

BZP61 / BZP62

Silicon Power Zener Diode

Description

The BZP61/62 are plastic sealed 35A- forward current diodes, which are available in different Zener voltages.

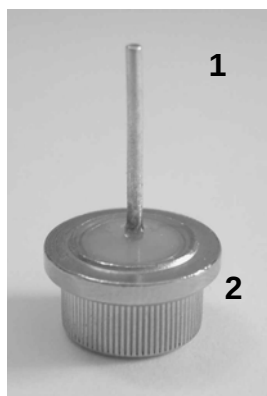
Features

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

Applications

- Power supplies
- Rectifier diode in car alternators

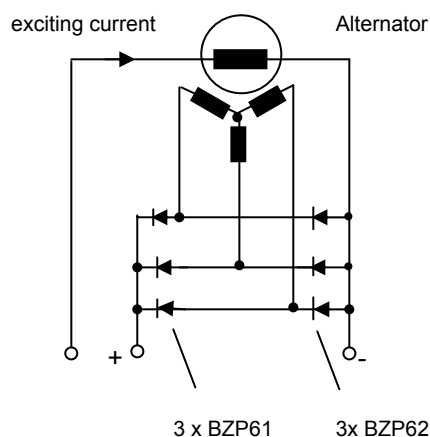
Pinout details



BZP61: 1 - cathode
2 - anode

BZP62: 1 - anode
2 - cathode

Typical application circuit

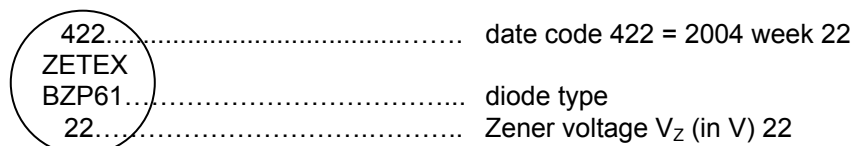


Ordering information

Device	Quantity per box	Options
BZP61-22; ...; BZP61-39	500	The package quantities for the different package modifications are included in "PressFitPackageModifications.pdf"
BZP62-22; ...; BZP62-39	500	

Device marking

Devices are identified by type. Colour of marking: BZP61- black, BZP62 – red



BZP61 / BZP62

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

Parameter			Symbol		Unit	Test condition
Z-current (continuous)	BZP61-22	BZP62-22	I_z	5.5	A	$T_c = 25^{\circ}\text{C}$
	BZP61-27	BZP62-27		4.5		
	BZP61-33	BZP62-33		3.8		
	BZP61-39	BZP62-39		3.3		
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	A^2s	$T_J = 25^{\circ}\text{C}$, 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}	140	$^{\circ}\text{C}$	
Storage temperature range			T_{stg}	- 50 to + 140	$^{\circ}\text{C}$	

Thermal resistance

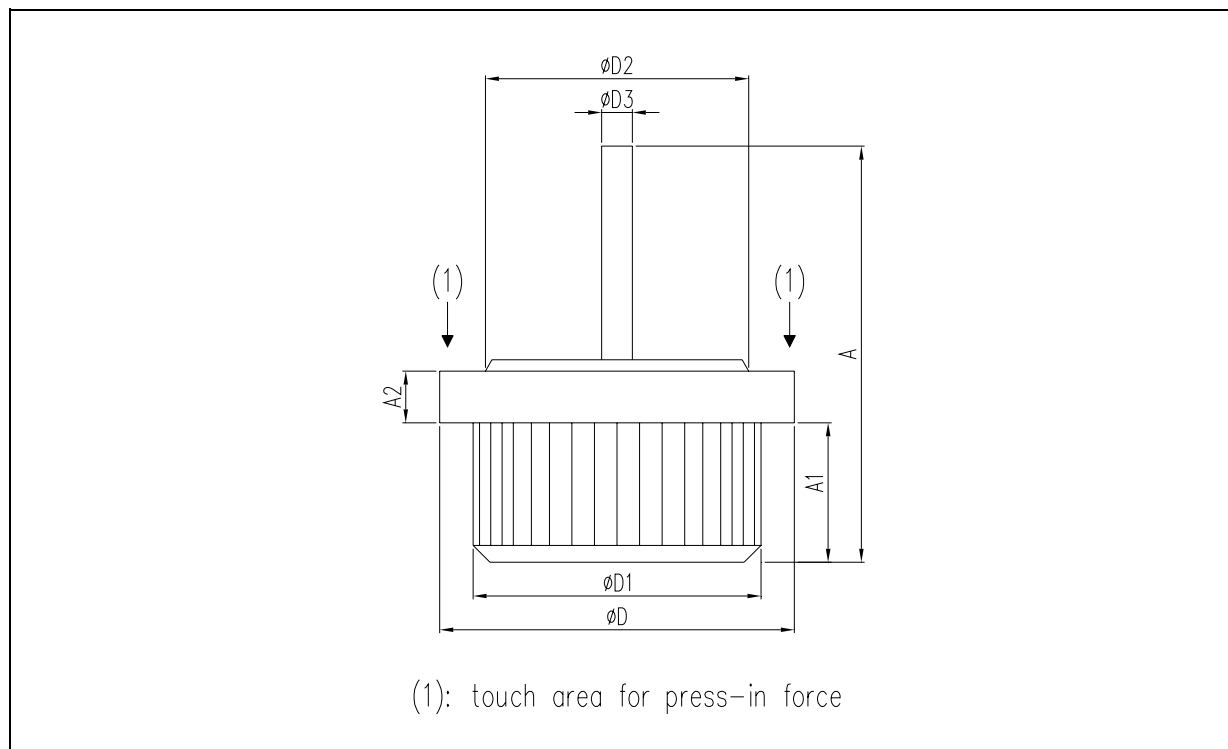
Parameter	Symbol	Value	Unit
Junction to case	$R_{\theta JC}$	0.8	$^{\circ}\text{C/W}$

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

Parameter			Symbol	Min.	Typ.	Max.	Unit	Test conditions
Z-voltage	BZP61-22	BZP62-22	V_Z	20.8	22	23.3	V	at $I_Z = 100\text{mA}$
	BZP61-27	BZP62-27		25.1	27	28.9		
	BZP61-33	BZP62-33		31	33	35		
	BZP61-39	BZP62-39		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	BZP61-22	BZP62-22	r_z	-	-	2	Ω	at $I_Z = 100\text{mA}$
	BZP61-27	BZP62-27		-	-	3.5		
	BZP61-33	BZP62-33		-	-	5		
	BZP61-39	BZP62-39		-	-	6		
Dynamical resistance (information value)	BZP61-22	BZP62-22	r_z	-	-	200	$\text{m}\Omega$	at $I_Z = 1\text{A}$
	BZP61-27	BZP62-27		-	-	350		
	BZP61-33	BZP62-33		-	-	500		
	BZP61-39	BZP62-39		-	-	700		
Dynamical resistance (information value)	BZP61-22	BZP62-22	r_z	-	-	20	$\text{m}\Omega$	at $I_Z = 10\text{A}$
	BZP61-27	BZP62-27		-	-	35		
	BZP61-33	BZP62-33		-	-	50		
	BZP61-39	BZP62-39		-	-	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	18,00	18,50	19,00	0,709	0,728	0,748
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
D	15,50	15,70	15,90	0,610	0,618	0,626
D1	12,72	12,77	12,82	0,501	0,503	0,505
D2	11,50	11,70	11,90	0,453	0,461	0,469
D3	1,31	1,36	1,41	0,052	0,054	0,056

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
Telephone: (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

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