

## BZV61 / BZV62

### Silicon Power Zener Diode

#### Description

The BZV61/62 are hermetically sealed 35A-forward current diodes, which are available in different Zener voltages.

#### Features

- Forward current 35A
- Zener voltages 22V, 27V, 33V or 39V
- Hermetic press-fit package
- Available in different modifications of the package

#### Applications

- Power supplies
- Rectifier diode in car alternators

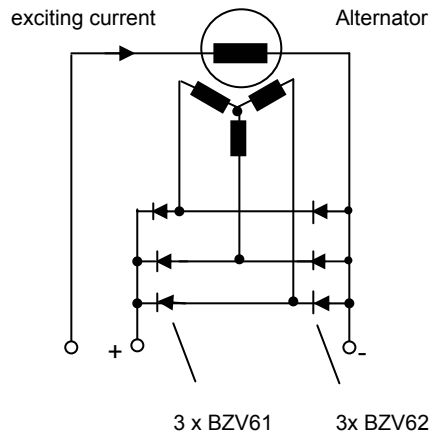
#### Pinout details



BZV61: 1 – cathode; 2 - anode

BZV62: 1 – anode; 2 - cathode

#### Typical application circuit

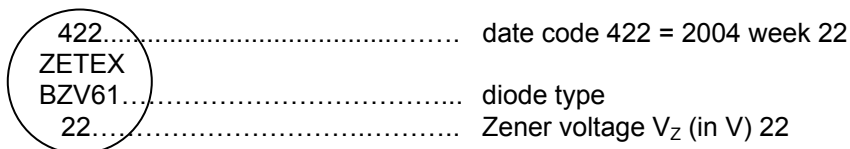


#### Ordering information

Device	Quantity per box	Options
BZV61-22; ...; BZV61-39	500	The package quantities for the different package modifications are included in "PressFitPackageModifications.pdf"
BZV62-22; ...; BZV62-39	500	

#### Device marking

Devices are identified by type. Colour of marking: BZV61- black, BZV62 – red



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

Parameter		Symbol		Unit	Test condition
Z-current (continuous)	BZV61-22	BZV62-22	$I_z$	7.2	$T_c = 25^{\circ}\text{C}$
	BZV61-27	BZV62-27		5.8	
	BZV61-33	BZV62-33		4.8	
	BZV61-39	BZV62-39		4.2	
Mean forward current		$I_{F(AV)}$	35	A	sinusoidal, $f = 15 - 1000 \text{ Hz}$
Surge forward current		$I_{FSM}$	600	A	$T_J = 25^{\circ}\text{C}$ , half-sine wave, $\leq 10 \text{ ms}$
			500		$T_J = 175^{\circ}\text{C}$ , half-sine wave, $\leq 10 \text{ ms}$
Maximum rated value		$\int i^2 dt$	1800	$\text{A}^2\text{s}$	$T_J = 25^{\circ}\text{C}$ , half-sine wave, $\leq 10 \text{ ms}$
			1250		$T_J = 175^{\circ}\text{C}$ , half-sine wave, $\leq 10 \text{ ms}$
Repetitive peak forward current		$I_{FRM} = \pi * I_{F(AV)}$	110	A	$f = 15 - 1000 \text{ Hz}$
Effective forward current		$I_{F(RMS)}$	55	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	$^{\circ}\text{C/W}$

