

RD2.0S to RD120S

ZENER DIODES 200 mW 2 PIN SUPER MINI MOLD

DESCRIPTION

Type RD2.0S to RD120S series are 2 pin super mini mold package zener diodes possessing an allowable power dissipation of 200 mW.

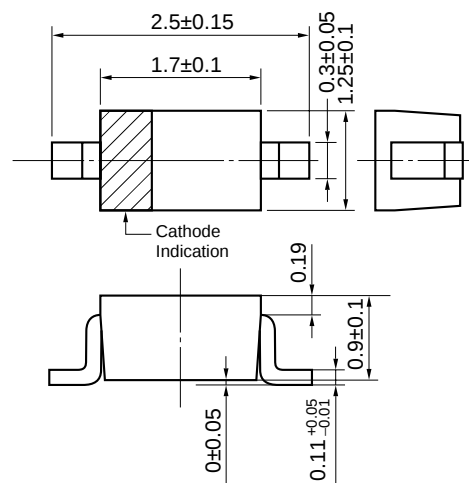
FEATURES

- Sharp breakdown characteristic.
- V_z : Applied E24 standard.

APPLICATIONS

Circuit for constant voltage, constant current, wave form clipper, surge absorber, etc.

PACKAGE DIMENSIONS (in millimeter)



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

Power Dissipation	P	200	mW	
Forward Current	I_F	100	mA	
Reverse Surge Power	P_{RSM}	85	W	(at $t = 10 \mu\text{s}$ / 1 pulse) Show Fig.12
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_A = 25 ±2°C)

Type Number	Class	Zener Voltage V _Z (V) ^{Note1}			Dynamic Impedance Z _Z (Ω) ^{Note2}		Reverse Current I _R (μA)	
		MIN.	MAX.	I _Z (mA)	MAX.	I _Z (mA)	MAX.	V _R (V)
RD2.0S	B	1.90	2.20	5	100	5	120	0.5
RD2.2S	B	2.10	2.40	5	100	5	120	0.7
RD2.4S	B	2.30	2.60	5	100	5	120	1.0
RD2.7S	B	2.50	2.90	5	110	5	120	1.0
	B1	2.50	2.75					
	B2	2.65	2.90					
RD3.0S	B	2.80	3.20	5	120	5	50	1.0
	B1	2.80	3.05					
	B2	2.95	3.20					
RD3.3S	B	3.10	3.50	5	130	5	20	1.0
	B1	3.10	3.35					
	B2	3.25	3.50					
RD3.6S	B	3.40	3.80	5	130	5	10	1.0
	B1	3.40	3.65					
	B2	3.55	3.80					
RD3.9S	B	3.70	4.10	5	130	5	10	1.0
	B1	3.70	3.97					
	B2	3.87	4.10					
RD4.3S	B	4.00	4.49	5	130	5	10	1.0
	B1	4.00	4.22					
	B2	4.14	4.35					
	B3	4.27	4.49					
RD4.7S	B	4.40	4.92	5	130	5	10	1.0
	B1	4.40	4.63					
	B2	4.53	4.77					
	B3	4.67	4.92					
RD5.1S	B	4.82	5.39	5	130	5	5	1.5
	B1	4.82	5.06					
	B2	4.96	5.22					
	B3	5.12	5.39					
RD5.6S	B	5.29	5.94	5	80	5	5	2.5
	B1	5.29	5.57					
	B2	5.47	5.75					
	B3	5.65	5.94					
RD6.2S	B	5.84	6.55	5	50	5	2	3.0
	B1	5.84	6.14					
	B2	6.04	6.35					
	B3	6.24	6.55					

