BZT-RLZ Series

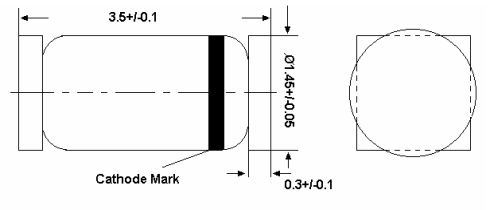
SILICON EPITAXIAL PLANAR ZENER DIODES

Constant Voltage Control Applications

LS-34

Features

- Small surface mounting type
- High reliability



QuadroMELF
Dimensions in mm

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_S	- 65 to + 175	°C

BZT-RLZ Series

Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Operating Resistance		Rising Operating Resistance		Reverse Current	
	V_Z (V)			Z_Z (Ω)		Z_{ZK} (Ω)		I_R (μA)	
	Min.	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	V_R (V)
BZT-RLZ2V2A	2.12	2.3	20	120	20	2000	1	120	0.7
BZT-RLZ2V2B	2.22	2.41	20	120	20	2000	1	120	0.7
BZT-RLZ2V4A	2.33	2.52	20	100	20	2000	1	120	1
BZT-RLZ2V4B	2.43	2.63	20	100	20	2000	1	120	1
BZT-RLZ2V7A	2.54	2.75	20	100	20	1000	1	100	1
BZT-RLZ2V7B	2.69	2.91	20	100	20	1000	1	100	1
BZT-RLZ3V0A	2.85	3.07	20	80	20	1000	1	50	1
BZT-RLZ3V0B	3.01	3.22	20	80	20	1000	1	50	1
BZT-RLZ3V3A	3.16	3.38	20	70	20	1000	1	20	1
BZT-RLZ3V3B	3.32	3.53	20	70	20	1000	1	20	1
BZT-RLZ3V6	3.4	3.8	20	60	20	1000	1	10	1
BZT-RLZ3V6A	3.455	3.695	20	60	20	1000	1	10	1
BZT-RLZ3V6B	3.6	3.845	20	60	20	1000	1	10	1
BZT-RLZ3V9	3.7	4.1	20	50	20	1000	1	5	1
BZT-RLZ3V9A	3.74	4.01	20	50	20	1000	1	5	1
BZT-RLZ3V9B	3.89	4.16	20	50	20	1000	1	5	1
BZT-RLZ4V3	4	4.5	20	40	20	1000	1	5	1
BZT-RLZ4V3A	4.04	4.29	20	40	20	1000	1	5	1
BZT-RLZ4V3B	4.17	4.43	20	40	20	1000	1	5	1
BZT-RLZ4V3C	4.3	4.57	20	40	20	1000	1	5	1
BZT-RLZ4V7	4.4	4.9	20	25	20	900	1	5	1
BZT-RLZ4V7A	4.44	4.68	20	25	20	900	1	5	1
BZT-RLZ4V7B	4.55	4.8	20	25	20	900	1	5	1
BZT-RLZ4V7C	4.68	4.93	20	25	20	900	1	5	1
BZT-RLZ5V1	4.8	5.4	20	20	20	800	1	5	1.5
BZT-RLZ5V1A	4.81	5.07	20	20	20	800	1	5	1.5
BZT-RLZ5V1B	4.94	5.2	20	20	20	800	1	5	1.5
BZT-RLZ5V1C	5.09	5.37	20	20	20	800	1	5	1.5
BZT-RLZ5V6	5.3	6	20	13	20	500	1	5	2.5
BZT-RLZ5V6A	5.28	5.55	20	13	20	500	1	5	2.5
BZT-RLZ5V6B	5.45	5.73	20	13	20	500	1	5	2.5
BZT-RLZ5V6C	5.61	5.91	20	13	20	500	1	5	2.5
BZT-RLZ6V2	5.8	6.6	20	10	20	300	1	5	3
BZT-RLZ6V2A	5.78	6.09	20	10	20	300	1	5	3
BZT-RLZ6V2B	5.96	6.27	20	10	20	300	1	5	3
BZT-RLZ6V2C	6.12	6.44	20	10	20	300	1	5	3
BZT-RLZ6V8	6.4	7.2	20	8	20	150	0.5	2	3.5

