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

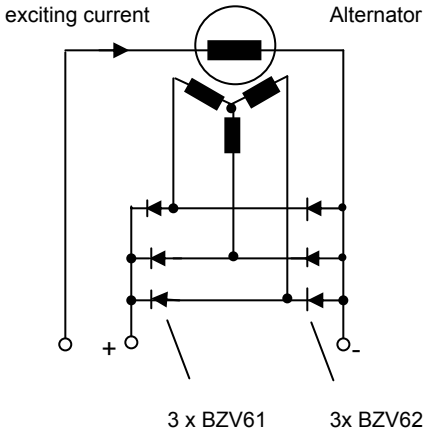
Pinout details



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

422..... date code 422 = 2004 week 22
ZETEX
BZV61…….... diode type
22…….. Zener voltage V_Z (in V) 22

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Absolute maximum ratings (at T_{amb} = 25°C unless otherwise stated)

Parameter			Symbol		Unit	Test condition
Z-current (continuous)	BZV61-22	BZV62-22	I_Z	7.2	A	T_c = 25°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 Hz
Surge forward current			I_{FSM}	600	A	T_J = 25°C, half-sine wave, ≤ 10 ms
				500		T_J = 175°C, half-sine wave, ≤ 10 ms
Maximum rated value			$\int i^2dt$	1800	A^2s	T_J = 25°C, half-sine wave, ≤ 10 ms
				1250		T_J = 175°C, half-sine wave, ≤ 10 ms
Repetitive peak forward current			$I_{FRM}=\pi*I_{F(AV)}$	110	A	f = 15 - 1000 Hz
Effective forward current			$I_{F(RMS)}$	55	A	sinusoidal, f = 15 - 1000 Hz
Junction temperature			T_{Jmax}	175	°C	
Storage temperature range			T_{stg}	- 50 to + 150	°C	

Thermal resistance

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

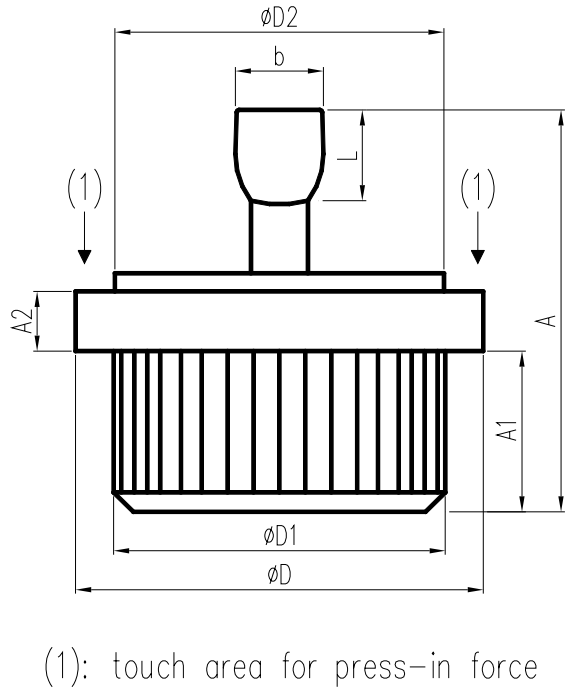
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Electrical characteristics (at T_{amb} = 25°C unless otherwise stated)

Parameter			Symbol	Min.	Typ.	Max.	Unit	Test contitions
Z-voltage	BZV61-22	BZV62-22	V_Z	20.8	22	23.3	V	at I_Z = 100mA
	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 A, measuring time 1ms
Reverse current			I_R	-	-	200	µA	at V_Z –5V
Dynamical resistance	BZV61-22	BZV62-22	r_Z	-	-	2	Ω	at I_Z = 100mA
	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	mΩ	at I_Z = 1A
	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	mΩ	at I_Z = 10A
	BZV61-27	BZV62-27		-	-	35		
	BZV61-33	BZV62-33		-	-	50		
	BZV61-39	BZV62-39		-	-	80		

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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

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