



Zener diode

Features

1. DO-35 Glass sealed package
2. Planar process
3. Vz applied E24 standard

Applications

Circuits for constant voltage, constant current, waveform clipper, surge absorber, etc.



Absolute Maximum Ratings

$T_j=25^{\circ}\text{C}$

Parameter	Symbol	Value	Unit
Forward Current	I_f	150	mA
Power Dissipation	P_V	400	mW
Surge Reverse Power	P_{RSM}	100	W
Junction Temperature	T_j	175	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-65~+175	$^{\circ}\text{C}$

Stresses exceeding maximum ratings may damage the device. Maximum ratings are stress ratings only. Functional operation above the recommended operating conditions is not implied. Extended exposure to stresses above the recommended operating conditions may affect device reliability.



Electrical Characteristics

T_j=25°C

Type Number	Suffix	Zener voltage			Dynamic Impedance		Knee Dynamic Impedance		Reverse current	
		V _z (V)			Z _{zt} (Ω)		Z _{zk} (Ω)		I _R (μA)	
		Min.	Max.	I _z (mA)	Max.	I _z (mA)	Max.	I _z (mA)	Max.	V _R (V)
RD 2.0 E	-	1.88	2.24	5	100	5	1000	0.5	120	0.5
	A	1.88	2.12							
	B	2.01	2.24							
RD 2.2 E	-	2.11	2.44	5	100	5	1000	0.5	120	0.7
	A	2.11	2.34							
	B	2.22	2.44							
RD 2.4 E	-	2.32	2.65	5	100	5	1000	0.5	120	1.0
	A	2.32	2.54							
	B	2.41	2.65							
RD 2.7 E	-	2.52	2.93	5	110	5	1000	0.5	100	1.0
	A	2.52	2.77							
	B	2.68	2.93							
RD 3.0 E	-	2.84	3.24	5	120	5	1000	0.5	50	1.0
	A	2.84	3.08							
	B	2.99	3.24							
RD 3.3 E	-	3.15	3.54	5	120	5	1000	0.5	20	1.0
	A	3.15	3.39							
	B	3.31	3.54							
RD 3.6 E	-	3.46	3.84	5	120	5	1100	0.5	10	1.0
	A	3.46	3.69							
	B	3.60	3.84							
RD 3.9 E	-	3.74	4.16	5	120	5	1200	0.5	5	1.0
	A	3.74	4.01							
	B	3.89	4.16							
RD 4.3 E	-	4.04	4.57	5	120	5	1200	0.5	5	1.0
	A	4.04	4.29							
	B	4.17	4.43							
	C	4.30	4.57							
RD 4.7 E	-	4.44	4.93	5	100	5	1200	0.5	5	1.0
	A	4.44	4.68							
	B	4.55	4.80							
	C	4.68	4.93							
RD 5.1 E	-	4.81	5.37	5	70	5	1200	0.5	5	1.5
	A	4.81	5.07							
	B	4.94	5.20							
	C	5.09	5.37							
RD 5.6 E	-	5.28	5.91	5	40	5	900	0.5	5	2.5
	A	5.28	5.55							
	B	5.45	5.73							
	C	5.61	5.91							
RD 6.2 E	-	5.78	6.44	5	30	5	500	0.5	5	3.0
	A	5.78	6.09							
	B	5.96	6.27							
	C	6.12	6.44							

