

# BZTRLZ Series

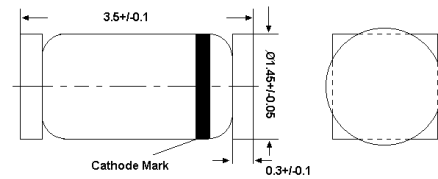
## Silicon Epitaxial Planar Zener Diodes

Constant voltage control applications

LS-34

### Features

- Small surface mounting type
- High reliability



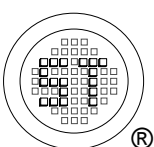
QuadromELF  
Dimensions in mm

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

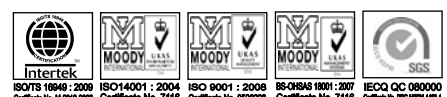
Parameter	Symbol	Value	Unit
Power Dissipation	$P_{\text{tot}}$	500	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	- 65 to + 175	$^\circ\text{C}$

### Characteristics at $T_a = 25^\circ\text{C}$ ( $V_F = 1\text{ V Max. at } I_F = 100\text{ mA}$ )

Type	Zener Voltage <sup>1)</sup>		Operating Resistance		Rising Operating Resistance		Reverse Current		
	$V_Z$		at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	(V)
BZTRLZ2V2A	2.12	2.3	20	120	20	2000	1	120	0.7
BZTRLZ2V2B	2.22	2.41	20	120	20	2000	1	120	0.7
BZTRLZ2V4A	2.33	2.52	20	100	20	2000	1	120	1
BZTRLZ2V4B	2.43	2.63	20	100	20	2000	1	120	1
BZTRLZ2V7A	2.54	2.75	20	100	20	1000	1	100	1
BZTRLZ2V7B	2.69	2.91	20	100	20	1000	1	100	1
BZTRLZ3V0A	2.85	3.07	20	80	20	1000	1	50	1
BZTRLZ3V0B	3.01	3.22	20	80	20	1000	1	50	1
BZTRLZ3V3A	3.16	3.38	20	70	20	1000	1	20	1
BZTRLZ3V3B	3.32	3.53	20	70	20	1000	1	20	1
BZTRLZ3V6	3.4	3.8	20	60	20	1000	1	10	1
BZTRLZ3V6A	3.455	3.695	20	60	20	1000	1	10	1
BZTRLZ3V6B	3.6	3.845	20	60	20	1000	1	10	1
BZTRLZ3V9	3.7	4.1	20	50	20	1000	1	5	1
BZTRLZ3V9A	3.74	4.01	20	50	20	1000	1	5	1
BZTRLZ3V9B	3.89	4.16	20	50	20	1000	1	5	1
BZTRLZ4V3	4	4.5	20	40	20	1000	1	5	1
BZTRLZ4V3A	4.04	4.29	20	40	20	1000	1	5	1
BZTRLZ4V3B	4.17	4.43	20	40	20	1000	1	5	1
BZTRLZ4V3C	4.3	4.57	20	40	20	1000	1	5	1
BZTRLZ4V7	4.4	4.9	20	25	20	900	1	5	1
BZTRLZ4V7A	4.44	4.68	20	25	20	900	1	5	1
BZTRLZ4V7B	4.55	4.8	20	25	20	900	1	5	1



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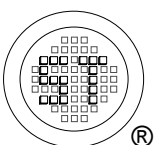


Dated : 18/07/2009

# BZTRLZ Series

Characteristics at  $T_a = 25\text{ }^\circ\text{C}$  ( $V_F = 1\text{ V Max. at } I_F = 100\text{ mA}$ )

