

## RD4.7UJ to RD39UJ

LOW NOISE SHARP BREAKDOWN CHARACTERISTICS  
ZENER DIODES  
2PIN ULTRA SUPER MINI MOLD

**DESCRIPTION**

Type RD4.7UJ to RD39UJ Series are 2PIN Ultra Super Mini Mold Package zener diodes possessing an allowable power dissipation of 150 mW featuring low noise and sharp breakdown characteristic. They are intended for use in audio equipment, instrument equipment.

**FEATURES**

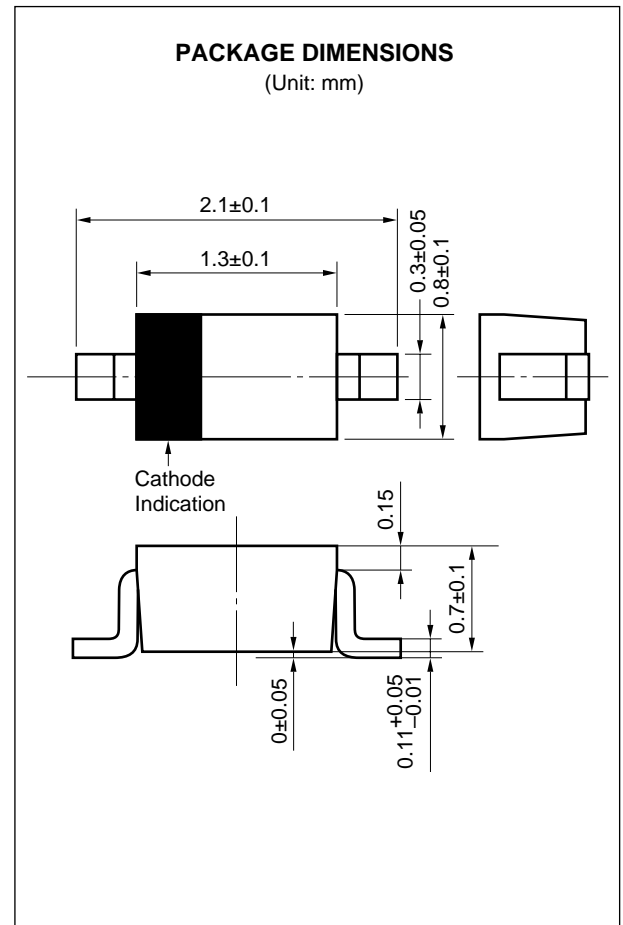
- Low Noise
- Sharp Breakdown characteristics
- $V_z$ ; Applied E24 standard

**APPLICATIONS**

Circuits for Constant Voltage, Constant Current, Waveform clipper, Surge absorber, etc.

**MAXIMUM RATINGS ( $T_A = 25\text{ }^\circ\text{C}$ )**

Power Dissipation	P	150 mW
Forward Current	$I_F$	100 mA
Reverse Surge Power	$P_{RSM}$	2.2 W
		(at $t = 10\text{ }\mu\text{s}/1\text{ pulse}$ )
		Show Fig. 6
Junction Temperature	$T_j$	150 $^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150 $^\circ\text{C}$



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**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25 ± 2 °C)**