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		MIN.	MAX.	I _Z (mA)	MAX.	I _Z (mA)	MAX.	V _R (V)
RD6.8S	B	6.44	7.17	5	30	5	2	3.5
	B1	6.44	6.76					
	B2	6.62	6.96					
	B3	6.83	7.17					
RD7.5S	B	7.03	7.87	5	30	5	2	4.0
	B1	7.03	7.39					
	B2	7.25	7.63					
	B3	7.49	8.67					
RD8.2S	B	7.73	8.67	5	30	5	2	5.0
	B1	7.73	8.13					
	B2	7.98	8.39					
	B3	8.25	8.67					
RD9.1S	B	8.53	9.58	5	30	5	2	6.0
	B1	8.53	8.96					
	B2	8.81	9.26					
	B3	9.12	9.58					
RD10S	B	9.42	10.58	5	30	5	2	7.0
	B1	9.42	9.90					
	B2	9.74	10.24					
	B3	10.08	10.58					
RD11S	B	10.40	11.60	5	30	5	2	8.0
	B1	10.40	10.92					
	B2	10.72	11.26					
	B3	11.06	11.60					
RD12S	B	11.38	12.64	5	35	5	2	9.0
	B1	11.38	11.94					
	B2	11.69	12.28					
	B3	12.04	12.64					
RD13S	B	12.43	14.00	5	35	5	2	10
RD15S	B	13.80	15.56	5	40	5	2	11
RD16S	B	15.31	17.14	5	40	5	2	12
RD18S	B	16.89	19.08	5	45	5	2	13
RD20S	B	18.80	21.14	5	50	5	2	15
RD22S	B	20.81	23.25	5	55	5	2	17
RD24S	B	22.86	25.66	5	60	5	2	19
RD27S	B	25.10	28.90	2	70	2	2	21
RD30S	B	28.00	32.00	2	80	2	2	23
RD33S	B	31.00	35.00	2	80	2	2	25
RD36S	B	34.00	38.00	2	90	2	2	27

ELECTRICAL CHARACTERISTICS (T_A = 25 ±2°C)

Type Number	Class	Zener Voltage V _Z (V) ^{Note1}			Dynamic Impedance Z _Z (Ω) ^{Note2}		Reverse Current I _R (μA)	
		MIN.	MAX.	I _Z (mA)	MAX.	I _Z (mA)	MAX.	V _R (V)
RD39S	B	37.00	41.00	2	100	2	2	30
RD43S	B	40.00	45.00	2	130	2	2	33
RD47S	B	44.00	49.00	2	150	2	2	36
RD51S	B	48.00	54.00	2	180	2	1	39
RD56S	B	53.00	60.00	2	180	2	1	43
RD62S	B	58.00	66.00	2	200	2	0.2	47
RD68S	B	64.00	72.00	2	250	2	0.2	52
RD75S	B	70.00	79.00	2	300	2	0.2	57
RD82S	B	77.00	87.00	2	300	2	0.2	63
RD91S	B	85.00	96.00	1	700	1	0.2	69
RD100S	B	94.00	106.0	1	700	1	0.2	76
RD110S	B	104.00	116.00	1	800	1	0.2	84
RD120S	B	114.00	126.00	1	900	1	0.2	91

Note 1. V_Z is tested with pulsed (40 ms).