Type	Zener Voltage <sup>1)</sup>		Operating Resistance		Rising Operating Resistance		Reverse Current		
	$V_Z$		at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	(V)
BZTRLZ4V7C	4.68	4.93	20	25	20	900	1	5	1
BZTRLZ5V1	4.8	5.4	20	20	20	800	1	5	1.5
BZTRLZ5V1A	4.81	5.07	20	20	20	800	1	5	1.5
BZTRLZ5V1B	4.94	5.2	20	20	20	800	1	5	1.5
BZTRLZ5V1C	5.09	5.37	20	20	20	800	1	5	1.5
BZTRLZ5V6	5.3	6	20	13	20	500	1	5	2.5
BZTRLZ5V6A	5.28	5.55	20	13	20	500	1	5	2.5
BZTRLZ5V6B	5.45	5.73	20	13	20	500	1	5	2.5
BZTRLZ5V6C	5.61	5.91	20	13	20	500	1	5	2.5
BZTRLZ6V2	5.8	6.6	20	10	20	300	1	5	3
BZTRLZ6V2A	5.78	6.09	20	10	20	300	1	5	3
BZTRLZ6V2B	5.96	6.27	20	10	20	300	1	5	3
BZTRLZ6V2C	6.12	6.44	20	10	20	300	1	5	3
BZTRLZ6V8	6.4	7.2	20	8	20	150	0.5	2	3.5
BZTRLZ6V8A	6.29	6.63	20	8	20	150	0.5	2	3.5
BZTRLZ6V8B	6.49	6.83	20	8	20	150	0.5	2	3.5
BZTRLZ6V8C	6.66	7.01	20	8	20	150	0.5	2	3.5
BZTRLZ7V5	7	7.9	20	8	20	120	0.5	0.5	4
BZTRLZ7V5A	6.85	7.22	20	8	20	120	0.5	0.5	4
BZTRLZ7V5B	7.07	7.45	20	8	20	120	0.5	0.5	4
BZTRLZ7V5C	7.29	7.67	20	8	20	120	0.5	0.5	4
BZTRLZ8V2	7.7	8.7	20	8	20	120	0.5	0.5	5
BZTRLZ8V2A	7.53	7.92	20	8	20	120	0.5	0.5	5
BZTRLZ8V2B	7.78	8.19	20	8	20	120	0.5	0.5	5
BZTRLZ8V2C	8.03	8.45	20	8	20	120	0.5	0.5	5
BZTRLZ9V1	8.5	9.6	20	8	20	120	0.5	0.5	6
BZTRLZ9V1A	8.29	8.73	20	8	20	120	0.5	0.5	6
BZTRLZ9V1B	8.57	9.01	20	8	20	120	0.5	0.5	6
BZTRLZ9V1C	8.83	9.3	20	8	20	120	0.5	0.5	6
BZTRLZ10	9.4	10.6	20	8	20	120	0.5	0.2	7
BZTRLZ10A	9.12	9.59	20	8	20	120	0.5	0.2	7
BZTRLZ10B	9.41	9.9	20	8	20	120	0.5	0.2	7
BZTRLZ10C	9.7	10.2	20	8	20	120	0.5	0.2	7
BZTRLZ10D	9.94	10.44	20	8	20	120	0.5	0.2	7
BZTRLZ11	10.4	11.6	10	10	10	120	0.5	0.2	8
BZTRLZ11A	10.18	10.71	10	10	10	120	0.5	0.2	8
BZTRLZ11B	10.5	11.05	10	10	10	120	0.5	0.2	8
BZTRLZ11C	10.82	11.38	10	10	10	120	0.5	0.2	8
BZTRLZ12	11.4	12.6	10	12	10	110	0.5	0.2	9
BZTRLZ12A	11.13	11.71	10	12	10	110	0.5	0.2	9
BZTRLZ12B	11.44	12.03	10	12	10	110	0.5	0.2	9
BZTRLZ12C	11.74	12.35	10	12	10	110	0.5	0.2	9
BZTRLZ13	12.4	14.1	10	14	10	110	0.5	0.2	10



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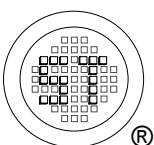


Dated : 18/07/2009

# BZTRLZ Series

Characteristics at T<sub>a</sub> = 25 °C (V<sub>F</sub> = 1 V Max. at I<sub>F</sub> = 100 mA)

