

BZV63 / BZV64

Silicon Power Zener Diode

Description

The BZV63/62 are hermetically sealed 50A-forward current diodes, which are available in different Zener voltages.

Features

- Forward current 50A
- Zener voltages 22V, 27V, 33V or 39V
- Hermetic press-fit package
- Available in different package modifications

Applications

- Power supplies
- Rectifier diode in car alternators

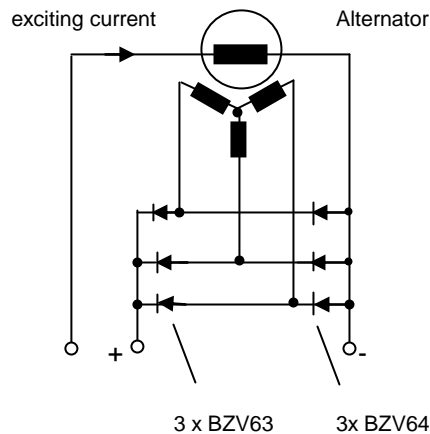
Pinout details



BZV63: 1 - cathode
2 - anode

BZV64: 1 - anode
2 - cathode

Typical application circuit

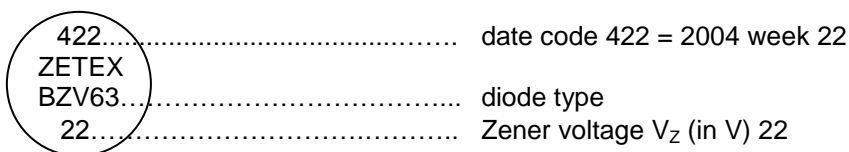


Ordering information

Device	Quantity per box	Options
BZV63-22; ...; BZV63-39	500	The package quantities for the different package modifications are included in "HermeticPressFitPackageModifications.pdf"
BZV64-22; ...; BZV64-39	500	

Device marking

Devices are identified by type. Colour of marking: BZV63- black, BZV64 – red



Absolute maximum ratings (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated)

Parameter		Symbol		Unit	Test condition
Z-current (continuous)	BZV63-22	BZV64-22	I_z	8.1	$T_c = 25^{\circ}\text{C}$
	BZV63-27	BZV64-27		6.6	
	BZV63-33	BZV64-33		5.5	
	BZV63-39	BZV64-39		4.8	
Mean forward current		$I_{F(AV)}$	50	A	sinusoidal, $f = 15 - 1000 \text{ Hz}$
Surge forward current		I_{FSM}	700	A	$T_J = 25^{\circ}\text{C}$, half-sine wave, $\leq 10 \text{ ms}$
			550		$T_J = 175^{\circ}\text{C}$, half-sine wave, $\leq 10 \text{ ms}$
Maximum rated value		$\int i^2 dt$	2450	A ² s	$T_J = 25^{\circ}\text{C}$, half-sine wave, $\leq 10 \text{ ms}$
			1500		$T_J = 175^{\circ}\text{C}$, half-sine wave, $\leq 10 \text{ ms}$
Repetitive peak forward current		$I_{FRM} = \pi * I_{F(AV)}$	157	A	$f = 15 - 1000 \text{ Hz}$
Effective forward current		$I_{F(RMS)}$	78	A	sinusoidal, $f = 15 - 1000 \text{ Hz}$
Junction temperature		T_{Jmax}	175	$^{\circ}\text{C}$	
Storage temperature range		T_{stg}	- 50 to + 150	$^{\circ}\text{C}$	

Thermal resistance

Parameter	Symbol	Value	Unit
Junction to case	$R_{\theta JC}$	0.8	$^{\circ}\text{C/W}$