2. Z_Z is measured at I_Z by given a very small A.C. current signal.

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

Fig.1 POWER DISSIPATION vs. AMBIENT TEMPERATURE

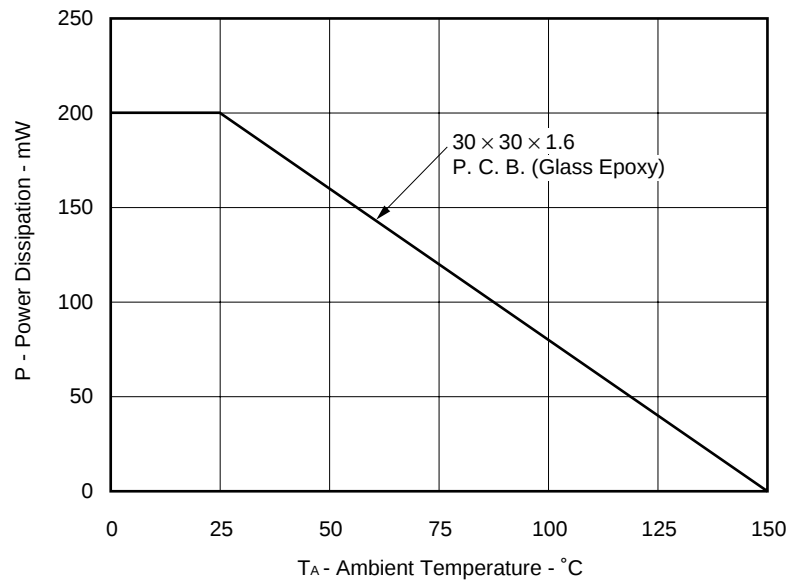


Fig.2 ZENER CURRENT vs. ZENER VOLTAGE

