



Zener diode

Features

1. Low leakage
2. High reliability

Applications

Voltage stabilization

Construction

Silicon epitaxial planar



Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Power dissipation	$R_{thJA} \leq 300\text{K/W}$		P_V	500	mW
Junction temperature			T_j	175	$^{\circ}\text{C}$
Storage temperature range			T_{stg}	-65~+175	$^{\circ}\text{C}$

Maximum Thermal Resistance

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

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mm×50mm×1.6mm	R_{thJA}	500	K/W

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

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

Type	Zener voltage				Operating resistance		Rising operating resistance		Reverse current	
	Rank	V_z (V)		I_z (mA)	Z_{zt} (Ω)		Z_{zk} (Ω)		I_R (μA)	
		Min.	Max.		Max.	I_z (mA)	Max.	I_z (mA)	Max.	V_R (V)
MTZJ 2.0	A	1.88	2.10	5	100	5	1000	0.5	120	0.5
	B	2.02	2.20							
MTZJ 2.2	A	2.12	2.30	5	100	5	1000	0.5	100	0.7
	B	2.22	2.41							
MTZJ 2.4	A	2.33	2.52	5	100	5	1000	0.5	120	1.0
	B	2.43	2.63							
MTZJ 2.7	A	2.54	2.75	5	110	5	1000	0.5	100	1.0
	B	2.69	2.91							
MTZJ 3.0	A	2.85	3.07	5	120	5	1000	0.5	50	1.0
	B	3.01	3.22							
MTZJ 3.3	A	3.16	3.38	5	120	5	1000	0.5	20	1.0
	B	3.32	3.53							
MTZJ 3.6	A	3.46	3.69	5	100	5	1000	1	10	1.0
	B	3.60	3.84							
MTZJ 3.9	A	3.74	4.01	5	100	5	1000	1	5	1.0
	B	3.89	4.16							
MTZJ 4.3	A	4.04	4.29	5	100	5	1000	1	5	1.0
	B	4.17	4.43							
	C	4.30	4.57							
MTZJ 4.7	A	4.44	4.68	5	90	5	900	1	5	1.0
	B	4.55	4.80							
	C	4.68	4.93							
MTZJ 5.1	A	4.81	5.07	5	80	5	800	1	5	1.5
	B	4.94	5.20							
	C	5.09	5.37							
MTZJ 5.6	A	5.28	5.55	5	60	5	500	1	5	2.5
	B	5.45	5.73							
	C	5.61	5.91							
MTZJ 6.2	A	5.78	6.09	5	60	5	300	1	5	3.0
	B	5.96	6.27							
	C	6.12	6.44							
MTZJ 6.8	A	6.29	6.63	5	20	5	150	0.5	2	3.5
	B	6.49	6.83							
	C	6.66	7.01							
MTZJ 7.5	A	6.85	7.22	5	20	5	120	0.5	0.5	4.0
	B	7.07	7.45							
	C	7.29	7.67							
MTZJ 8.2	A	7.53	7.92	5	20	5	120	0.5	0.5	5.0
	B	7.78	8.19							
	C	8.03	8.45							
MTZJ 9.1	A	8.29	8.73	5	25	5	120	0.5	0.5	6.0
	B	8.57	9.01							
	C	8.83	9.30							

