

## Features

- Total 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



DO-214AC(SMA)

## TYPICAL APPLICATIONS

- Protection from high voltage, high energy transients

## Mechanical Data

- Case: DO-214AC, 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 °C 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

( $T_A=25$  °C unless otherwise noted)

Type number	Device marking code	Nominal zener voltage at $I_{zT}$ $V_z$ (Volts) <sup>(1)</sup>	Test current $I_{zT}$ (mA)	Maximum zener impedance <sup>(2)</sup>			Maximum reverse leakage current		Maximum regulator current <sup>(3)</sup> at $T_A=50$
				$Z_T$ at $I_{zT}$	$Z_K$ ( )	$A_t$ $I_{zK}$ (mA)	$I_R$ (uA)	at $V_R$ (Volts)	
3.0SMAZ3.3A	913 A	3.3	113.6	10	500	1	100	1	908
3.0SMAZ3.6A	914A	3.6	104.2	9	500	1	75	1	832
3.0SMAZ3.9A	915A	3.9	96.1	7.5	500	1	25	1	768
3.0SMAZ4.3A	916A	4.3	87.2	6	500	1	5	1	696
3.0SMAZ4.7A	917A	4.7	79.8	5	500	1	5	1.5	638
3.0SMAZ5.1A	918A	5.1	73.5	4	350	1	5	2	588
3.0SMAZ5.6A	919A	5.6	66.9	2	250	1	5	3	534
3.0SMAZ6.2A	920A	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) <sup>(1)</sup>	Test current IzT(mA)	Maximum zener impedance <sup>(2)</sup>			Maximum reverse leakage current		Maximum regulator current <sup>(3)</sup> at TA=50 IzM(mA)
				ZT at IzT	ZK ( )	At IzK (mA)	IR(uA)	at VR (Volts)	
3.0SMAZ6.8A	921A	6.8	55.1	2.5	200	1	2.5	5.2	440
3.0SMAZ7.5A	922A	7.5	50	3	400	0.5	2.5	6	400
3.0SMAZ8.2A	923A	8.2	45.7	3.5	400	0.5	2.5	6.5	364
3.0SMAZ9.1A	924A	9.1	41.2	4	500	0.5	2.5	7	328
3.0SMAZ10A	925A	10	37.5	4.5	500	0.25	2.5	8	300
3.0SMAZ11A	926A	11	34.1	5.5	550	0.25	0.5	8.4	272
3.0SMAZ12A	927A	12	31.2	6.5	550	0.25	0.5	9.1	250
3.0SMAZ13A	928A	13	28.8	7	550	0.25	0.5	9.9	230
3.0SMAZ15A	929A	15	25	9	600	0.25	0.5	11.4	200
3.0SMAZ16A	930A	16	23.4	10	600	0.25	0.5	12.2	186
3.0SMAZ18A	931A	18	20.8	12	650	0.25	0.5	13.7	166
3.0SMAZ20A	932A	20	18.7	14	650	0.25	0.5	15.2	150
3.0SMAZ22A	933A	22	17	17.5	650	0.25	0.5	16.7	156
3.0SMAZ24A	934A	24	15.6	19	700	0.25	0.5	18.2	124
3.0SMAZ27A	935A	27	13.9	23	700	0.25	0.5	20.6	110
3.0SMAZ30A	936A	30	12.5	26	750	0.25	0.5	22.8	100
3.0SMAZ33A	937A	33	11.4	33	800	0.25	0.5	25.1	90
3.0SMAZ36A	938A	36	10.4	38	850	0.25	0.5	27.4	82
3.0SMAZ39A	939A	39	9.6	45	900	0.25	0.5	29.7	76
3.0SMAZ43A	940A	43	8.7	53	950	0.25	0.5	32.7	68
3.0SMAZ47A	941A	47	8	67	1000	0.25	0.5	35.8	62
3.0SMAZ51A	942A	51	7.3	70	1100	0.25	0.5	38.8	58
3.0SMAZ56A	943A	56	6.7	86	1300	0.25	0.5	42.6	52
3.0SMAZ62A	944A	62	6	100	1500	0.25	0.5	47.1	48
3.0SMAZ68A	945A	68	5.5	120	1700	0.25	0.5	51.7	44
3.0SMAZ75A	946A	75	5	140	2000	0.25	1	56	40
3.0SMAZ82A	947A	82	4.6	160	2500	0.25	1	62.2	36
3.0SMAZ91A	948A	91	4.1	200	3000	0.25	1	69.2	32
3.0SMAZ100A	949A	100	3.7	250	3100	0.25	1	76	30
3.0SMAZ110A	950A	110	3.4	300	4000	0.25	1	83.6	26
3.0SMAZ120A	951A	120	3.1	380	4500	0.25	1	91.2	24
3.0SMAZ130A	952A	130	2.9	450	5000	0.25	1	98.8	22
3.0SMAZ150A	953A	150	2.5	600	6000	0.25	1	114	20
3.0SMAZ160A	954A	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 IZT Vz(Volts) <sup>(1)</sup>	Test current IZT(mA)	Maximum zener impedance <sup>(2)</sup>			Maximum reverse leakage current		Maximum regulator current <sup>(3)</sup> at TA=50 IZM(mA)
				ZT at IZT	ZK ( )	At IZK (mA)	IR(uA)	at VR (Volts)	
3.0SMAZ180A	955A	180	2.1	900	7000	0.25	1	136.8	16
3.0SMAZ200A	956A	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  $\pm 5\%$