Type	Zener Voltage <sup>1)</sup>		Operating Resistance		Rising Operating Resistance		Reverse Current		
	V <sub>Z</sub>		at I <sub>ZT</sub>	Z <sub>ZT</sub>	at I <sub>ZT</sub>	Z <sub>ZK</sub>	at I <sub>ZK</sub>	I <sub>R</sub>	at V <sub>R</sub>
	Min. (V)	Max. (V)	(mA)	Max. (Ω)	(mA)	Max. (Ω)	(mA)	Max. (μA)	(V)
BZTRLZ13A	12.11	12.75	10	14	10	110	0.5	0.2	10
BZTRLZ13B	12.55	13.21	10	14	10	110	0.5	0.2	10
BZTRLZ13C	12.99	13.66	10	14	10	110	0.5	0.2	10
BZTRLZ15	13.8	15.6	10	16	10	110	0.5	0.2	11
BZTRLZ15A	13.44	14.13	10	16	10	110	0.5	0.2	11
BZTRLZ15B	13.89	14.62	10	16	10	110	0.5	0.2	11
BZTRLZ15C	14.35	15.09	10	16	10	110	0.5	0.2	11
BZTRLZ16	15.3	17.1	10	18	10	150	0.5	0.2	12
BZTRLZ16A	14.8	15.57	10	18	10	150	0.5	0.2	12
BZTRLZ16B	15.25	16.04	10	18	10	150	0.5	0.2	12
BZTRLZ16C	15.69	16.51	10	18	10	150	0.5	0.2	12
BZTRLZ18	16.8	19.1	10	23	10	150	0.5	0.2	13
BZTRLZ18A	16.22	17.06	10	23	10	150	0.5	0.2	13
BZTRLZ18B	16.82	17.7	10	23	10	150	0.5	0.2	13
BZTRLZ18C	17.42	18.33	10	23	10	150	0.5	0.2	13
BZTRLZ20	18.8	21.2	10	28	10	200	0.5	0.2	15
BZTRLZ20A	18.02	18.96	10	28	10	200	0.5	0.2	15
BZTRLZ20B	18.63	19.59	10	28	10	200	0.5	0.2	15
BZTRLZ20C	19.23	20.22	10	28	10	200	0.5	0.2	15
BZTRLZ20D	19.72	20.72	10	28	10	200	0.5	0.2	15
BZTRLZ22	20.8	23.3	5	30	5	200	0.5	0.2	17
BZTRLZ22A	20.15	21.2	5	30	5	200	0.5	0.2	17
BZTRLZ22B	20.64	21.71	5	30	5	200	0.5	0.2	17
BZTRLZ22C	21.08	22.17	5	30	5	200	0.5	0.2	17
BZTRLZ22D	21.52	22.63	5	30	5	200	0.5	0.2	17
BZTRLZ24	22.8	25.6	5	35	5	200	0.5	0.2	19
BZTRLZ24A	22.05	23.18	5	35	5	200	0.5	0.2	19
BZTRLZ24B	22.61	23.77	5	35	5	200	0.5	0.2	19
BZTRLZ24C	23.12	24.31	5	35	5	200	0.5	0.2	19
BZTRLZ24D	23.63	24.85	5	35	5	200	0.5	0.2	19
BZTRLZ27	25.1	28.9	5	45	5	250	0.5	0.2	21
BZTRLZ27A	24.26	25.52	5	45	5	250	0.5	0.2	21
BZTRLZ27B	24.97	26.26	5	45	5	250	0.5	0.2	21
BZTRLZ27C	25.63	26.95	5	45	5	250	0.5	0.2	21
BZTRLZ27D	26.29	27.64	5	45	5	250	0.5	0.2	21
BZTRLZ30	28	32	5	55	5	250	0.5	0.2	23
BZTRLZ30A	26.99	28.39	5	55	5	250	0.5	0.2	23
BZTRLZ30B	27.70	29.13	5	55	5	250	0.5	0.2	23
BZTRLZ30C	28.36	29.82	5	55	5	250	0.5	0.2	23
BZTRLZ30D	29.02	30.51	5	55	5	250	0.5	0.2	23
BZTRLZ33	31	35	5	65	5	250	0.5	0.2	25
BZTRLZ33A	29.68	31.22	5	65	5	250	0.5	0.2	25
BZTRLZ33B	30.32	31.88	5	65	5	250	0.5	0.2	25