Type Number	Class	Zener Voltage V <sub>Z</sub> (V) <sup>Note 1</sup>			Dynamic Impedance Z <sub>Z</sub> (Ω) <sup>Note 2</sup>		Reverse Current I <sub>R</sub> (μA)	
		MIN.	MAX.	I <sub>Z</sub> (mA)	MAX.	I <sub>Z</sub> (mA)	MAX.	V <sub>R</sub> (V)
RD4.7UJ	N	4.39	4.91	0.5	800	0.5	2	1.0
	N1	4.39	4.62					
	N2	4.52	4.76					
	N3	4.66	4.91					
RD5.1UJ	N	4.81	5.36	0.5	500	0.5	2	1.5
	N1	4.81	5.05					
	N2	4.95	5.20					
	N3	5.10	5.36					
RD5.6UJ	N	5.26	5.91	0.5	200	0.5	1	2.5
	N1	5.26	5.54					
	N2	5.44	5.73					
	N3	5.63	5.91					
RD6.2UJ	N	5.81	6.53	0.5	100	0.5	1	3.0
	N1	5.81	6.11					
	N2	6.01	6.32					
	N3	6.21	6.53					
RD6.8UJ	N	6.41	7.14	0.5	60	0.5	0.5	3.5
	N1	6.41	6.74					
	N2	6.60	6.94					
	N3	6.80	7.14					
RD7.5UJ	N	7.00	7.83	0.5	60	0.5	0.5	4.0
	N1	7.00	7.35					
	N2	7.21	7.60					
	N3	7.46	7.83					
RD8.2UJ	N	7.69	8.61	0.5	60	0.5	0.5	5.0
	N1	7.69	8.08					
	N2	7.94	8.34					
	N3	8.20	8.61					
RD9.1UJ	N	8.47	9.51	0.5	60	0.5	0.5	6.0
	N1	8.47	8.91					
	N2	8.76	9.21					
	N3	9.06	9.51					
RD10UJ	N	9.35	10.51	0.5	60	0.5	0.1	7.0
	N1	9.35	9.82					
	N2	9.66	10.16					
	N3	10.00	10.51					
RD11UJ	N	10.32	11.50	0.5	60	0.5	0.1	8.0
	N1	10.32	10.84					
	N2	10.64	11.17					
	N3	10.97	11.50					
RD12UJ	N	11.28	12.52	0.5	80	0.5	0.1	9.0
	N1	11.28	11.83					
	N2	11.59	12.17					
	N3	11.93	12.52					
RD13UJ	N	12.29	13.86	0.5	80	0.5	0.1	10.0
	N1	12.29	12.95					
	N2	12.72	13.40					
	N3	13.17	13.86					

Type Number	Class	Zener Voltage $V_z$ (V) <sup>Note 1</sup>			Dynamic Impedance $Z_z$ ( $\Omega$ ) <sup>Note 2</sup>		Reverse Current $I_R$ ( $\mu$ A)	
		MIN.	MAX.	$I_z$ (mA)	MAX.	$I_z$ (mA)	MAX.	$V_R$ (V)
RD15UJ	N	13.63	15.38	0.5	80	0.5	0.1	11
	N1	13.63	14.35					
	N2	14.12	14.85					
	N3	14.62	15.38					
RD16UJ	N	15.13	16.91	0.5	80	0.5	0.1	12
	N1	15.13	15.87					
	N2	15.58	16.36					
	N3	16.07	16.91					
RD18UJ	N	16.63	18.81	0.5	80	0.5	0.1	13
	N1	16.63	17.52					
	N2	17.24	18.15					
	N3	17.87	18.81					
RD20UJ	N	18.51	20.79	0.5	100	0.5	0.1	15
	N1	18.51	19.42					
	N2	19.14	20.12					
	N3	19.80	20.79					
RD22UJ	N	20.46	22.82	0.5	100	0.5	0.1	17
	N1	20.46	21.47					
	N2	21.09	22.15					
	N3	21.76	22.82					
RD24UJ	N	22.42	25.17	0.5	120	0.5	0.1	19
	N1	22.42	23.59					
	N2	23.19	24.38					
	N3	23.98	25.17					
RD27UJ	N	24.75	27.95	0.5	150	0.5	0.1	21
	N1	24.75	26.04					
	N2	25.56	26.96					
	N3	26.46	27.95					
RD30UJ	N	27.38	31.04	0.5	200	0.5	0.1	23
	N1	27.38	29.00					
	N2	28.35	30.04					
	N3	29.37	31.04					
RD33UJ	N	30.30	33.97	0.5	250	0.5	0.1	25
	N1	30.30	32.02					
	N2	31.21	32.98					
	N3	32.14	33.97					
RD36UJ	N	33.08	36.83	0.5	300	0.5	0.1	27
	N1	33.08	34.92					
	N2	33.95	36.85					
	N3	34.87	36.83					
RD39UJ	N	35.78	39.67	0.5	360	0.5	0.1	30
	N1	35.78	37.75					
	N2	36.63	38.69					
	N3	37.56	39.67					