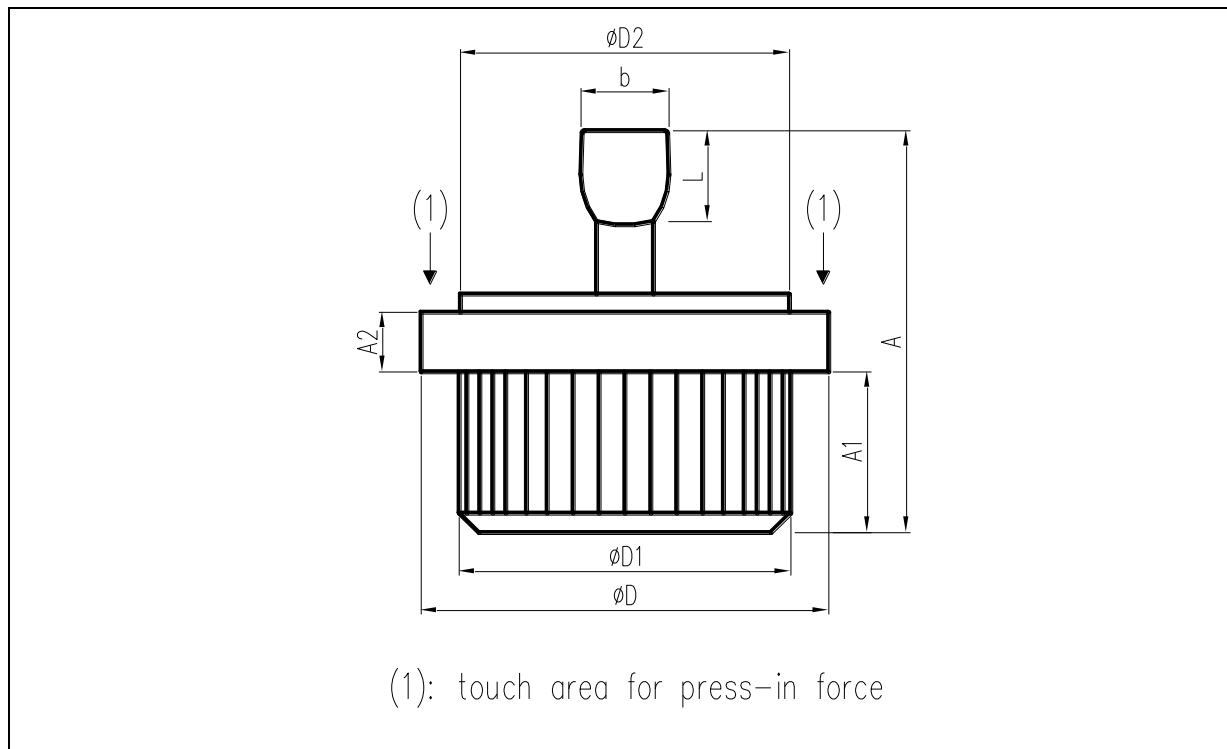
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BZV63 / BZV64

Electrical characteristics (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated)

Parameter			Symbol	Min.	Typ.	Max.	Unit	Test conditions
Z-voltage	BZV63-22	BZV64-22	V_Z	20.8	22	23.3	V	at $I_Z = 100\text{mA}$
	BZV63-27	BZV64-27		25.1	27	28.9		
	BZV63-33	BZV64-33		31	33	35		
	BZV63-39	BZV64-39		37	39	41		
Forward voltage			V_F	-	1.0	1.1	V	$I_F = 35\text{ A}$, measuring time 1ms
Reverse current			I_R	-	-	200	μA	at $V_Z = -5\text{V}$
Dynamical resistance	BZV63-22	BZV64-22	r_z	-	-	2	Ω	at $I_Z = 100\text{mA}$
	BZV63-27	BZV64-27		-	-	3.5		
	BZV63-33	BZV64-33		-	-	5		
	BZV63-39	BZV64-39		-	-	6		
Dynamical resistance (information value)	BZV63-22	BZV64-22	r_z	-	-	200	m Ω	at $I_Z = 1\text{ A}$
	BZV63-27	BZV64-27		-	-	350		
	BZV63-33	BZV64-33		-	-	500		
	BZV63-39	BZV64-39		-	-	700		
Dynamical resistance (information value)	BZV63-22	BZV64-22	r_z	-	-	20	m Ω	at $I_Z = 10\text{A}$
	BZV63-27	BZV64-27		-	-	35		
	BZV63-33	BZV64-33		-	-	50		
	BZV63-39	BZV64-39		-	-	80		

Packaging details



Package dimensions

Dimensions in millimeters are control dimensions, dimensions in inches are approximate

DIM	Millimeters			Inches		
	MIN	TYP	MAX	MIN	TYP	MAX
A	15,00	15,50	16,00	0,591	0,610	0,630
A1	5,90	6,10	6,30	0,232	0,240	0,248
A2	2,10	2,30	2,50	0,083	0,091	0,098
b	3,50	3,80	4,10	0,138	0,150	0,161
D	15,50	15,70	15,90	0,610	0,618	0,626
D1	12,75	12,80	12,85	0,502	0,504	0,506
D2	12,30	12,50	12,70	0,484	0,492	0,500
L	3,00	3,50	4,00	0,118	0,138	0,157

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