(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

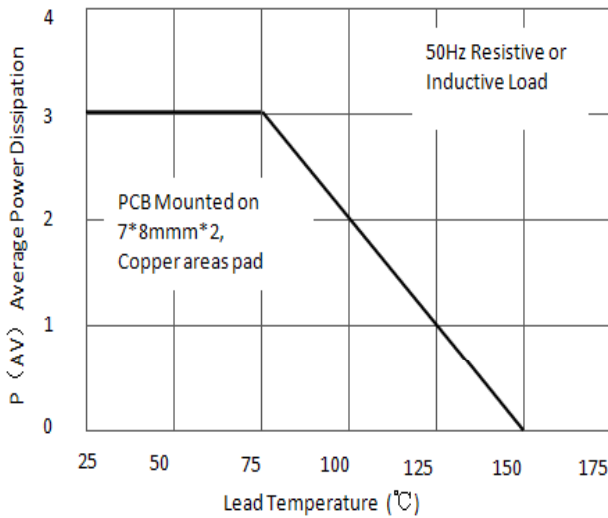


Fig.1 Maximum Continuous Power Dissipation

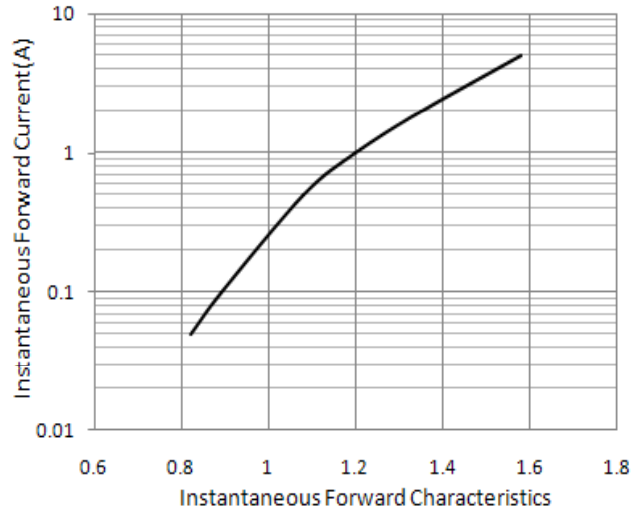


Fig.2 Typical Instantaneous Forward Characteristics

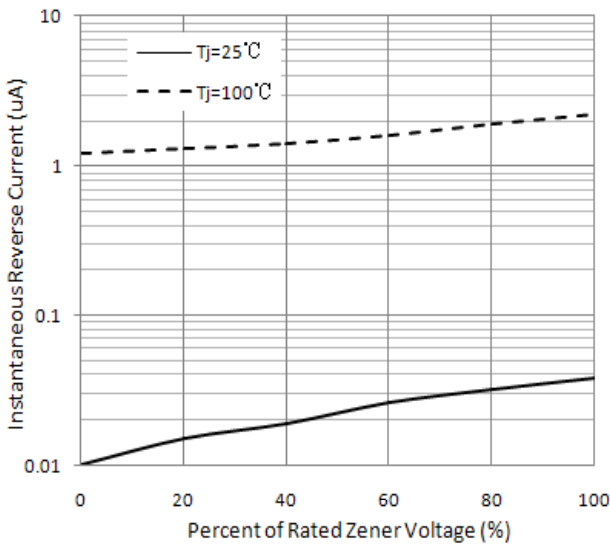


Fig.3 Typical Reverse Characteristics

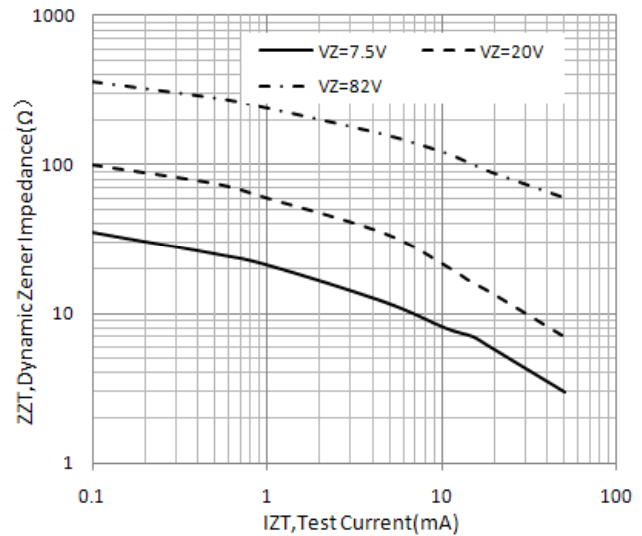


Fig.4 Typical Zener Impedance



## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