**Note 1.** Tested with pulse (40 ms)

**2.**  $Z_z$  is measured at  $I_z$  by given a very small A.C. current signal

TYPICAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ )

Fig. 1 P -  $T_A$  RATING

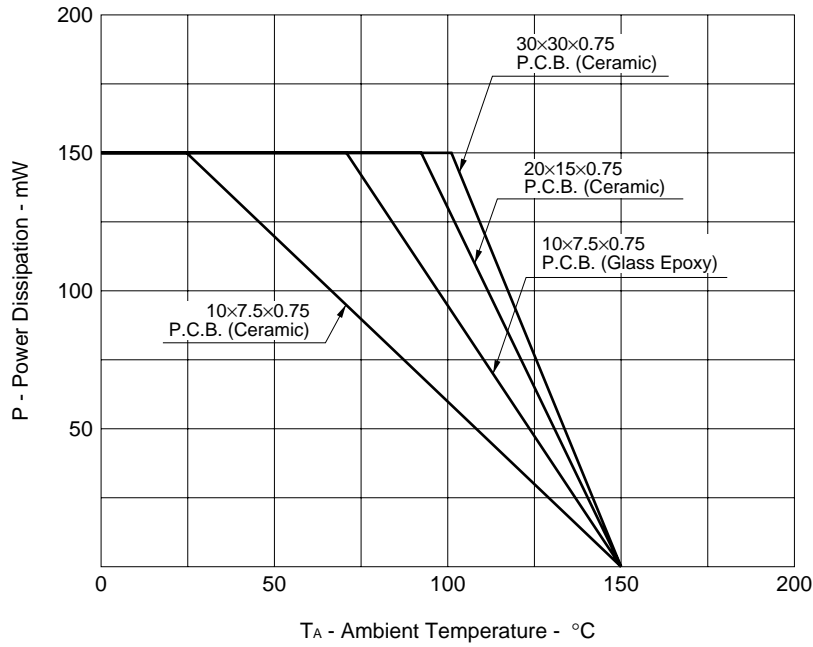
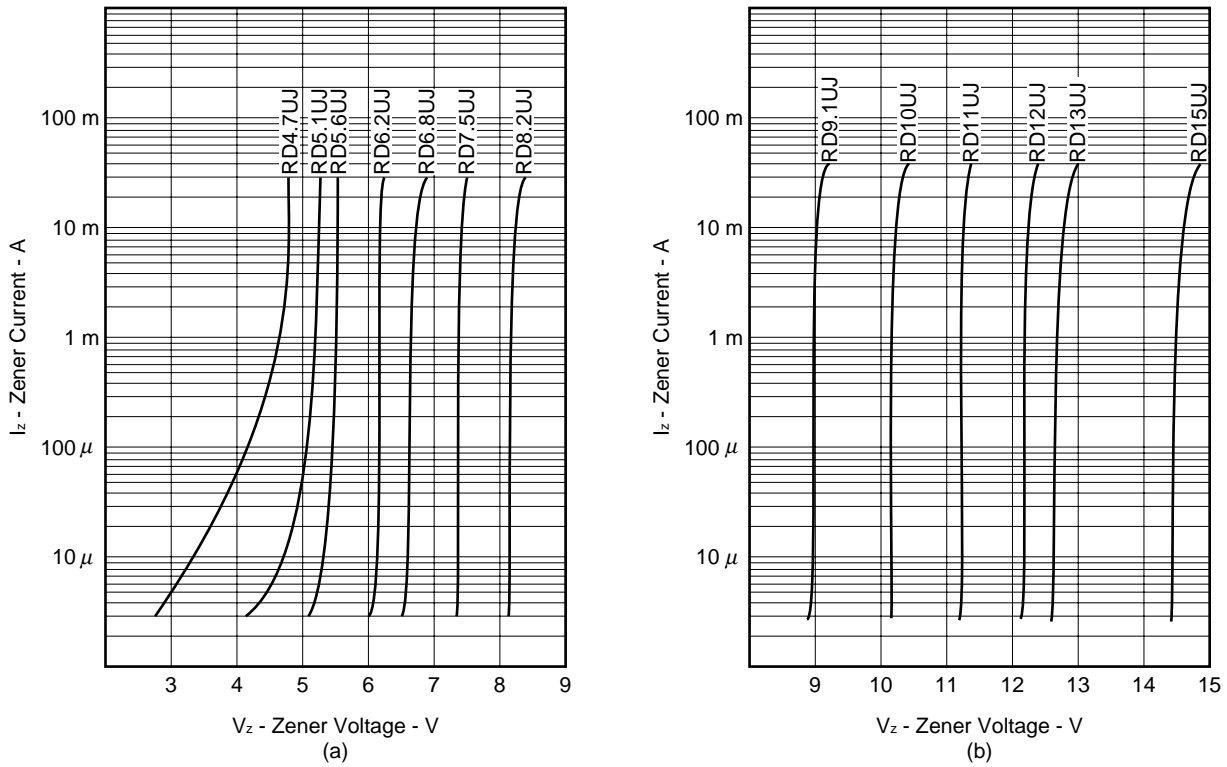


