STEIFPOWER TECHNOLOGY

3.0SMBZ3.3A thru 3.0SMBZ200A

Surface Mount Zener Diodes

Vz Range:3.3 to 200V Power Dissipation:3W

Features

- Toal power dissipation:max,3.0W
- For use in stabilizing and clipping circuits with high power rating
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s

RoHS COMPLIANT

DO-214AA（SMB）

TYPICAL APPLICATIONS

- Protection from high voltage,high energy transients

Mechanical Data

- Case:DO-214AA, molded epoxy body · Epoxy meets UL 94V-0 flammability rating
- Terminal:Matte tin plated leads, solderable per J-STD-002 and JESD22B-106
- Polarity:Indicated by cathode band

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS

(Rating at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Zener current		See Next Table	
Power dissipation at T_L=75℃	P_{tot}	3	W
Junction temperature	T_j	150	℃
Storage temperature	T_S	-55to+150	℃

Electrical Characteristics

(TA=25℃ unless otherwise noted)

Type number	Device marking code	Nominal zener voltage at IZT Vz(Volts)(1)	Test current IZT(mA)	Maximum zener impedance(2)			Maximum reverse leakage current		Maximum regulator current(3) at TA=50℃
				ZT at IZT	ZK (Ω)	At IZK(mA)	IR(uA)	at VR (Volts)	IZM(mA)
3.0SMBZ3.3A	913 B	3.3	113.6	10	500	1	100	1	908
3.0SMBZ3.6A	914B	3.6	104.2	9	500	1	75	1	832
3.0SMBZ3.9A	915B	3.9	96.1	7.5	500	1	25	1	768
3.0SMBZ4.3A	916B	4.3	87.2	6	500	1	5	1	696
3.0SMBZ4.7A	917B	4.7	79.8	5	500	1	5	1.5	638
3.0SMBZ5.1A	918B	5.1	73.5	4	350	1	5	2	588
3.0SMBZ5.6A	919B	5.6	66.9	2	250	1	5	3	534
3.0SMBZ6.2A	920B	6.2	60.5	2	200	1	2.5	4	482

Electrical Characteristics

(TA=25℃ unless otherwise noted)

Type number	Device marking code	Nominal zener voltage at IZT Vz(Volts)(1)	Test current IZT(mA)	Maximum zener impedance(2)			Maximum reverse leakage current		Maximum regulator current(3) at TA=50℃
				ZT at IZT	ZK (Ω)	At IZK(mA)	IR(uA)	at VR (Volts)	IZM(mA)
3.0SMBZ6.8A	921B	6.8	55.1	2.5	200	1	5	5.2	440
3.0SMBZ7.5A	922B	7.5	50	3	400	0.5	2.5	6	400
3.0SMBZ8.2A	923B	8.2	45.7	3.5	400	0.5	2.5	6.5	364
3.0SMBZ9.1A	924B	9.1	41.2	4	500	0.5	2.5	7	328
3.0SMBZ10A	925B	10	37.5	4.5	500	0.25	2.5	8	300
3.0SMBZ11A	926B	11	34.1	5.5	550	0.25	0.5	8.4	272
3.0SMBZ12A	927B	12	31.2	6.5	550	0.25	0.5	9.1	250
3.0SMBZ13A	928B	13	28.8	7	550	0.25	0.5	9.9	230
3.0SMBZ15A	929B	15	25	9	600	0.25	0.5	11.4	200
3.0SMBZ16A	930B	16	23.4	10	600	0.25	0.5	12.2	186
3.0SMBZ18A	931B	18	20.8	12	650	0.25	0.5	13.7	166
3.0SMBZ20A	932B	20	18.7	14	650	0.25	0.5	15.2	150
3.0SMBZ22A	933B	22	17	17.5	650	0.25	0.5	16.7	156
3.0SMBZ24A	934B	24	15.6	19	700	0.25	0.5	18.2	124
3.0SMBZ27A	935B	27	13.9	23	700	0.25	0.5	20.6	110
3.0SMBZ30A	936B	30	12.5	26	750	0.25	0.5	22.8	100
3.0SMBZ33A	937B	33	11.4	33	800	0.25	0.5	25.1	90
3.0SMBZ36A	938B	36	10.4	38	850	0.25	0.5	27.4	82
3.0SMBZ39A	939B	39	9.6	45	900	0.25	0.5	29.7	76
3.0SMBZ43A	940B	43	8.	53	950	0.25	0.5	32.7	68
3.0SMBZ47A	941B	47	8	67	1000	0.25	0.5	35.8	62
3.0SMBZ51A	942B	51	7.3	70	1100	0.25	0.5	38.8	58
3.0SMBZ56A	943B	56	6.7	86	1300	0.25	0.5	42.6	52
3.0SMBZ62A	944B	62	6	100	1500	0.25	0.5	47.1	48
3.0SMBZ68A	945B	68	5.5	120	1700	0.25	0.5	51.7	44
3.0SMBZ75A	946A	75	5	140	2000	0.25	1	56	40
3.0SMBZ82A	947B	82	4.6	160	2500	0.25	1	62.2	36
3.0SMBZ91A	948B	91	4.1	200	3000	0.25	1	69.2	32
3.0SMBZ100A	949B	100	3.7	250	3100	0.25	1	76	30
3.0SMBZ110A	950B	110	3.4	300	4000	0.25	1	83.6	26
3.0SMBZ120A	951B	120	3.1	380	4500	0.25	1	91.2	24
3.0SMBZ130A	952B	130	2.9	450	5000	0.25	1	98.8	22
3.0SMBZ150A	953B	150	2.5	600	6000	0.25	1	114	20
3.0SMBZ160A	954B	160	2.3	700	6500	0.25	1	121.6	18

