

Features

- Total power dissipation: max, 1.0W
- 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 $T_L=70$	P_{tot}	1	W
Junction temperature	T_j	150	
Storage temperature range	T_S	-55to+150	

Electrical Characteristics

($T_A=25$ °C unless otherwise noted)

TYPE	MARK	ZENER CHARACTERISTIC					measurement current I_z (mA)	temperature coefficient of zener αT (mV/°C)		reverse current	
		zener voltage V_z (V)			zener impedance r_d (Ω)	TYP.		MAX	IR (uA)	measurement voltage V_R (V)	
		MIN	TYP	MAX							
U1ZB6.8	1ZB6.8	6.2	6.8	7.4	60	10	3	4	10	3	
U1ZB7.5	1ZB7.5	6.8	7.5	8.3	30	10	4	5	10	4.5	
U1ZB8.2	1ZB8.2	7.4	8.2	9.1	30	10	4	6	10	4.9	
U1ZB9.1	1ZB9.1	8.2	9.1	10.1	30	10	5	8	10	5.5	
U1ZB10	1ZB10	9	10	11	30	10	6	9	10	6	
U1ZB11	1ZB11	9.9	11	12.1	30	10	7	11	10	7	

Electrical Characteristics

(TA=25 unless otherwise noted)

TYPE	MARK	ZENER CHARACTERISTIC					measureme nt current Iz (mA)	temperature coefficient of zener $\alpha T(\text{mV}/^{\circ}\text{C})$		reverse current	
		zener voltage Vz(V)			zener impedance rd(Ω)	TYP.		MAX	IR(μA)	measureme nt voltage VR(V)	
		MIN	TYP	MAX							
U1ZB12	1ZB12	10.8	12	13.2	30	10	8	13	10	8	
U1ZB13	1ZB13	11.7	13	14.3	30	10	9	14	10	9	
U1ZB15	1ZB15	13.5	15	16.5	30	10	11	17	10	10	
U1ZB16	1ZB16	14.4	16	17.6	30	10	12	19	10	11	
U1ZB18	1ZB18	16.2	18	19.8	30	10	14	23	10	13	
U1ZB20	1ZB20	18	20	22	30	10	16	26	10	14	
U1ZB22	1ZB22	19.8	22	24.2	30	10	18	28	10	16	
U1ZB24	1ZB24	21.6	24	26.4	30	10	20	32	10	17	
U1ZB27	1ZB27	24.3	27	29.7	30	10	23	36	10	19	
U1ZB30	1ZB30	27	30	33	30	10	25	40	10	21	
U1ZB33	1ZB33	29.7	33	36.3	30	10	26	41	10	26.4	
U1ZB36	1ZB36	32.4	36	39.6	30	9	28	45	10	28.8	
U1ZB43	1ZB43	38.7	43	47.3	40	7	33	53	10	34.4	
U1ZB47	1ZB47	42.3	47	51.7	65	6	38	60	10	37.6	
U1ZB51	1ZB51	45.9	51	56.1	65	6	43	68	10	40.8	
U1ZB68	1ZB68	61.2	68	74.8	120	4	57	90	10	54.4	
U1ZB75	1ZB75	67.5	75	82.5	150	4	66	104	10	60	
U1ZB82	1ZB82	73.8	82	90.2	170	3	71	113	10	65.4	
U1ZB100	1ZB100	90	100	110	300	3	87	138	10	80	
U1ZB110	1ZB110	99	110	121	300	3	96	152	10	88	
U1ZB150	1ZB150	135	150	165	450	2	136	212	10	120	
U1ZB180	1ZB180	162	180	198	500	1.5	161	255	10	144	
U1ZB200	1ZB200	180	200	220	500	0.5	170	269	10	160	
U1ZB200-Y	1ZB200-Y	190	200	210			170	269		160	
U1ZB200-Z	1ZB200-Z	200	210	220			178	286		168	
U1ZB220	1ZB220	198	220	242	5000	0.5	200	309	10	176	
U1ZB220-Y	1ZB220-Y	210	220	230			200	309		176	
U1ZB220-Z	1ZB220-Z	220	230	240			207	320		184	
U1ZB240	1ZB240	216	240	264	5000	0.5	215	325	10	192	
U1ZB240-Y	1ZB240-Y	230	240	250			215	325		216	
U1ZB240-Z	1ZB240-Z	240	250	260			225	338		225	
U1ZB270	1ZB270	243	270	297	5000	0.5	243	385	10	216	
U1ZB270-X	1ZB270-X	250	260	270			221	350		234	
U1ZB270-Y	1ZB270-Y	260	270	280			228	362		243	
U1ZB270-Z	1ZB270-Z	270	280	290			236	374		252	
U1ZB300	1ZB300	270	300	330	5000	0.5	270	428	10	240	
U1ZB300-X	1ZB300-X	280	290	300			244	388		261	
U1ZB300-Y	1ZB300-Y	290	300	310			253	402		270	
U1ZB300-Z	1ZB300-Z	300	310	320			261	415		279	

Electrical Characteristics

(TA=25 unless otherwise noted)

TYPE	MARK	ZENER CHARACTERISTIC					measurement current Iz (mA)	temperature coefficient of zener $\alpha T(mV/^{\circ}C)$		reverse current	
		zener voltage Vz(V)			zener impedance $r_d(\Omega)$	MAX		TYP.	MAX	IR(μA)	measurement voltage V _R (V)
		MIN	TYP	MAX							
U1ZB330	1ZB330	297	330	363	5000	0.5	296	470	10	264	
U1ZB330-X	1ZB330-X	310	320	330			270	428		288	
U1ZB330-Y	1ZB330-Y	320	330	340			278	441		297	
U1ZB330-Z	1ZB330-Z	330	340	350			287	455		306	
U1ZB390	1ZB390	351	390	429	10000	0.5	350	555	10	312	