Fig. 2  $I_z - V_z$  CHARACTERISTICS (a to d)



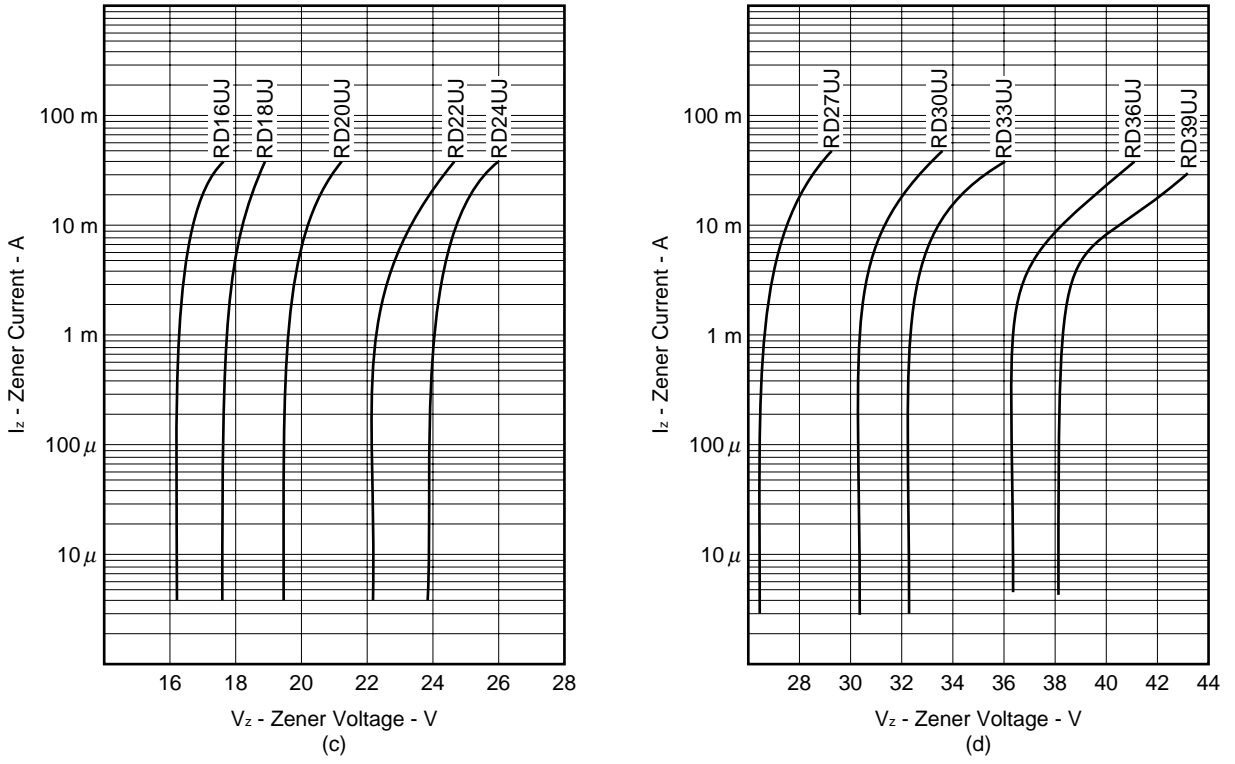


Fig. 3  $\gamma_z - V_z$  CHARACTERISTICS

