

SMB59xxB Series Surface Mount Zener Diode

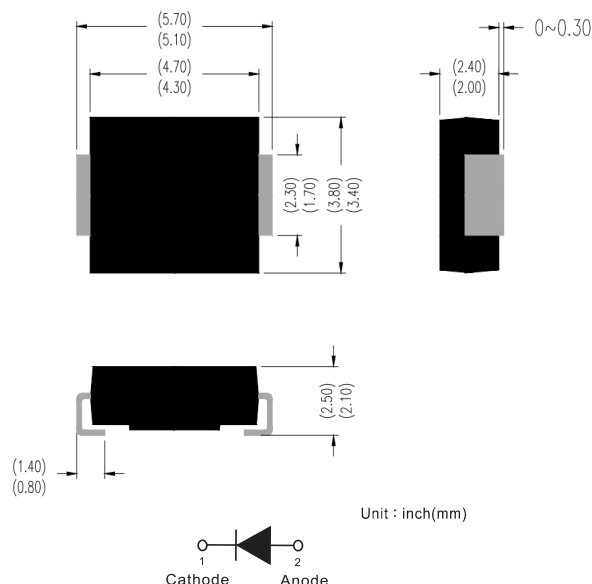
Feature

- Glass passivated chip
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Low reverse leakage
- For use in stabilizing and clipping with high power rating
- Comply with RoHS standard, halogen-free

Mechanical Data

- Case: DO214-AA (SMB) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Mounting position: Any

DO214-AA (SMB)



Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbols	Value	Unit
DC Power dissipation at $T_L = 75^{\circ}\text{C}^{(1)}$	P_D	1.5	W
Maximum forward voltage at $I_F=200\text{mA}$	V_F	1.2	V
Junction temperature range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$

Note :