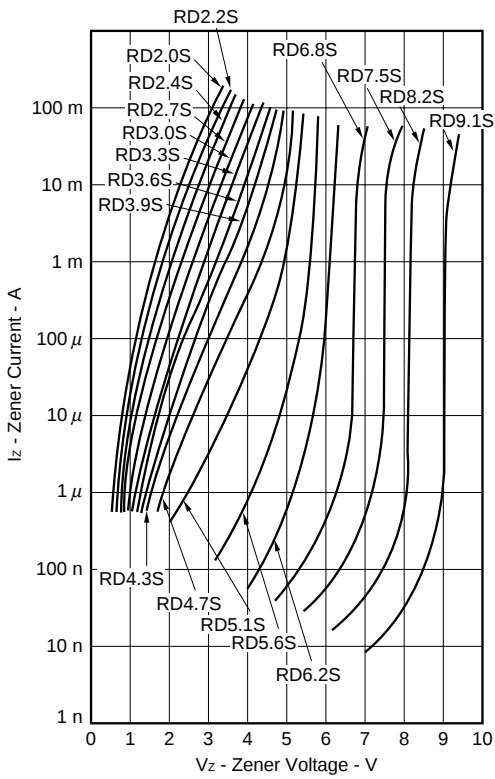


Fig.3 ZENER CURRENT vs. ZENER VOLTAGE

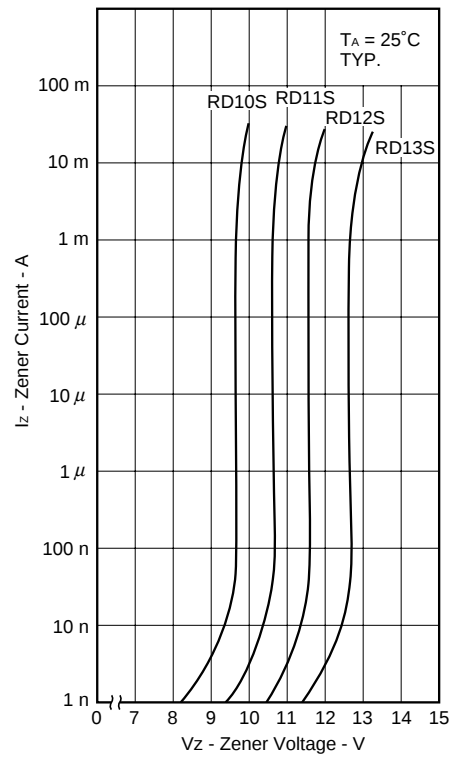


Fig.4 ZENER CURRENT vs. ZENER VOLTAGE

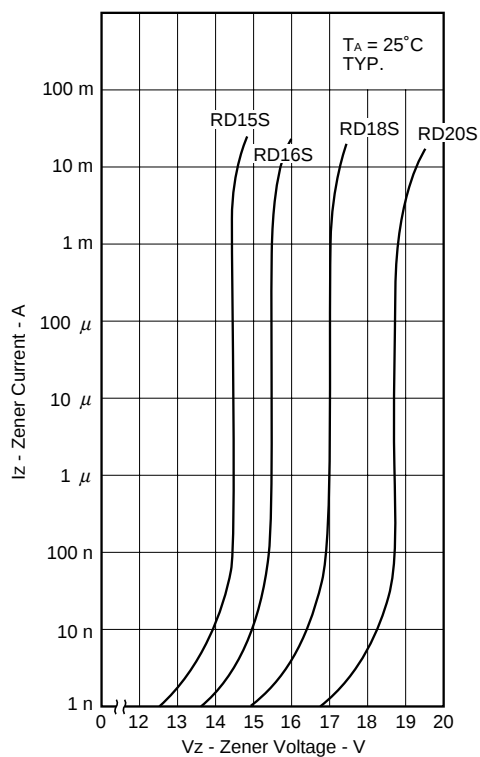
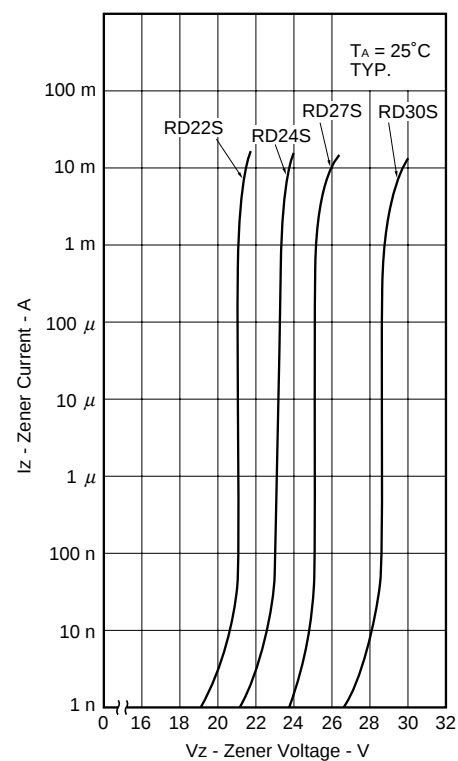