Excel Semiconductor

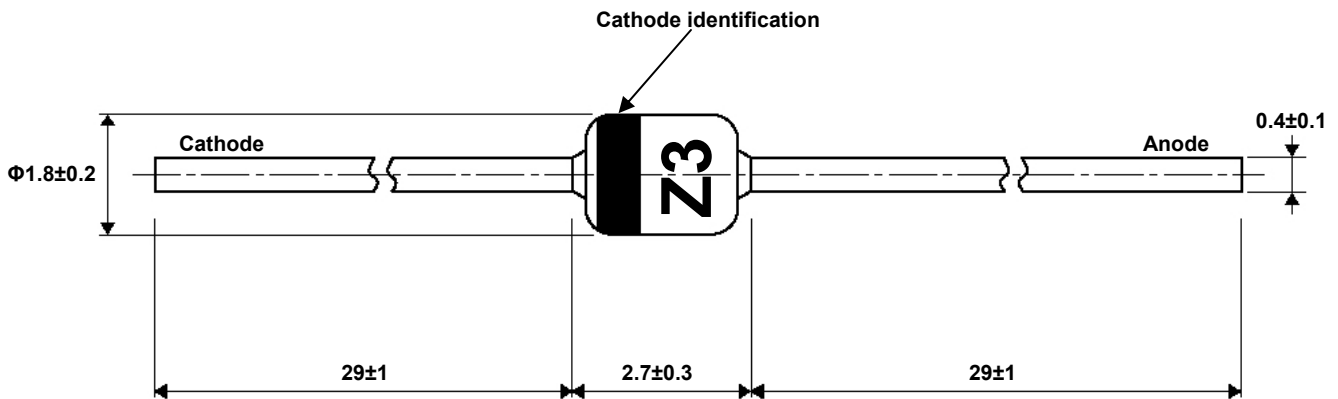


Type	Zener voltage				Operating resistance		Rising operating resistance		Reverse current	
	Rank	Vz (V)		Iz (mA)	Zzt (Ω)		Zzk (Ω)		I _R (μ A)	
		Min.	Max.		Max.	Iz (mA)	Max.	Iz (mA)	Max.	V _R (V)
MTZJ 10	A	9.12	9.59	5	30	5	120	0.5	0.2	7.0
	B	9.41	9.90							
	C	9.70	10.20							
	D	9.94	10.44							
MTZJ 11	A	10.18	10.71	5	30	5	120	0.5	0.2	8.0
	B	10.50	11.05							
	C	10.82	11.38							
MTZJ 12	A	11.13	11.71	5	30	5	110	0.5	0.2	9.0
	B	11.44	12.03							
	C	11.74	12.35							
MTZJ 13	A	12.11	12.75	5	35	5	110	0.5	0.2	10
	B	12.55	13.21							
	C	12.99	13.66							
MTZJ 15	A	13.44	14.13	5	40	5	110	0.5	0.2	11
	B	13.89	14.62							
	C	14.35	15.09							
MTZJ 16	A	14.80	15.57	5	40	5	150	0.5	0.2	12
	B	15.25	16.04							
	C	15.69	16.51							
MTZJ 18	A	16.22	17.06	5	45	5	150	0.5	0.2	13
	B	16.82	17.70							
	C	17.42	18.33							
MTZJ 20	A	18.20	18.96	5	55	5	200	0.5	0.2	15
	B	18.63	19.59							
	C	19.23	20.22							
	D	19.72	20.72							
MTZJ 22	A	20.15	21.20	5	30	5	200	0.5	0.2	17
	B	20.64	21.71							
	C	21.08	22.17							
	D	21.52	22.63							
MTZJ 24	A	22.05	23.18	5	35	5	200	0.5	0.2	19
	B	22.61	23.77							
	C	23.12	24.13							
	D	23.63	24.85							
MTZJ 27	A	24.26	25.52	5	45	5	250	0.5	0.2	21
	B	24.97	26.26							
	C	25.63	26.95							
	D	26.29	27.64							
MTZJ 30	A	26.99	28.39	5	55	5	250	0.5	0.2	23
	B	27.70	29.13							
	C	28.36	29.82							
	D	29.02	30.51							



Type	Zener voltage				Operating resistance		Rising operating resistance		Reverse current	
	Rank	Vz (V)		Iz (mA)	Zzt (Ω)		Zzk (Ω)		IR (μA)	
		Min.	Max.		Max.	Iz (mA)	Max.	Iz (mA)	Max.	VR (V)
MTZJ 33	A	29.68	31.22	5	65	5	250	0.5	0.2	25
	B	30.32	31.88							
	C	30.90	32.50							
	D	31.49	33.11							
MTZJ 36	A	32.14	33.79	5	75	5	250	0.5	0.2	27
	B	32.79	34.49							
	C	33.40	35.13							
	D	34.01	35.77							
MTZJ 39	A	34.68	36.47	5	85	5	250	0.5	0.2	30
	B	35.36	37.19							
	C	36.00	37.85							
	D	36.63	38.52							

Dimensions in mm



Standard Glass Case
JEDEC DO-34

Marking