1. T_L =Lead temperature at 3/8" (9.5mm) from body



Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

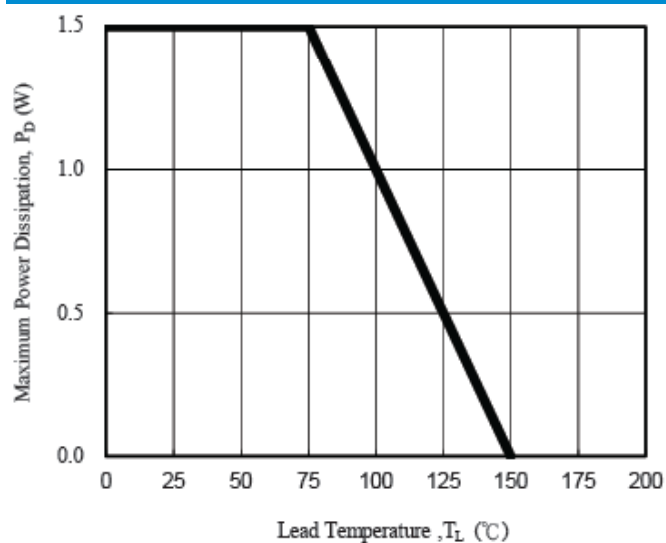


Fig. 1 - Power Temperature Derating Curve

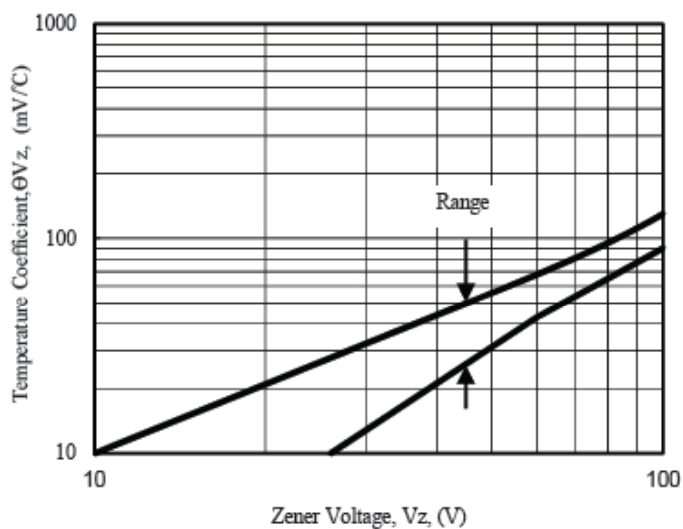


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

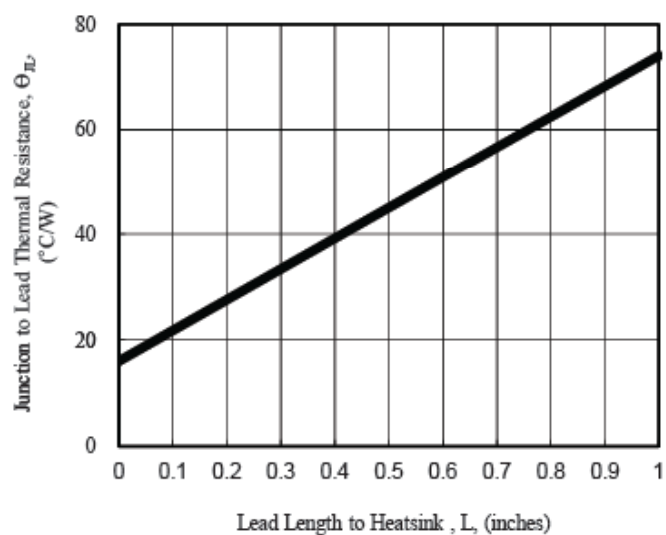


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

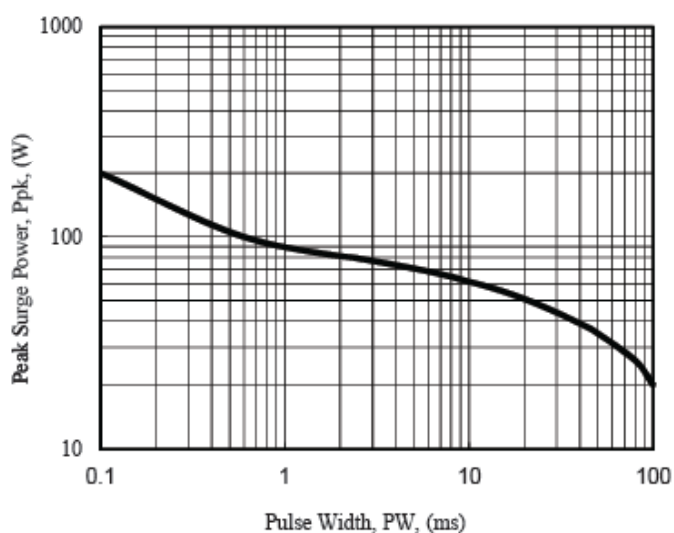


Fig. 4 - Maximum Surge Power

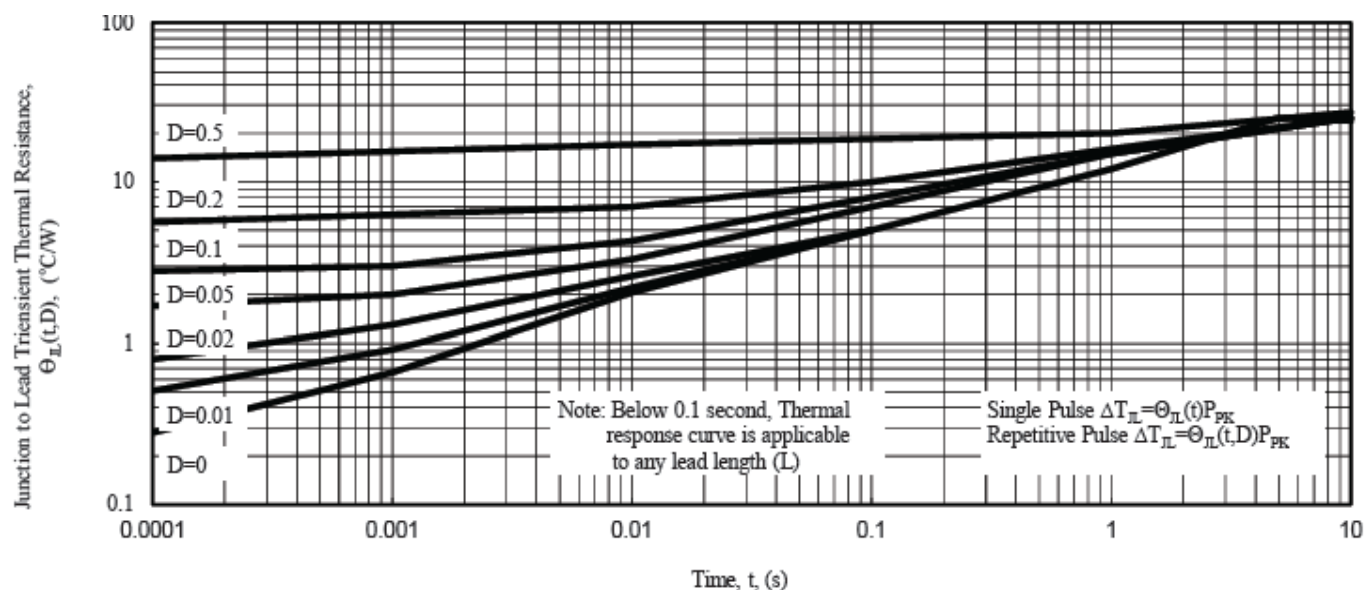


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Part Number	Device Marking Code	Nominal Zener Voltage @ I_T			$I_{ZT}(\text{mA})$	Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		$V_{Z\text{AVE}}(\text{V})$	$V_{Z\text{MIN}}(\text{V})$	$V_{Z\text{MAX}}(\text{V})$		$Z_{ZT\text{MAX}}(\Omega)$ @ I_{ZT}	$Z_{ZK\text{MAX}}(\Omega)$ @ I_{ZK}	$I_{ZK}(\text{mA})$	$I_R(\mu\text{A})@V_R$	$V_R(\text{V})$	
SMB5913B	913B	3.3	3.14	3.47	113.6	10	500.0	1.00	100.0	1.0	274.0
SMB5914B	914B	3.6	3.42	3.78	104.2	9.0	500.0	1.00	100.0	1.0	251.0
SMB5915B	915B	3.9	3.71	4.10	96.1	7.5	500.0	1.00	50.0	1.0	232.0
SMB5916B	916B	4.3	4.09	4.52	87.2	6.0	500.0	1.00	10.0	1.0	210.0
SMB5917B	917B	4.7	4.47	4.94	79.8	5.0	500.0	1.00	10.0	1.5	192.0
SMB5918B	918B	5.1	4.85	5.36	73.5	4.0	350.0	1.00	10.0	2.0	177.0
