

# RD2.0E ~ RD39E

**V<sub>Z</sub> : 2.0 - 39 Volts**

**P<sub>D</sub> : 500 mW**

### FEATURES :

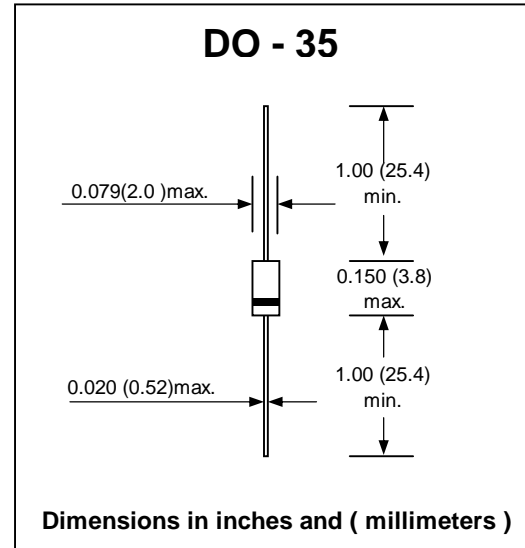
- \* Complete 2.0 to 39 Volts
- \* High peak reverse power dissipation
- \* High reliability
- \* Low leakage current
- \* **Pb / RoHS Free**

### MECHANICAL DATA

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13g

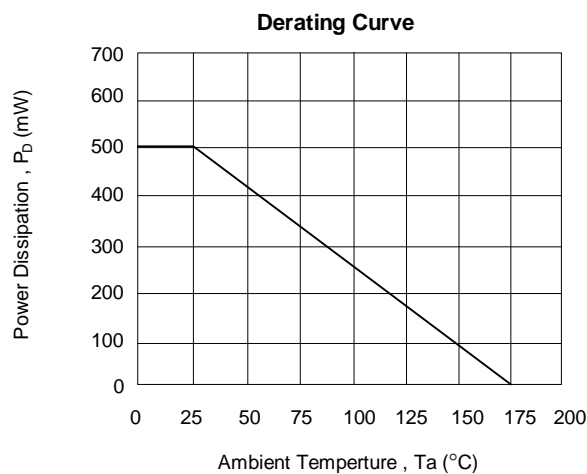
## SILICON ZENER DIODES



### MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
Power Dissipation	P <sub>D</sub>	500	mW
Forward Current	I <sub>F</sub>	200	mA
Junction Temperature Range	T <sub>J</sub>	- 55 to + 175	°C
Storage Temperature Range	T <sub>s</sub>	- 55 to + 175	°C



## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type Number	Suffix	Zener Voltage <sup>1)</sup> V <sub>Z</sub> (V)			Dynamic Impedance Z <sub>Z</sub> (W)		Knee Dynamic Impedance Z <sub>ZK</sub> (W)		Reverse Current I <sub>R</sub> (mA)		Zener Voltage Temperature g <sub>Z</sub> (mV/°C)	
		Min.	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>Z</sub> (mA)	Max.	V <sub>R</sub> (V)	Max.	I <sub>Z</sub> (mA)
RD2.0E	B	1.88	2.20	20	140	20	2000	1.0	120	0.5	-1.0	20
	B1	1.88	2.10									
	B2	2.02	2.20									
RD2.2E	B	2.12	2.41	20	120	20	2000	1.0	120	0.7	-1.5	20
	B1	2.12	2.3									
	B2	2.22	2.41									
RD2.4E	B	2.33	2.63	20	100	20	2000	1.0	120	1.0	-1.5	20
	B1	2.33	2.52									
	B2	2.43	2.63									
RD2.7E	B	2.54	2.91	20	100	20	1000	1.0	100	1.0	-1.5	20
	B1	2.54	2.75									
	B2	2.69	2.91									
RD3.0E	B	2.85	3.22	20	80	20	1000	1.0	50	1.0	-2.0	20
	B1	2.85	3.07									
	B2	3.01	3.22									
RD3.3E	B	3.16	3.53	20	70	20	1000	1.0	20	1.0	-2.0	20
	B1	3.16	3.38									
	B2	3.32	3.53									
RD3.6E	B	3.47	3.83	20	60	20	1000	1.0	10	1.0	-2.0	20
	B1	3.47	3.68									
	B2	3.62	3.83									
RD3.9E	B	3.77	4.14	20	50	20	1000	1.0	5.0	1.0	-2.0	20
	B1	3.77	3.98									
	B2	3.92	4.14									
RD4.3E	B	4.05	4.53	20	40	20	1000	1.0	5.0	1.0	-1.5	20
	B1	4.05	4.26									
	B2	4.20	4.40									
	B3	4.34	4.53									
RD4.7E	B	4.47	4.91	20	25	20	900	1.0	5.0	1.0	-1.5	20
	B1	4.47	4.65									
	B2	4.59	4.77									
	B3	4.71	4.91									
RD5.1E	B	4.85	5.35	20	20	20	800	1.0	5.0	1.5	0.5	20
	B1	4.85	5.03									
	B2	4.97	5.18									
	B3	5.12	5.35									
RD5.6E	B	5.29	5.88	20	13	20	500	1.0	5.0	2.5	1.5	20
	B1	5.29	5.52									
	B2	5.46	5.70									
	B3	5.64	5.88									
RD6.2E	B	5.81	6.40	20	10	20	300	1.0	5.0	3.0	2.0	20
	B1	5.81	6.06									
	B2	5.99	6.24									
	B3	6.16	6.40									
RD6.8E	B	6.32	6.97	20	8	20	150	0.5	2.0	3.5	2.5	20
	B1	6.32	6.59									
	B2	6.52	6.79									
	B3	6.70	6.97									
RD7.5E	B	6.88	7.64	20	8	20	120	0.5	0.5	4.0	3.0	20
	B1	6.88	7.19									
	B2	7.11	7.41									
	B3	7.33	7.64									

## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

Type Number	Suffix	Zener Voltage <sup>1)</sup> V <sub>Z</sub> (V)			Dynamic Impedance Z <sub>Z</sub> (W)		Knee Dynamic Impedance Z <sub>ZK</sub> (W)		Reverse Current I <sub>R</sub> (mA)		Zener Voltage Temperature g <sub>Z</sub> (mV/°C)	
		Min.	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>Z</sub> (mA)	Max.	V <sub>R</sub> (V)	Max.	I <sub>Z</sub> (mA)
RD8.2E	B	7.56	8.41	20	8	20	120	0.5	0.5	5.0	4.0	20
	B1	7.56	7.90									
	B2	7.82	8.15									
	B3	8.07	8.41									
RD9.1E	B	8.33	9.29	20	8	20	120	0.5	0.5	6.0	4.5	20
	B1	8.33	8.70									
	B2	8.61	8.99									
	B3	8.89	9.29									
RD10E	B	9.19	10.30	20	8	20	120	0.5	0.2	7.0	5.5	20
	B1	9.19	9.59									
	B2	9.48	9.90									
	B3	9.82	10.30									
RD11E	B	10.18	11.26	10	10	10	120	0.5	0.2	8.0	6.5	10
	B1	10.18	10.63									
	B2	10.50	10.95									
	B3	10.82	11.26									
RD12E	B	11.13	12.30	10	12	10	110	0.5	0.2	9.0	7.5	10
	B1	11.13	11.63									
	B2	11.50	11.92									
	B3	11.80	12.30									
RD13E	B	12.18	13.62	10	14	10	110	0.5	0.2	10	8.5	10
	B1	12.18	12.71									
	B2	12.59	13.16									
	B3	13.03	13.62									
RD15E	B	13.48	15.02	10	16	10	110	0.5	0.2	11	10	10
	B1	13.48	14.09									
	B2	13.95	14.56									
	B3	14.40	15.02									
RD16E	B	14.87	16.50	10	18	10	150	0.5	0.2	10	11	10
	B1	14.87	15.50									
	B2	13.55	15.93									
	B3	15.79	16.50									
RD18E	B	16.34	18.30	10	23	10	150	0.5	0.2	13	13	10
	B1	16.34	17.06									
	B2	16.90	17.67									
	B3	17.51	18.30									
RD20E	B	18.11	20.72	10	28	10	200	0.5	0.2	15	15	10
	B1	18.11	18.92									
	B2	18.73	19.57									
	B3	19.38	20.22									
RD22E	B	20.23	22.61	5	30	5	200	0.5	0.2	17	17	5.0
	B1	20.23	21.08									
	B2	21.76	21.65									
	B3	21.22	22.09									
RD24E	B	22.26	24.81	5	35	5	200	0.5	0.2	19	19	5.0
	B1	22.26	23.12									
	B2	22.75	23.75									
	B3	23.29	24.27									
	B4	23.81	24.81									

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Rating at 25 °C ambient temperature unless otherwise specified

Type Number	Suffix	Zener Voltage <sup>1)</sup> V <sub>Z</sub> (V)			Dynamic Impedance Z <sub>Z</sub> (W)		Knee Dynamic Impedance Z <sub>ZK</sub> (W)		Reverse Current I <sub>R</sub> (mA)		Zener Voltage Temperature g <sub>Z</sub> (mV/°C)	
		Min.	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>Z</sub> (mA)	Max.	V <sub>R</sub> (V)	Max.	I <sub>Z</sub> (mA)
RD27E	B	24.26	27.64	5	45	5	250	0.5	0.2	21	21	5.0
	B1	24.26	25.52									
	B2	24.97	26.26									
	B3	25.63	26.95									
	B4	26.29	27.64									
RD30E	B	26.99	30.51	5	55	5	250	0.5	0.2	23	24	5.0
	B1	26.99	28.39									
	B2	27.70	29.13									
	B3	28.36	29.82									
	B4	29.02	30.51									
RD33E	B	29.63	33.11	5	65	5	250	0.5	0.2	25	26	5.0
	B1	29.68	31.22									
	B2	30.32	31.88									
	B3	30.90	32.50									
	B4	31.49	33.11									
RD36E	B	32.14	35.77	5	75	5	250	0.5	0.2	27	29	5.0
	B1	32.14	33.79									
	B2	32.79	34.49									
	B3	33.40	35.13									
	B4	34.01	35.77									
RD39E	B	34.68	40.80	5	85	5	250	0.5	0.2	30	32	5.0
	B1	34.68	36.47									
	B2	35.36	37.19									
	B3	36.00	37.85									
	B4	36.63	38.52									

**Notes:**

- (1) The zener voltage (V<sub>Z</sub>) of the B and B1 to B4 grades is tested for 40 ms after power ON.
- (2) The B grade is a composition of the B1 to B4 grades. Any of the B1 to B4 voltage classifications are available for customers who request the B grade product