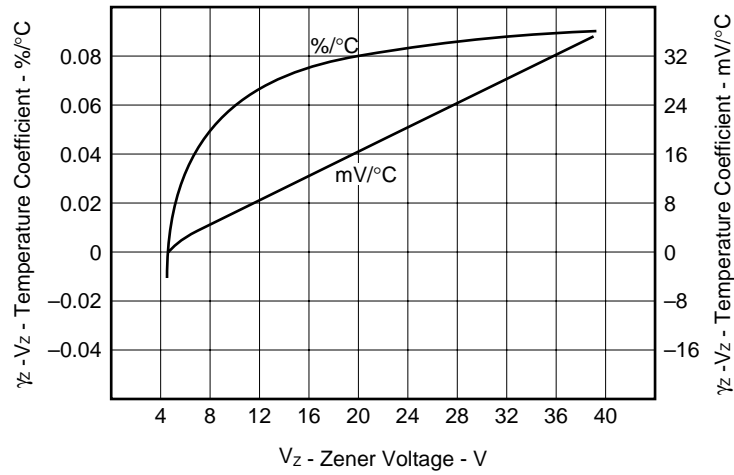


Fig. 4 TRANSIENT THERMAL IMPEDANCE CHARACTERISTIC

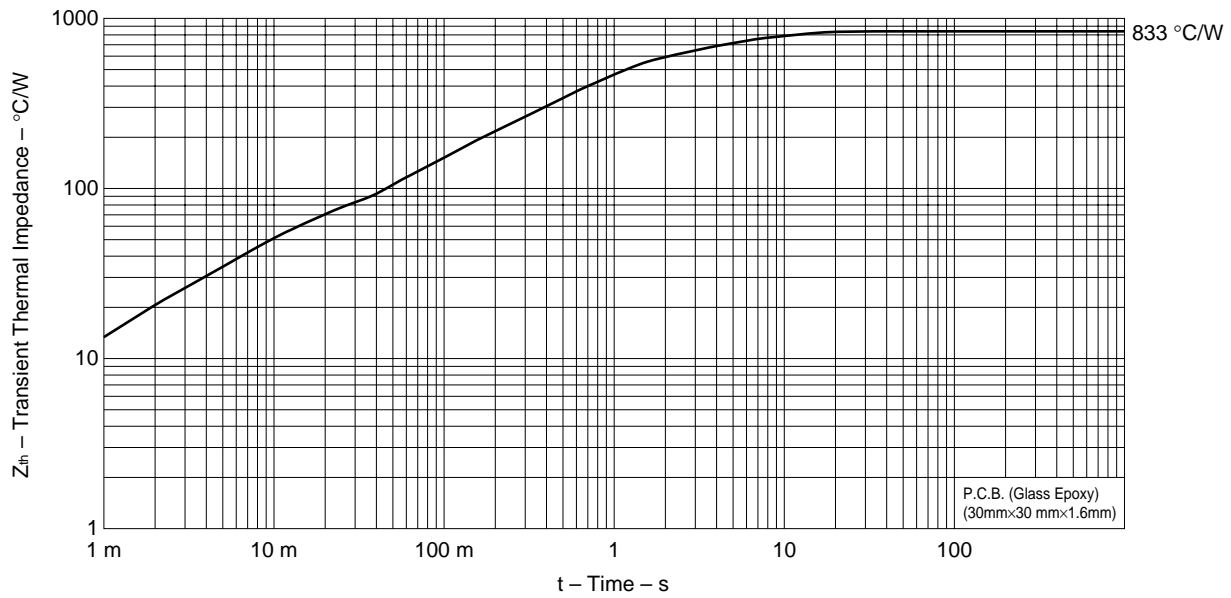