SMB5919B	919B	5.6	5.32	5.88	66.9	2.0	250.0	1.00	10.0	3.0	161.0
SMB5920B	920B	6.2	5.89	6.51	60.5	2.0	200.0	1.00	10.0	4.0	146.0
SMB5921B	921B	6.8	6.46	7.14	55.1	2.5	200.0	1.00	10.0	5.2	133.0
SMB5922B	922B	7.5	7.13	7.88	50.0	3.0	400.0	0.50	10.0	6.0	121.0
SMB5923B	923B	8.2	7.79	8.61	45.7	3.5	400.0	0.50	10.0	6.5	110.0
SMB5924B	924B	9.1	8.65	9.56	41.2	4.0	500.0	0.50	10.0	7.0	100.0
SMB5925B	925B	10.0	9.50	10.50	37.5	4.5	500.0	0.25	10.0	8.0	91.0
SMB5926B	926B	11.0	10.45	11.55	34.1	5.5	550.0	0.25	0.5	8.4	83.0
SMB5927B	927B	12.0	11.40	12.60	31.2	6.5	550.0	0.25	0.5	9.1	76.0
SMB5928B	928B	13.0	12.35	13.65	28.8	7.0	550.0	0.25	0.5	9.9	69.0
SMB5929B	929B	15.0	14.25	15.75	25.0	9.0	600.0	0.25	0.5	11.4	61.0
SMB5930B	930B	16.0	15.20	16.80	23.4	10.0	600.0	0.25	0.5	12.2	57.0
SMB5931B	931B	18.0	17.10	18.90	20.8	12.0	650.0	0.25	0.5	13.7	50.0
SMB5932B	932B	20.0	19.00	21.00	18.7	14.0	650.0	0.25	0.5	15.2	45.0
SMB5933B	933B	22.0	20.90	23.10	17.0	17.5	650.0	0.25	0.5	16.7	41.0
SMB5934B	934B	24.0	22.80	25.20	15.6	19.0	700.0	0.25	0.5	18.2	38.0
SMB5935B	935B	27.0	25.65	28.35	13.9	23.0	700.0	0.25	0.5	20.6	34.0
SMB5936B	936B	30.0	28.50	31.50	12.5	26.0	750.0	0.25	0.5	22.8	30.0
SMB5937B	937B	33.0	31.35	34.65	11.4	33.0	800.0	0.25	0.5	25.1	27.0