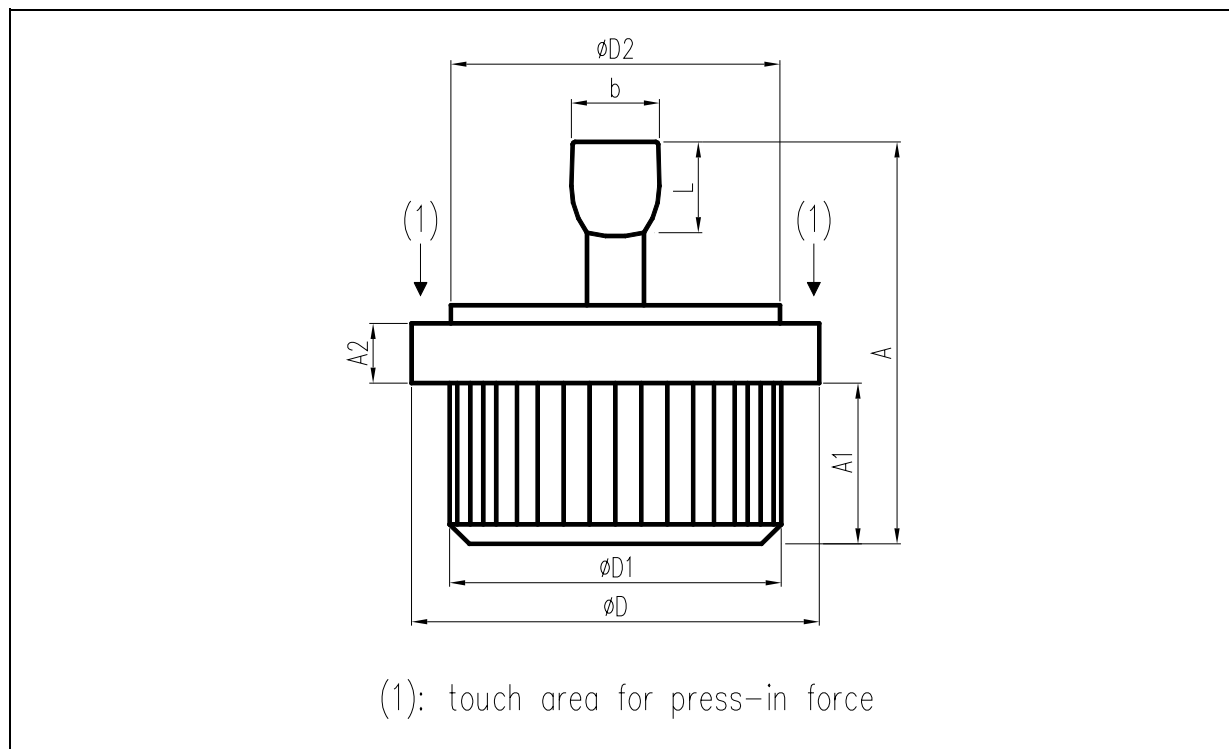
# DISCONTINUED

## BZV61 / BZV62

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

Parameter			Symbol	Min.	Typ.	Max.	Unit	Test conditions
Z-voltage	BZV61-22	BZV62-22	$V_Z$	20.8	22	23.3	V	at $I_Z = 100\text{mA}$
	BZV61-27	BZV62-27		25.1	27	28.9		
	BZV61-33	BZV62-33		31	33	35		
	BZV61-39	BZV62-39		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	$\mu\text{A}$	at $V_Z = -5\text{V}$
Dynamical resistance	BZV61-22	BZV62-22	$r_z$	-	-	2	$\Omega$	at $I_Z = 100\text{mA}$
	BZV61-27	BZV62-27		-	-	3.5		
	BZV61-33	BZV62-33		-	-	5		
	BZV61-39	BZV62-39		-	-	6		
Dynamical resistance (information value)	BZV61-22	BZV62-22	$r_z$	-	-	200	m $\Omega$	at $I_Z = 1\text{A}$
	BZV61-27	BZV62-27		-	-	350		
	BZV61-33	BZV62-33		-	-	500		
	BZV61-39	BZV62-39		-	-	700		
Dynamical resistance (information value)	BZV61-22	BZV62-22	$r_z$	-	-	20	m $\Omega$	at $I_Z = 10\text{A}$
	BZV61-27	BZV62-27		-	-	35		
	BZV61-33	BZV62-33		-	-	50		
	BZV61-39	BZV62-39		-	-	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	5,70	6,20	6,70	0,224	0,244	0,264
A2	2,10	2,30	2,50	0,083	0,091	0,098
b	3,10	3,40	3,70	0,122	0,134	0,146
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	12,70	13,10	0,484	0,500	0,516
L	3,00	3,50	4,00	0,118	0,138	0,157

Europe	Americas	Asia Pacific	Corporate Headquarters
Zetex GmbH Streitfeldstraße 19 D-81673 München Germany	Zetex Inc 700 Veterans Memorial Highway Hauppauge, NY 11788 USA	Zetex (Asia Ltd) 3701-04 Metroplaza Tower 1 Hing Fong Road, Kwai Fong Hong Kong	Zetex Semiconductors plc Zetex Technology Park, Chadderton Oldham, OL9 9LL United Kingdom
Telefon: (49) 89 45 49 49 0 Fax: (49) 89 45 49 49 49 europe.sales@zetex.com	Telephone: (1) 631 360 2222 Fax: (1) 631 360 8222 usa.sales@zetex.com	Telephone: (852) 26100 611 Fax: (852) 24250 494 asia.sales@zetex.com	Telephone (44) 161 622 4444 Fax: (44) 161 622 4446 hq@zetex.com

For international sales offices visit [www.zetex.com/offices](http://www.zetex.com/offices)

Zetex products are distributed worldwide. For details, see [www.zetex.com/salesnetwork](http://www.zetex.com/salesnetwork)

This publication is issued to provide outline information only which (unless agreed by the company in writing) may not be used, applied or reproduced for any purpose or form part of any order or contact or be regarded as a representation relating to the products or services concerned. The company reserves the right to alter without notice the specification, design, price or conditions of supply of any product or service.