zener diodes, with voltages from 3.3 to 200V, packaged in the high power dissipation SMB package.

The 1SMB59xxB series combines sharp zener breakdown voltages and voltage tolerances of $\pm 5\%$ with low leakage currents of typically $<1\mu\text{A}$ to provide excellent stability.

Furthermore, the 1SMB59xxB series of power zeners is robust and capable of withstanding ESD pulses of up to 16kV under Human Body Model conditions.

All devices in this series are RoHS-compliant, Halogen and Antimony free, "green".

(See diodes.com for further details)



The Diodes' Advantage

Diodes Incorporated has extended its range of surface mounted Zener diodes with high power dissipation capability.

▪ High Power Dissipation

The robust SMB package provides 3W maximum power dissipation.

▪ Wide Voltage Range

The nominal voltage are from 3.3V to 200V, which covers a wide variety of applications.

▪ Low Vz tolerance

The tolerance on the Zener breakdown voltage is $\pm 5\%$

▪ Robust ESD performance

These products offer a robust Class 3 ESD rating ($>16\text{kV}$) based on the human body model.

Applications

- General purpose voltage regulation
- Mobile devices
- Consumer electronics



**New Product
Announcement**
.....
1SMB59xxB

Product Portfolio & Cross Reference (Existing Products)

Diodes Part Number	Zener Breakdown Voltage		Maximum Reverse Current		Competitor	Competitor Part Number
	Nominal V_Z @ I_{ZT} (V)	I_{ZT} (mA)	I_R (μ A)	@ V_R (V)		
1SMB5913B	3.3	113.6	100	1	ON Semiconductor	1SMB5913BT3G
1SMB5914B	3.6	104.2	75	1	ON Semiconductor	1SMB5914BT3G
1SMB5915B	3.9	96.1	25	1	ON Semiconductor	1SMB5915BT3G
1SMB5916B	4.3	87.2	5	1	ON Semiconductor	1SMB5916BT3G
1SMB5917B	4.7	79.8	5	1.5	ON Semiconductor	1SMB5917BT3G
1SMB5920B	6.2	60.5	5	4	ON Semiconductor	1SMB5920BT3G
1SMB5921B	6.8	55.1	5	5.2	ON Semiconductor	1SMB5921BT3G
1SMB5922B	7.5	50	5	6	ON Semiconductor	1SMB5922BT3G
1SMB5923B	8.2	45.7	5	6.5	ON Semiconductor	1SMB5923BT3G
1SMB5924B	9.1	41.2	5	7	ON Semiconductor	1SMB5924BT3G
1SMB5925B	10	37.5	5	8	ON Semiconductor	1SMB5925BT3G
1SMB5926B	11	34.1	1	8.4	ON Semiconductor	1SMB5926BT3G
1SMB5927B	12	31.2	1	9.1	ON Semiconductor	1SMB5927BT3G
1SMB5928B	13	28.8	1	9.9	ON Semiconductor	1SMB5928BT3G
1SMB5929B	15	25	1	11.4	ON Semiconductor	1SMB5929BT3G
1SMB5930B	16	23.4	1	12.2	ON Semiconductor	1SMB5930BT3G
1SMB5931B	18	20.8	1	13.7	ON Semiconductor	1SMB5931BT3G
1SMB5932B	20	18.7	1	15.2	ON Semiconductor	1SMB5932BT3G
1SMB5933B	22	17	1	16.7	ON Semiconductor	1SMB5933BT3G
1SMB5934B	24	15.6	1	18.2	ON Semiconductor	1SMB5934BT3G
1SMB5935B	27	13.9	1	20.6	ON Semiconductor	1SMB5935BT3G
1SMB5936B	30	12.5	1	22.8	ON Semiconductor	1SMB5936BT3G
1SMB5937B	33	11.4	1	25.1	ON Semiconductor	1SMB5937BT3G
1SMB5938B	36	10.4	1	27.4	ON Semiconductor	1SMB5938BT3G
1SMB5939B	39	9.6	1	29.7	ON Semiconductor	1SMB5939BT3G



**New Product
Announcement**
.....
1SMB59xxB

Product Portfolio & Cross Reference (New Products)

Diodes Part Number	Zener Breakdown Voltage		Maximum Reverse Current		Competitor	Competitor Part Number
	Nominal V_Z @ I_{ZT} (V)	I_{ZT} (mA)	I_R (μ A)	@ V_R (V)		
1SMB5940B	43	8.7	1	32.7	ON Semiconductor	1SMB5940BT3G
1SMB5941B	47	8	1	35.8	ON Semiconductor	1SMB5941BT3G
1SMB5942B	51	7.3	1	38.8	ON Semiconductor	1SMB5942BT3G
1SMB5943B	56	6.7	1	42.6	ON Semiconductor	1SMB5943BT3G
1SMB5944B	62	6	1	47.1	ON Semiconductor	1SMB5944BT3G
1SMB5945B	68	5.5	1	51.7	ON Semiconductor	1SMB5945BT3G
1SMB5946B	75	5	1	56	ON Semiconductor	1SMB5946BT3G
1SMB5947B	82	4.6	1	62.2	ON Semiconductor	1SMB5947BT3G
1SMB5948B	91	4.1	1	69.2	ON Semiconductor	1SMB5948BT3G
1SMB5949B	100	3.7	1	76	ON Semiconductor	1SMB5949BT3G
1SMB5950B	110	3.4	1	83.6	ON Semiconductor	1SMB5950BT3G
1SMB5951B	120	3.1	1	91.2	ON Semiconductor	1SMB5951BT3G
1SMB5952B	130	2.9	1	98.8	ON Semiconductor	1SMB5952BT3G
1SMB5953B	150	2.5	1	114	ON Semiconductor	1SMB5953BT3G
1SMB5954B	160	2.3	1	121.6	ON Semiconductor	1SMB5954BT3G
1SMB5955B	180	2.1	1	136.8	ON Semiconductor	1SMB5955BT3G
1SMB5956B	200	1.9	1	152	ON Semiconductor	1SMB5956BT3G

Ordering information (Note 1)

Device*	Package	Shipping
1SMB59xxB-13	SMB	3000/Tape & Reel

*x = Device Voltage, e.g., 1SMB5920B-13

Note 1: For packaging details, go to our website at <http://www.diodes.com/products/packages.html>