SMB5938B	938B	36.0	34.20	37.80	10.4	38.0	850.0	0.25	0.5	27.4	25.0
SMB5939B	939B	39.0	37.05	40.95	9.6	45.0	900.0	0.25	0.5	29.7	23.0
SMB5940B	940B	43.0	40.85	45.15	8.7	53.0	950.0	0.25	0.5	32.7	22.0
SMB5941B	941B	47.0	44.65	49.35	8.0	67.0	1000.0	0.25	0.5	35.8	19.0
SMB5942B	942B	51.0	48.45	53.55	7.3	70.0	1100.0	0.25	0.5	38.8	18.0
SMB5943B	943B	56.0	53.20	58.80	6.7	86.0	1300.0	0.25	0.5	42.6	16.0
SMB5944B	944B	62.0	58.90	65.10	6.0	100.0	1500.0	0.25	0.5	47.1	14.0
SMB5945B	945B	68.0	64.60	71.40	5.5	120.0	1700.0	0.25	0.5	51.7	13.0
SMB5946B	946B	75.0	71.25	78.75	5.0	140.0	2000.0	0.25	0.5	56.0	12.0
SMB5947B	947B	82.0	77.90	86.10	4.6	160.0	2500.0	0.25	0.5	62.2	11.0
SMB5948B	948B	91.0	86.45	95.55	4.1	200.0	3000.0	0.25	0.5	69.2	10.0
SMB5949B	949B	100.0	95.00	105.00	3.7	250.0	3100.0	0.25	0.5	76.0	9.0
SMB5950B	950B	110.0	104.50	115.50	3.4	300.0	4000.0	0.25	0.5	83.6	8.6
SMB5951B	951B	120.0	114.00	126.00	3.1	380.0	4500.0	0.25	0.5	91.2	7.8
SMB5952B	952B	130.0	123.50	136.50	2.9	450.0	5000.0	0.25	0.5	98.8	7.0
SMB5953B	953B	150.0	142.50	157.50	2.5	600.0	6000.0	0.25	0.5	114.0	6.4
SMB5954B	954B	160.0	152.00	168.00	2.3	700.0	6500.0	0.25	0.5	121.6	5.8
SMB5955B	955B	180.0	171.00	189.00	2.1	900.0	7000.0	0.25	0.5	136.8	5.2
SMB5956B	956B	200.0	190.00	210.00	1.9	1200.0	8000.0	0.25	0.5	152.0	4.7