- 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). Maximum surge current : Surge current is a non-repetitive,8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per JEDEC method.
- (4).Valid provided that electrodes at a distance of 10 mm from case are kept at ambient temperature

RATINGS AND CHARACTERISTICS CURVES

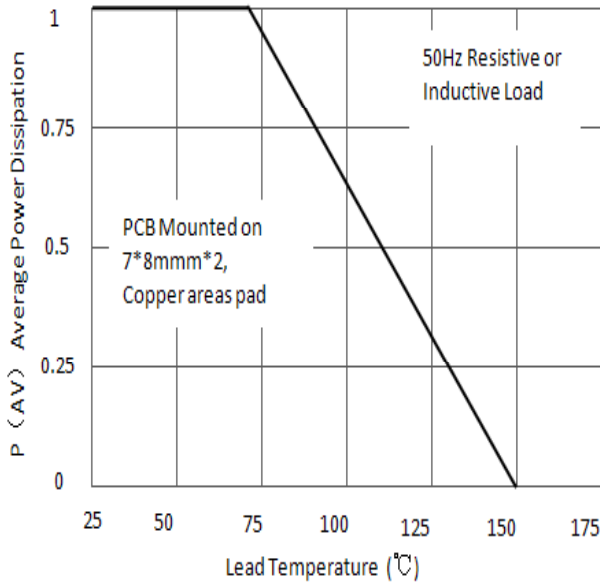


Fig.1 Maximum Continuous Power Dissipation

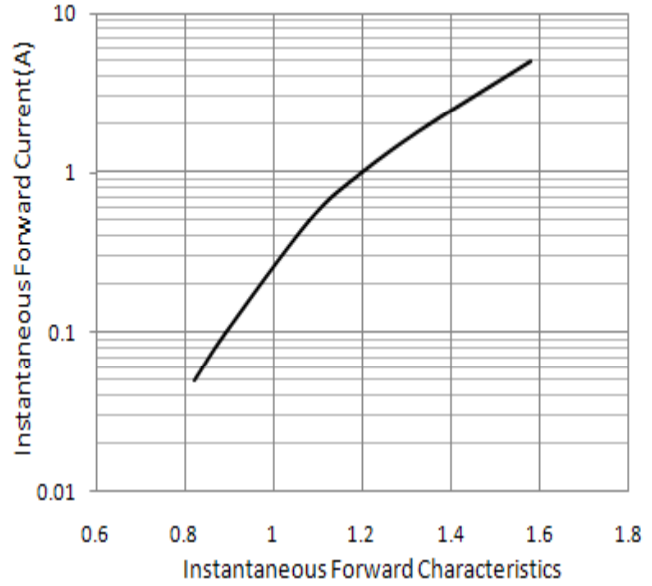


Fig.2 Typical Instantaneous Forward Characteristics

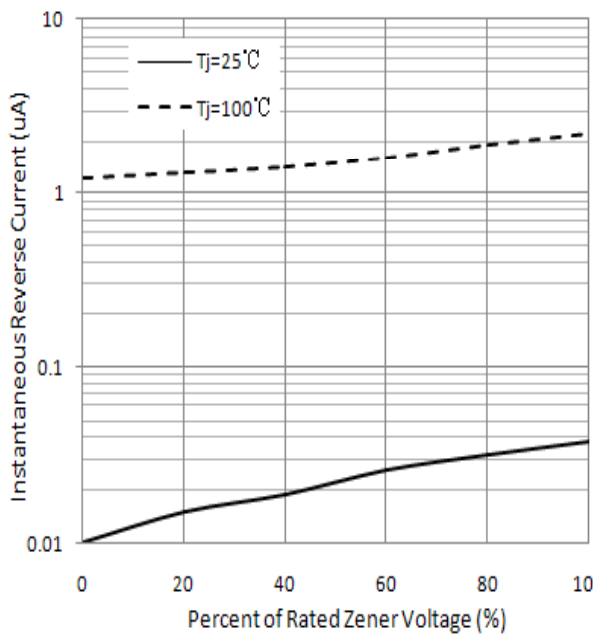


Fig.3 Typical Reverse Characteristics

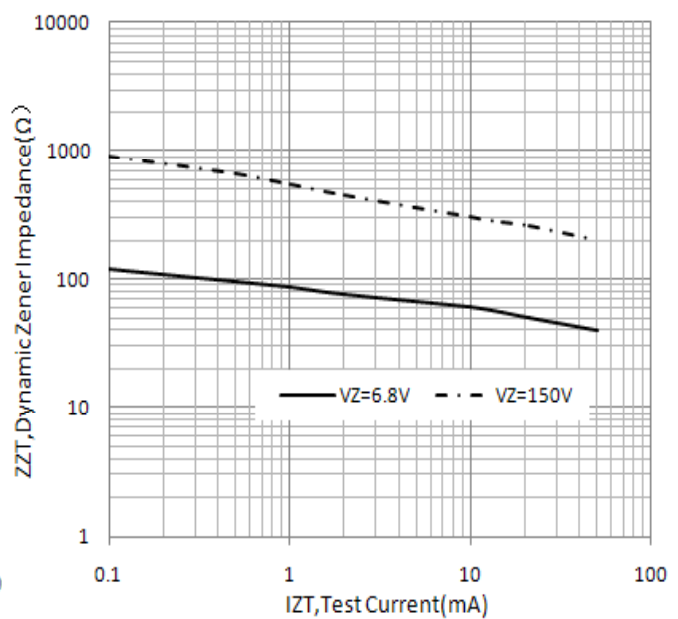


Fig.4 Typical Zener Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

