

BZP61 / BZP62

Silicon Power Zener Diode

Description

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

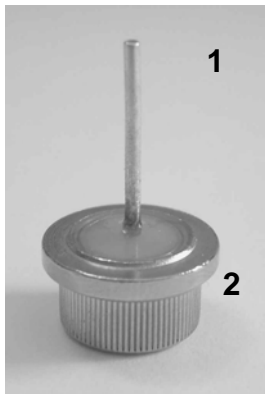
Features

- 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

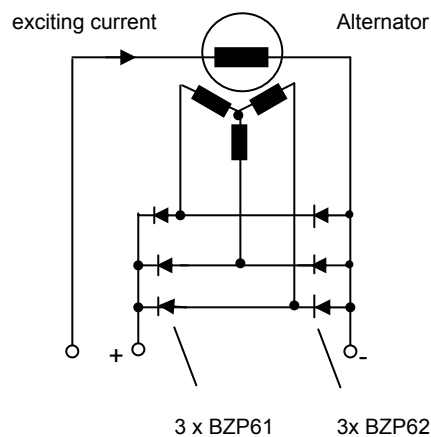
Pinout details



BZP61: 1 - cathode
2 - anode

BZP62: 1 - anode
2 - cathode

Typical application circuit

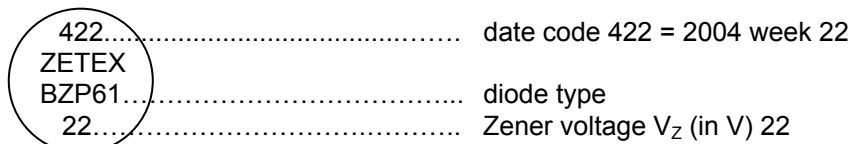


Ordering information

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 ² 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}	140	$^{\circ}\text{C}$		
Storage temperature range		T_{stg}	- 50 to + 140	$^{\circ}\text{C}$		

Thermal resistance

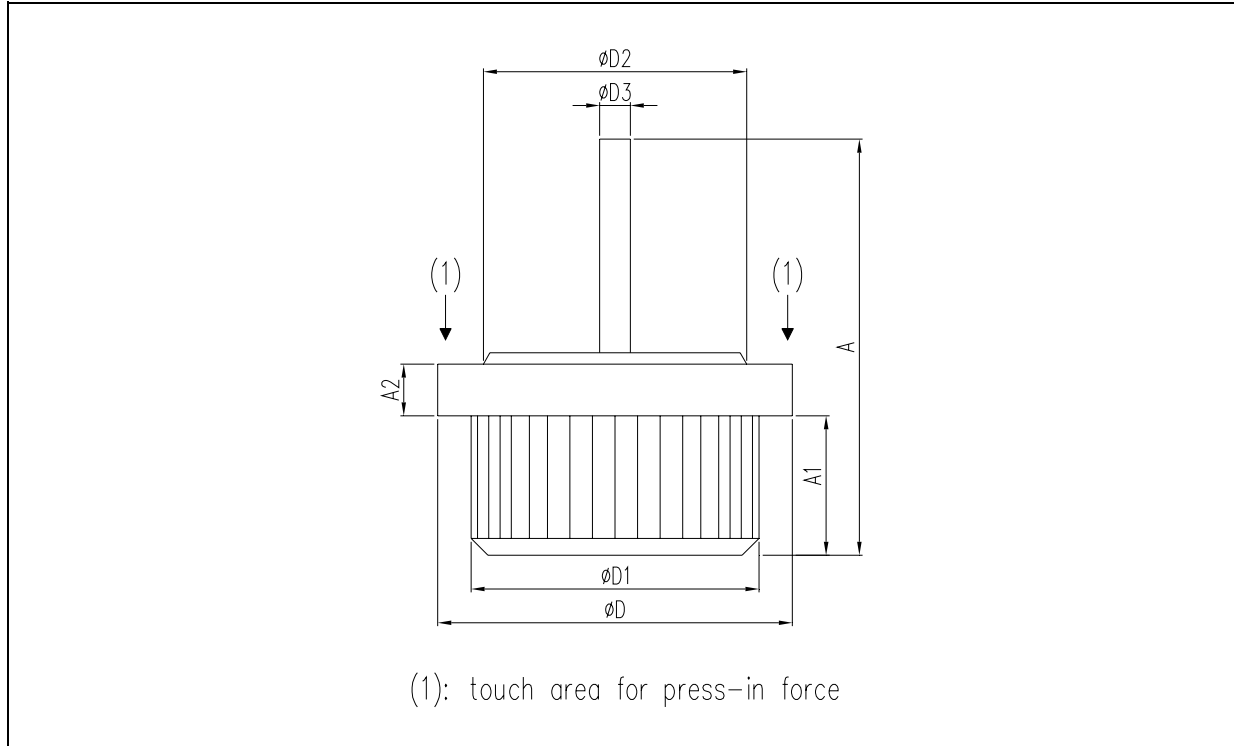
Parameter	Symbol	Value	Unit
Junction to case	$R_{\theta JC}$	0.8	$^{\circ}\text{C/W}$

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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	m Ω	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	m Ω	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

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