Excel Semiconductor



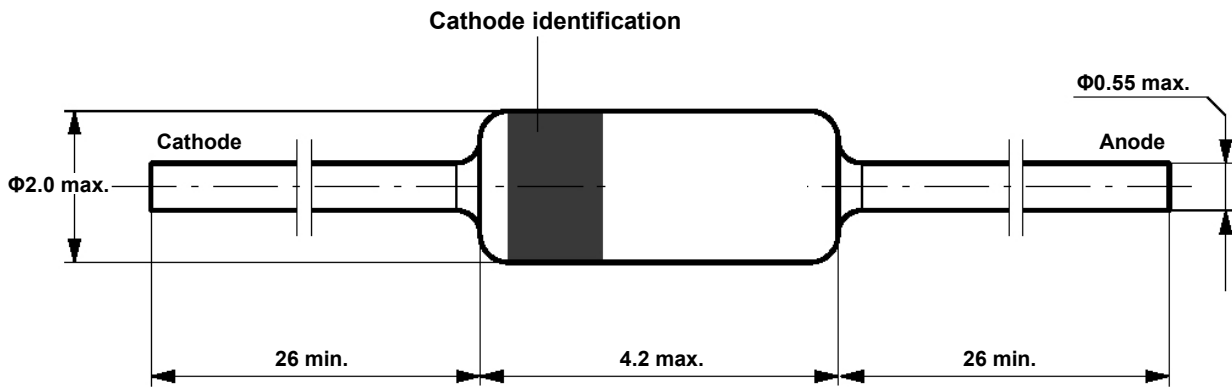
Type Number	Suffix	Zener voltage			Dynamic Impedance		Knee Dynamic Impedance		Reverse current	
		Vz (V)		Iz (mA)	Zzt (Ω)		Zzk (Ω)		IR (μA)	
		Min.	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Iz (mA)	Max.	VR (V)
RD 6.8 E	-	6.29	7.01	5	25	5	150	0.5	2	3.5
	A	6.29	6.63							
	B	6.49	6.83							
	C	6.66	7.01							
RD 7.5 E	-	6.85	7.67	5	25	5	120	0.5	0.5	4.0
	A	6.85	7.22							
	B	7.07	7.45							
	C	7.29	7.67							
RD 8.2 E	-	7.53	8.45	5	20	5	120	0.5	0.5	5.0
	A	7.53	7.92							
	B	7.78	8.19							
	C	8.03	8.45							
RD 9.1 E	-	8.29	9.30	5	20	5	120	0.5	0.5	6.0
	A	8.29	8.73							
	B	8.57	9.01							
	C	8.83	9.30							
RD 10 E	-	9.12	10.39	5	20	5	120	0.5	0.2	7.0
	A	9.12	9.65							
	B	9.46	10.02							
	C	9.82	10.39							
RD 11 E	-	10.18	11.38	5	20	5	120	0.5	0.2	8.0
	A	10.18	10.71							
	B	10.50	11.05							
	C	10.82	11.38							
RD 12 E	-	11.13	12.35	5	25	5	110	0.5	0.2	9.0
	A	11.13	11.71							
	B	11.44	12.03							
	C	11.74	12.35							
RD 13 E	-	12.11	13.66	5	25	5	110	0.5	0.2	10
	A	12.11	12.75							
	B	12.55	13.21							
	C	12.99	13.66							
RD 15 E	-	13.44	15.09	5	25	5	110	0.5	0.2	11
	A	13.44	14.13							
	B	13.89	14.62							
	C	14.35	15.09							
RD 16 E	-	14.80	16.51	5	25	5	150	0.5	0.2	12
	A	14.80	15.57							
	B	15.25	16.04							
	C	15.69	16.51							
RD 18 E	-	16.22	18.33	5	30	5	150	0.5	0.2	13
	A	16.22	17.06							
	B	16.82	17.70							
	C	17.42	18.33							



Type Number	Suffix	Zener voltage			Dynamic Impedance		Knee Dynamic Impedance		Reverse current	
		Vz (V)		Iz (mA)	Zzt (Ω)		Zzk (Ω)		IR (μA)	
		Min.	Max.	Iz (mA)	Max.	Iz (mA)	Max.	Iz (mA)	Max.	VR (V)
RD 20 E	-	18.14	20.45	5	30	5	200	0.5	0.2	15
	A	18.14	19.07							
	B	18.80	19.76							
	C	19.45	20.45							
RD 22 E	-	20.15	22.63	5	30	5	200	0.5	0.2	17
	A	20.15	21.20							
	B	20.64	21.71							
	C	21.08	22.17							
RD 24 E	-	22.05	24.85	5	35	5	200	0.5	0.2	19
	A	22.05	23.18							
	B	22.61	23.77							
	C	23.12	24.13							
RD 27 E	-	24.26	27.64	5	45	5	250	0.5	0.2	21
	A	24.26	25.52							
	B	24.97	26.26							
	C	25.63	26.95							
RD 30 E	-	26.99	30.51	5	55	5	250	0.5	0.2	23
	A	26.99	28.39							
	B	27.70	29.13							
	C	28.36	29.82							
RD 33 E	-	29.68	33.11	5	65	5	250	0.5	0.2	25
	A	29.68	31.22							
	B	30.32	31.88							
	C	30.90	32.50							
RD 36 E	-	32.14	35.77	5	75	5	250	0.5	0.2	27
	A	32.14	33.79							
	B	32.79	34.49							
	C	33.40	35.13							
RD 39 E	-	34.68	38.52	5	85	5	250	0.5	0.2	30
	A	34.68	36.47							
	B	35.36	37.19							
	C	36.00	37.85							
	D	36.63	38.52							



Dimensions in mm



Standard Glass Case
JEDEC DO-35