Fig.5 ZENER CURRENT vs. ZENER VOLTAGE



★ Fig.6 ZENER CURRENT vs. ZENER VOLTAGE

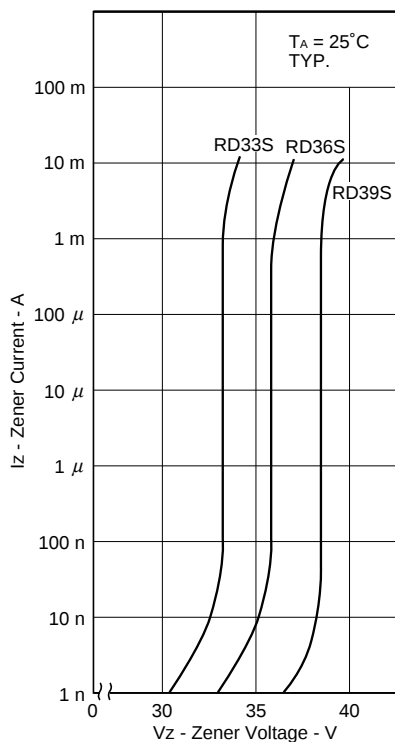


Fig.7 ZENER CURRENT vs. ZENER VOLTAGE

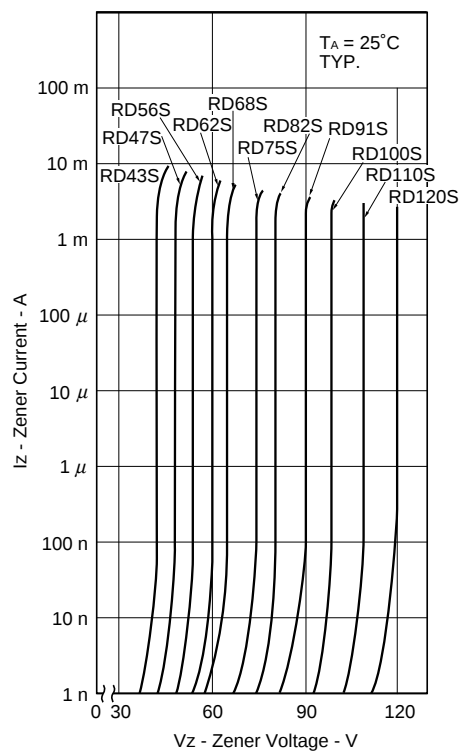


Fig.8 DYNAMIC IMPEDANCE vs. ZENER CURRENT

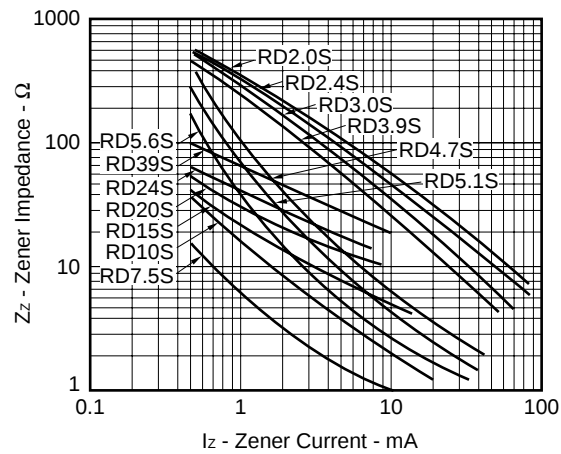


Fig.9 ZENER VOLTAGE TEMPERATURE COEFFICIENT vs. ZENER VOLTAGE