Electrical Characteristics

(TA=25℃ unless otherwise noted)

Type number	Device marking code	Nominal zener voltage at I_{ZT} V_z(Volts)(1)	Test current I_{ZT}(mA)	Maximum zener impedance(2)			Maximum reverse leakage current		Maximum regulator current(3) at T_A=50℃
				Z_T at I_{ZT}	Z_K (Ω)	At I_{ZK}(mA)	I_R(uA)	at V_R (Volts)	I_{ZM}(mA)
3.0SMBZ180A	955B	180	2.1	900	7000	0.25	1	136.8	16
3.0SMBZ200A	956B	200	1.9	1200	8000	0.25	1	152	14

Notes: (1). Measured under thermal equilibrium and DC test conditions , Standard voltage tolerance is 10%,suffix A ±5%

(2).The Zener impedance is derived from the 1KHZ AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (IZT or IZK) is superimposed on IZT or IZK. Zener impedance is measure at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units

(3).Valid provided that electrodes at a distance of 10 mm from case are kept at ambient temperature

RATINGS AND CHARACTERISTICS CURVES

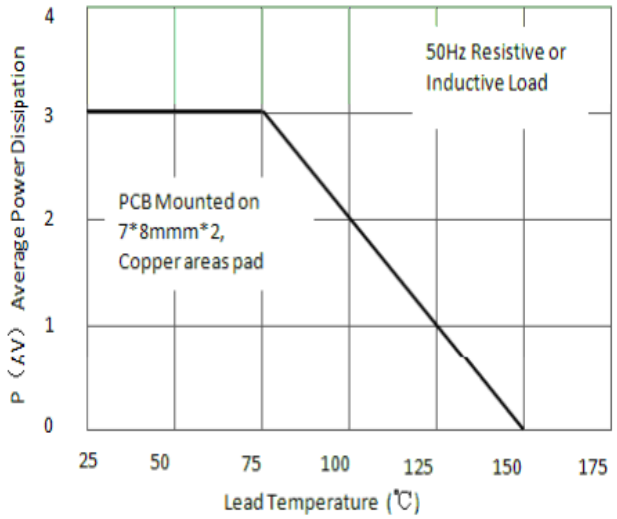

Fig.1 Maximum Continous Power Dissipation

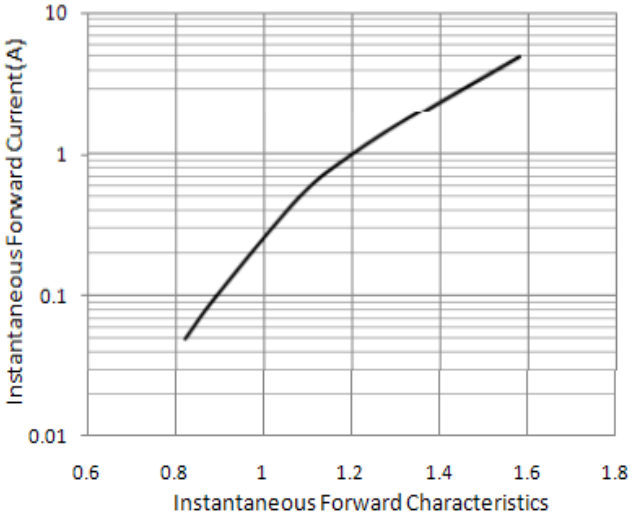

Fig.2 Typical Instantaneous Forward Characteristics

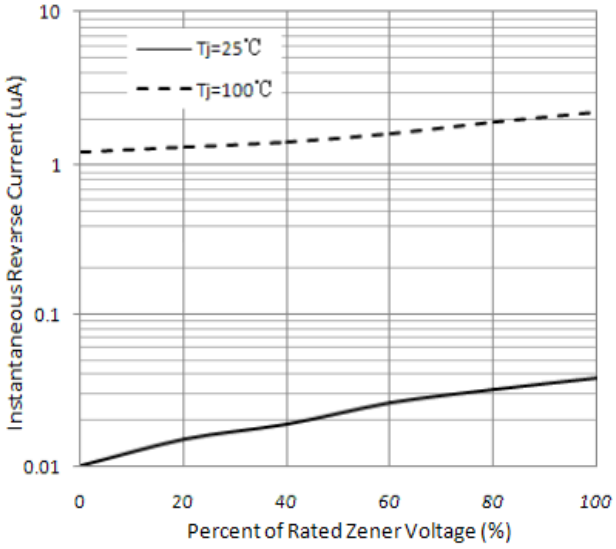

Fig.3 Typical Reverse Characteristics

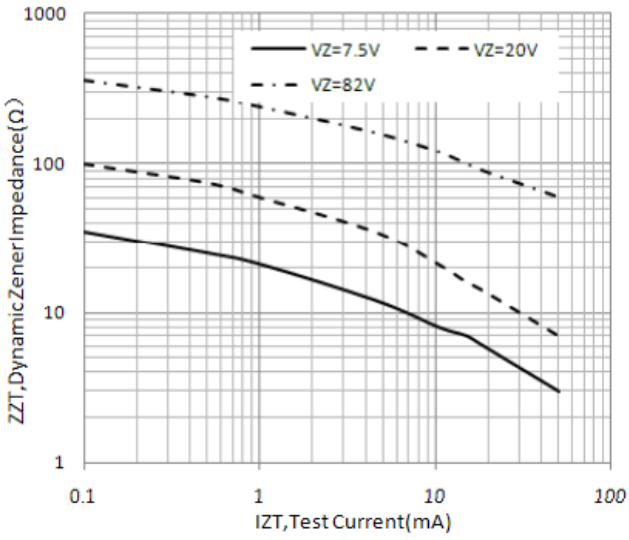

Fig.4 Typical Zener Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)