BZT-RLZ Series

Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Operating Resistance		Rising Operating Resistance		Reverse Current	
	V_Z (V)			Z_Z (Ω)		Z_{ZK} (Ω)		I_R (μA)	
	Min.	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	V_R (V)
BZT-RLZ6V8A	6.29	6.63	20	8	20	150	0.5	2	3.5
BZT-RLZ6V8B	6.49	6.83	20	8	20	150	0.5	2	3.5
BZT-RLZ6V8C	6.66	7.01	20	8	20	150	0.5	2	3.5
BZT-RLZ7V5	7	7.9	20	8	20	120	0.5	0.5	4
BZT-RLZ7V5A	6.85	7.22	20	8	20	120	0.5	0.5	4
BZT-RLZ7V5B	7.07	7.45	20	8	20	120	0.5	0.5	4
BZT-RLZ7V5C	7.29	7.67	20	8	20	120	0.5	0.5	4
BZT-RLZ8V2	7.7	8.7	20	8	20	120	0.5	0.5	5
BZT-RLZ8V2A	7.53	7.92	20	8	20	120	0.5	0.5	5
BZT-RLZ8V2B	7.78	8.19	20	8	20	120	0.5	0.5	5
BZT-RLZ8V2C	8.03	8.45	20	8	20	120	0.5	0.5	5
BZT-RLZ9V1	8.5	9.6	20	8	20	120	0.5	0.5	6
BZT-RLZ9V1A	8.29	8.73	20	8	20	120	0.5	0.5	6
BZT-RLZ9V1B	8.57	9.01	20	8	20	120	0.5	0.5	6
BZT-RLZ9V1C	8.83	9.3	20	8	20	120	0.5	0.5	6
BZT-RLZ10	9.4	10.6	20	8	20	120	0.5	0.2	7
BZT-RLZ10A	9.12	9.59	20	8	20	120	0.5	0.2	7
BZT-RLZ10B	9.41	9.9	20	8	20	120	0.5	0.2	7
BZT-RLZ10C	9.7	10.2	20	8	20	120	0.5	0.2	7
BZT-RLZ10D	9.94	10.44	20	8	20	120	0.5	0.2	7
BZT-RLZ11	10.4	11.6	10	10	10	120	0.5	0.2	8
BZT-RLZ11A	10.18	10.71	10	10	10	120	0.5	0.2	8
BZT-RLZ11B	10.50	11.05	10	10	10	120	0.5	0.2	8
BZT-RLZ11C	10.82	11.38	10	10	10	120	0.5	0.2	8
BZT-RLZ12	11.4	12.6	10	12	10	110	0.5	0.2	9
BZT-RLZ12A	11.13	11.71	10	12	10	110	0.5	0.2	9
BZT-RLZ12B	11.44	12.03	10	12	10	110	0.5	0.2	9
BZT-RLZ12C	11.74	12.35	10	12	10	110	0.5	0.2	9
BZT-RLZ13	12.4	14.1	10	14	10	110	0.5	0.2	10
BZT-RLZ13A	12.11	12.75	10	14	10	110	0.5	0.2	10
BZT-RLZ13B	12.55	13.21	10	14	10	110	0.5	0.2	10
BZT-RLZ13C	12.99	13.66	10	14	10	110	0.5	0.2	10
BZT-RLZ15	13.8	15.6	10	16	10	110	0.5	0.2	11
BZT-RLZ15A	13.44	14.13	10	16	10	110	0.5	0.2	11
BZT-RLZ15B	13.89	14.62	10	16	10	110	0.5	0.2	11
BZT-RLZ15C	14.35	15.09	10	16	10	110	0.5	0.2	11

BZT-RLZ Series

Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Operating Resistance		Rising Operating Resistance		Reverse Current	
	V_Z (V)			Z_Z (Ω)		Z_{ZK} (Ω)		I_R (μA)	
	Min.	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	V_R (V)
BZT-RLZ16	15.3	17.1	10	18	10	150	0.5	0.2	12
BZT-RLZ16A	14.8	15.57	10	18	10	150	0.5	0.2	12
BZT-RLZ16B	15.25	16.04	10	18	10	150	0.5	0.2	12
BZT-RLZ16C	15.69	16.51	10	18	10	150	0.5	0.2	12
BZT-RLZ18	16.8	19.1	10	23	10	150	0.5	0.2	13
BZT-RLZ18A	16.22	17.06	10	23	10	150	0.5	0.2	13
BZT-RLZ18B	16.82	17.7	10	23	10	150	0.5	0.2	13
BZT-RLZ18C	17.42	18.33	10	23	10	150	0.5	0.2	13
BZT-RLZ20	18.8	21.2	10	28	10	200	0.5	0.2	15
BZT-RLZ20A	18.02	18.96	10	28	10	200	0.5	0.2	15
BZT-RLZ20B	18.63	19.59	10	28	10	200	0.5	0.2	15
BZT-RLZ20C	19.23	20.22	10	28	10	200	0.5	0.2	15
BZT-RLZ20D	19.72	20.72	10	28	10	200	0.5	0.2	15
BZT-RLZ22	20.8	23.3	5	30	5	200	0.5	0.2	17
BZT-RLZ22A	20.15	21.2	5	30	5	200	0.5	0.2	17
BZT-RLZ22B	20.64	21.71	5	30	5	200	0.5	0.2	17
BZT-RLZ22C	21.08	22.17	5	30	5	200	0.5	0.2	17
BZT-RLZ22D	21.52	22.63	5	30	5	200	0.5	0.2	17
BZT-RLZ24	22.8	25.6	5	35	5	200	0.5	0.2	19
BZT-RLZ24A	22.05	23.18	5	35	5	200	0.5	0.2	19
BZT-RLZ24B	22.61	23.77	5	35	5	200	0.5	0.2	19
BZT-RLZ24C	23.12	24.31	5	35	5	200	0.5	0.2	19
BZT-RLZ24D	23.63	24.85	5	35	5	200	0.5	0.2	19
BZT-RLZ27	25.1	28.9	5	45	5	250	0.5	0.2	21
BZT-RLZ27A	24.26	25.52	5	45	5	250	0.5	0.2	21
BZT-RLZ27B	24.97	26.26	5	45	5	250	0.5	0.2	21
BZT-RLZ27C	25.63	26.95	5	45	5	250	0.5	0.2	21
BZT-RLZ27D	26.29	27.64	5	45	5	250	0.5	0.2	21
BZT-RLZ30	28	32	5	55	5	250	0.5	0.2	23
BZT-RLZ30A	26.99	28.39	5	55	5	250	0.5	0.2	23
BZT-RLZ30B	27.70	29.13	5	55	5	250	0.5	0.2	23
BZT-RLZ30C	28.36	29.82	5	55	5	250	0.5	0.2	23
BZT-RLZ30D	29.02	30.51	5	55	5	250	0.5	0.2	23
BZT-RLZ33	31	35	5	65	5	250	0.5	0.2	25
BZT-RLZ33A	29.68	31.22	5	65	5	250	0.5	0.2	25
BZT-RLZ33B	30.32	31.88	5	65	5	250	0.5	0.2	25
BZT-RLZ33C	30.9	32.5	5	65	5	250	0.5	0.2	25