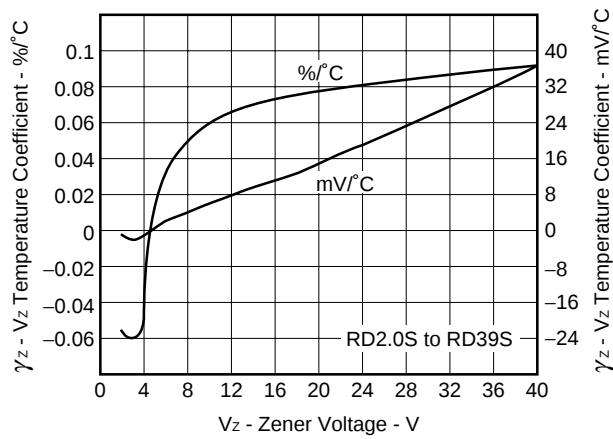


Fig.10 ZENER VOLTAGE TEMPERATURE COEFFICIENT vs. ZENER VOLTAGE

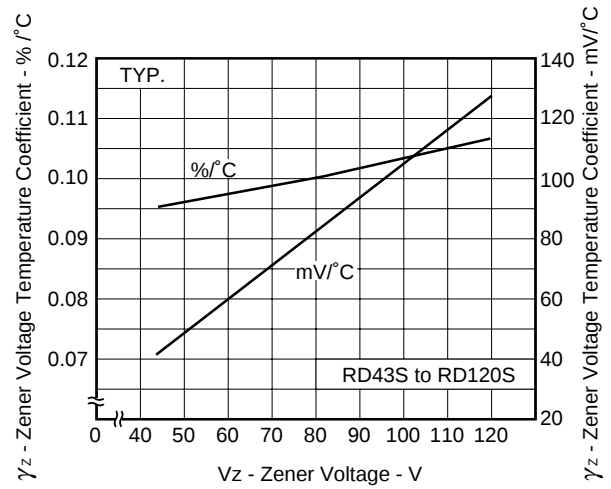


Fig.11 TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS

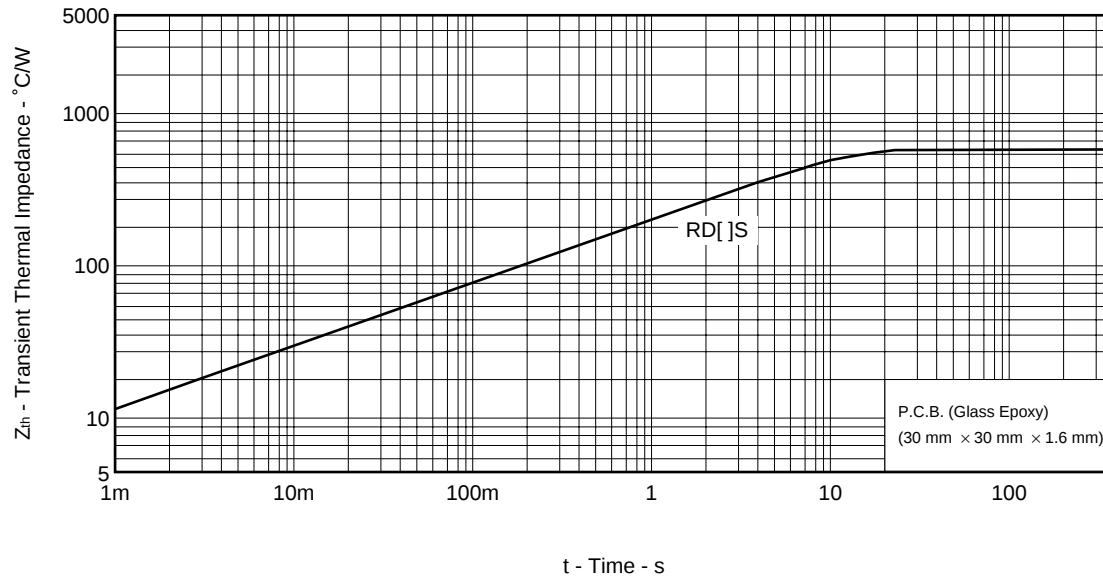
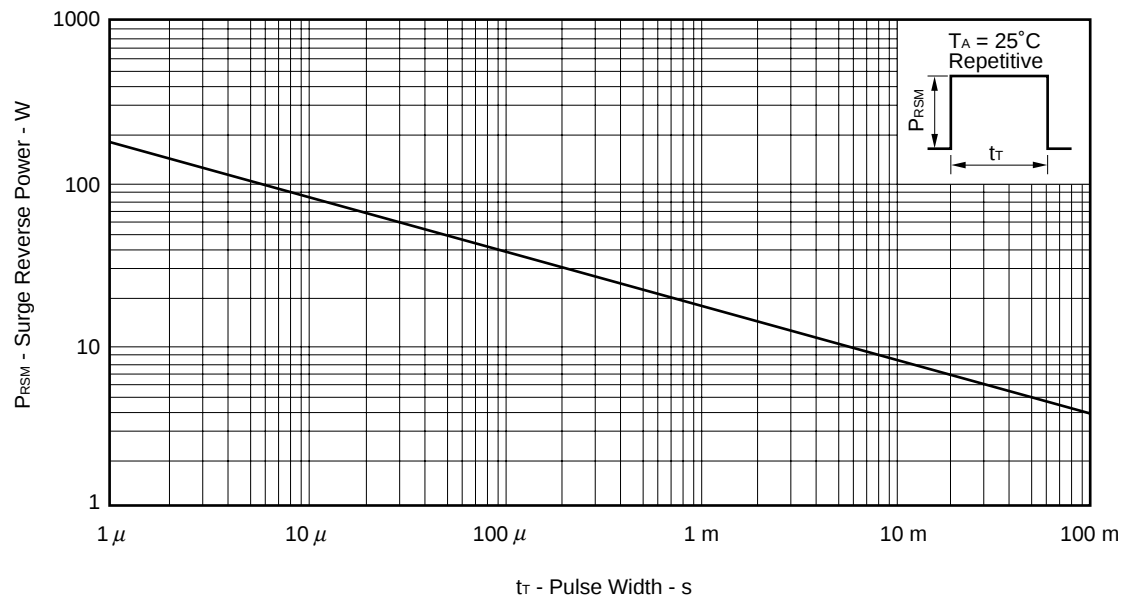


Fig.12 SURGE REVERSE POWER RATINGS



[MEMO]

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