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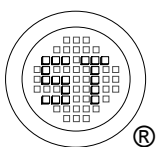
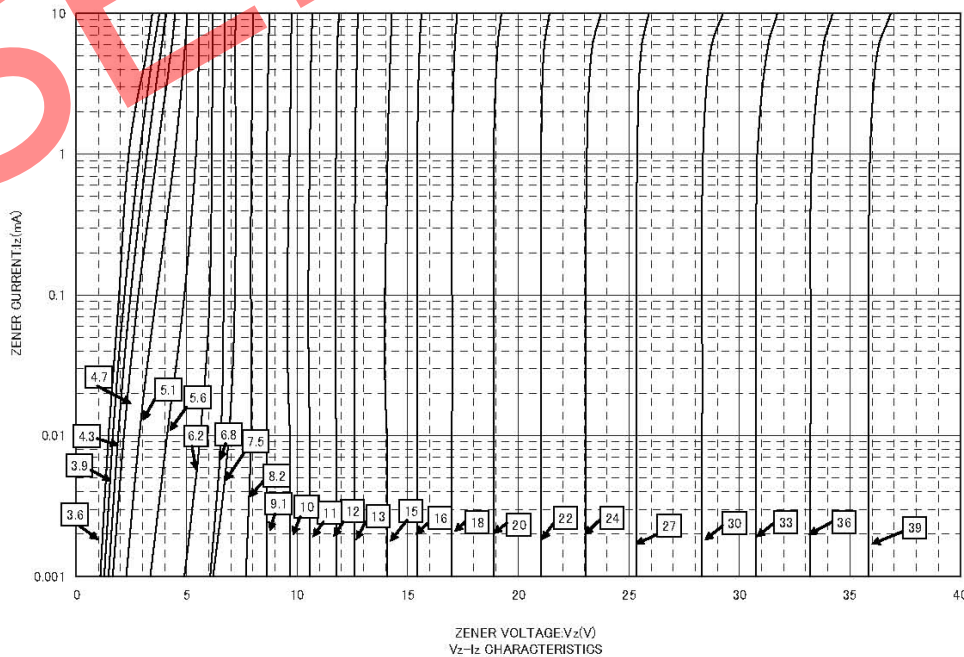
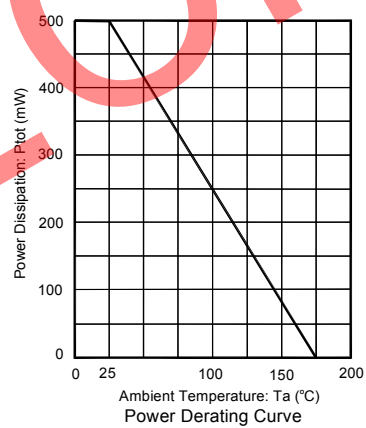
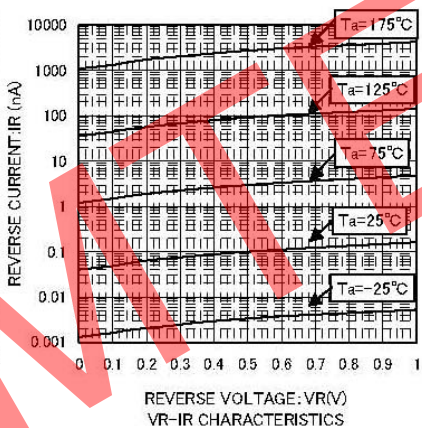
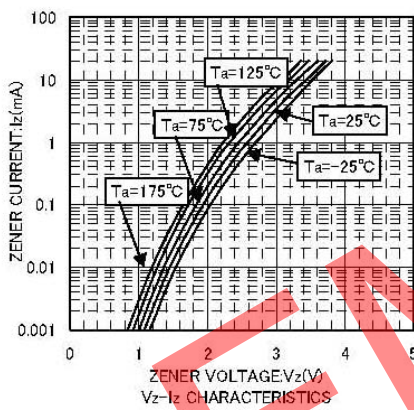
Dated : 18/07/2009

# BZTRLZ Series

Characteristics at  $T_a = 25\text{ }^\circ\text{C}$  ( $V_F = 1\text{ V Max. at } I_F = 100\text{ mA}$ )

Type	Zener Voltage <sup>1)</sup>		Operating Resistance		Rising Operating Resistance		Reverse Current		
	$V_Z$		at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$Z_{ZK}$	at $I_{ZK}$	$I_R$	at $V_R$
	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	(V)
BZTRLZ33C	30.9	32.5	5	65	5	250	0.5	0.2	25
BZTRLZ33D	31.49	33.11	5	65	5	250	0.5	0.2	25
BZTRLZ36	34	38	5	75	5	250	0.5	0.2	27
BZTRLZ36A	32.14	33.79	5	75	5	250	0.5	0.2	27
BZTRLZ36B	32.79	34.49	5	75	5	250	0.5	0.2	27
BZTRLZ36C	33.4	35.13	5	75	5	250	0.5	0.2	27
BZTRLZ36D	34.01	35.77	5	75	5	250	0.5	0.2	27
BZTRLZ39	37	41	5	85	5	250	0.5	0.2	30
BZTRLZ39A	34.68	36.47	5	85	5	250	0.5	0.2	30
BZTRLZ39B	35.36	37.19	5	85	5	250	0.5	0.2	30
BZTRLZ39C	36	37.85	5	85	5	250	0.5	0.2	30
BZTRLZ39D	36.63	38.52	5	85	5	250	0.5	0.2	30

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .



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