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Characteristics at T_a = 25 °C

Type	Zener Voltage [1]			Operating Resistance		Rising Operating Resistance		Reverse Current	
	V_Z (V)			Z_Z (Ω)		Z_{ZK} (Ω)		I_R (μA)	
	Min.	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	I_Z (mA)	Max.	V_R (V)
BZT-RLZ33D	31.49	33.11	5	65	5	250	0.5	0.2	25
BZT-RLZ36	34	38	5	75	5	250	0.5	0.2	27
BZT-RLZ36A	32.14	33.79	5	75	5	250	0.5	0.2	27
BZT-RLZ36B	32.79	34.49	5	75	5	250	0.5	0.2	27
BZT-RLZ36C	33.40	35.13	5	75	5	250	0.5	0.2	27
BZT-RLZ36D	34.01	35.77	5	75	5	250	0.5	0.2	27
BZT-RLZ39	37	41	5	85	5	250	0.5	0.2	30
BZT-RLZ39A	34.68	36.47	5	85	5	250	0.5	0.2	30
BZT-RLZ39B	35.36	37.19	5	85	5	250	0.5	0.2	30
BZT-RLZ39C	36.00	37.85	5	85	5	250	0.5	0.2	30
BZT-RLZ39D	36.63	38.52	5	85	5	250	0.5	0.2	30

[1] Tested with pulses tp = 20 ms.

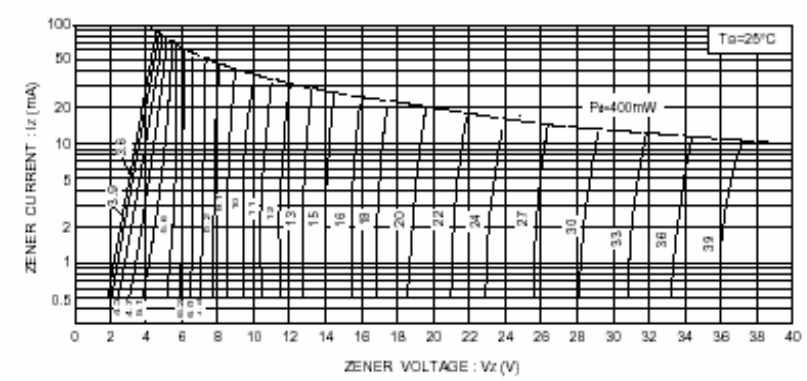

Fig.1 Zener characteristics

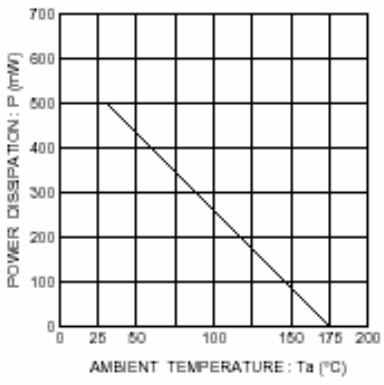

Fig.2 Derating curve

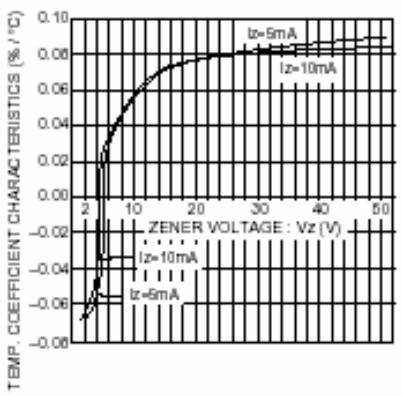

Fig.3 Zener voltage - temp.coefficient characteristics