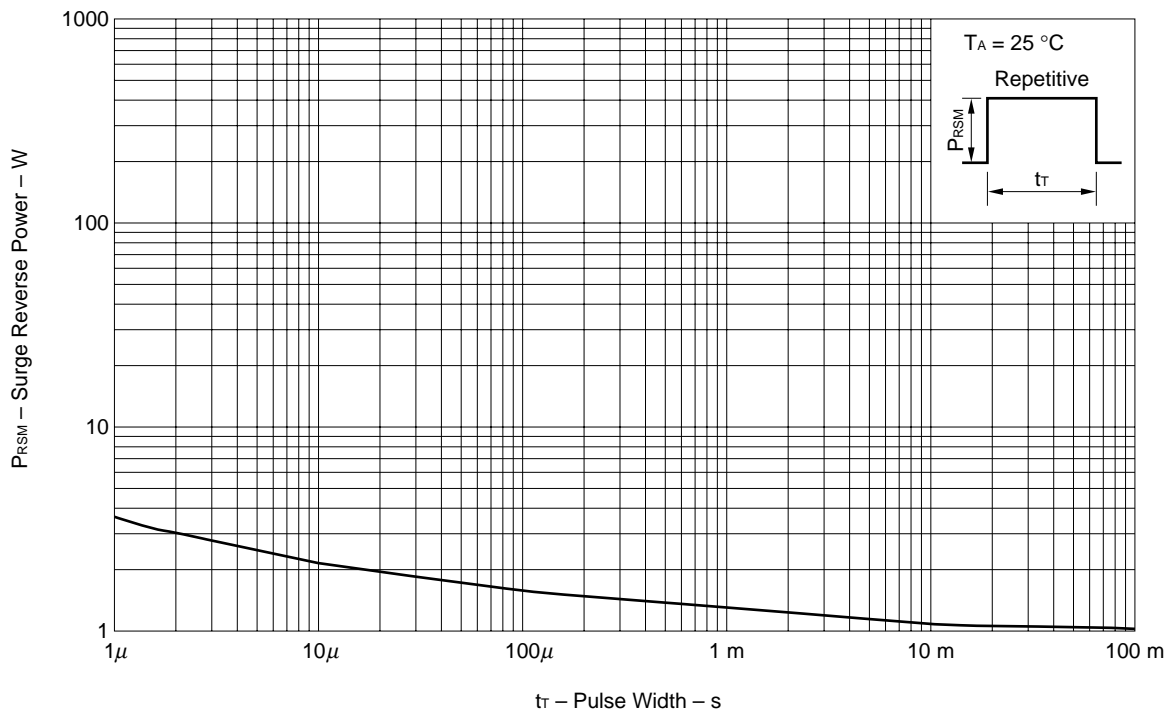


Fig. 5 SURGE REVERSE POWER RATINGS



[MEMO]

[MEMO]

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