

# BZP63 / BZP64

## Silicon Power Zener Diode

### Description

The BZP63/62 are plastic sealed 50A- forward current diodes, which are available in different Zener voltages.

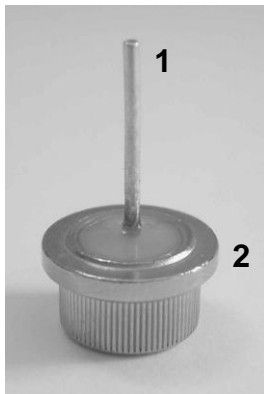
### Features

- Forward current 50A
- 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

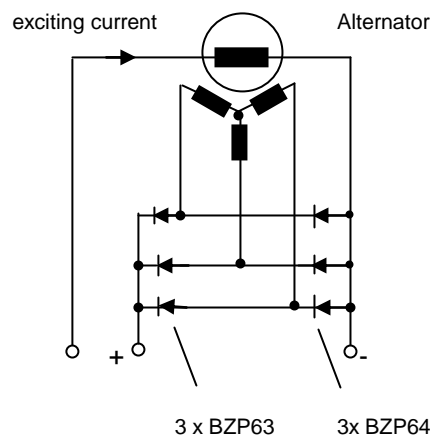
### Pinout details



**BZP63:** 1 - cathode  
2 - anode

**BZP64:** 1 - anode  
2 - cathode

### Typical application circuit

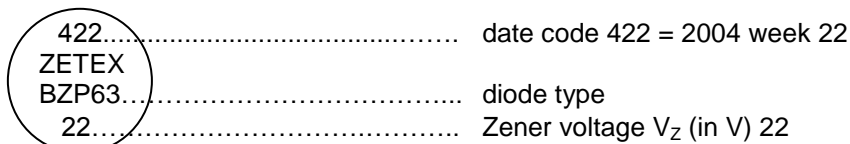


### Ordering information

Device	Quantity per box	Options
BZP63-22; ...; BZP63-39	500	The package quantities for the different package modifications are included in "PlasticPressFitPackageModifications.pdf"
BZP64-22; ...; BZP64-39	500	

### Device marking

Devices are identified by type. Colour of marking: BZP63- black, BZP64 – red



# BZP63 / BZP64

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

Parameter		Symbol		Unit	Test condition	
Z-current (continuous)	BZP63-22	BZP64-22	$I_z$	6.3	A	$T_c = 25^{\circ}\text{C}$
	BZP63-27	BZP64-27		5.2		
	BZP63-33	BZP64-33		4.3		
	BZP63-39	BZP64-39		3.8		
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 <sup>2</sup> 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		$T_{Jmax}$	140	$^{\circ}\text{C}$		
Storage temperature range		$T_{stg}$	- 50 to + 140	$^{\circ}\text{C}$		

## Thermal resistance

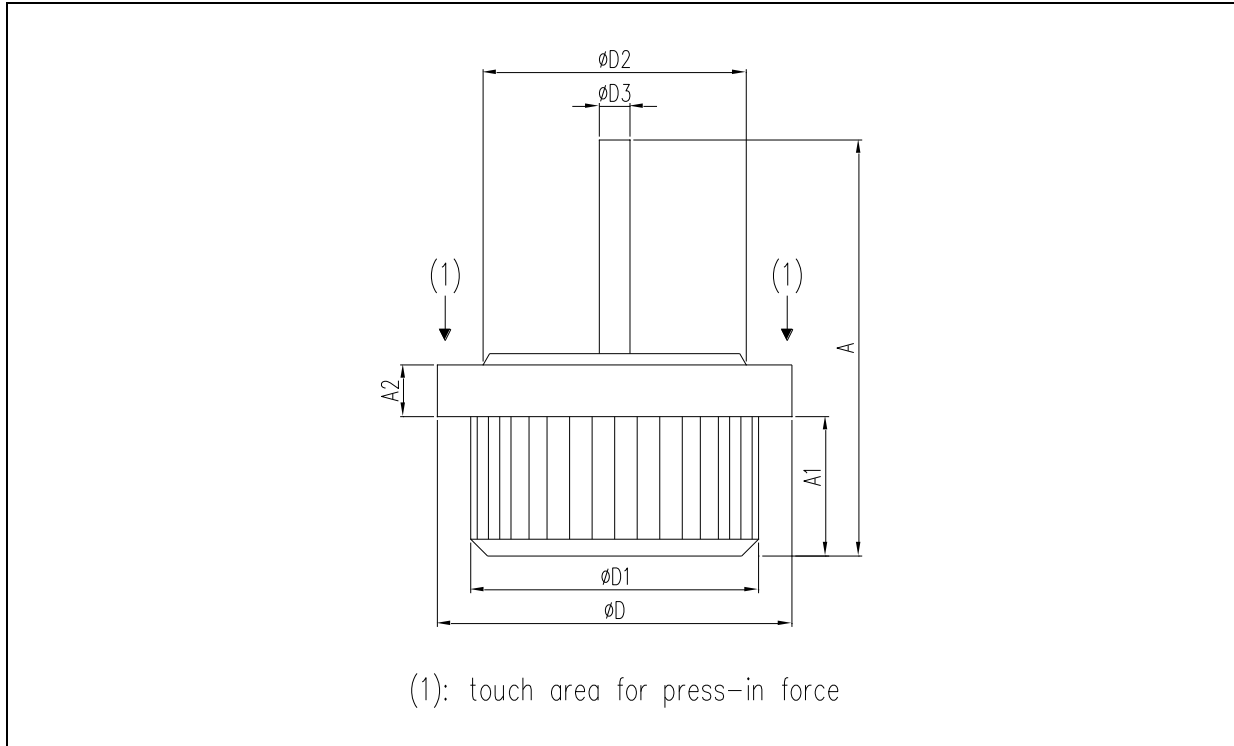
Parameter	Symbol	Value	Unit
Junction to case	$R_{\theta JC}$	0.8	$^{\circ}\text{C/W}$

# BZP63 / BZP64

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

Parameter			Symbol	Min.	Typ.	Max.	Unit	Test conditions
Z-voltage	BZP63-22	BZP64-22	$V_Z$	20.8	22	23.3	V	at $I_Z = 100\text{mA}$
	BZP63-27	BZP64-27		25.1	27	28.9		
	BZP63-33	BZP64-33		31	33	35		
	BZP63-39	BZP64-39		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	BZP63-22	BZP64-22	$r_z$	-	-	2	$\Omega$	at $I_Z = 100\text{mA}$
	BZP63-27	BZP64-27		-	-	3.5		
	BZP63-33	BZP64-33		-	-	5		
	BZP63-39	BZP64-39		-	-	6		
Dynamical resistance (information value)	BZP63-22	BZP64-22	$r_z$	-	-	200	m $\Omega$	at $I_Z = 1\text{ A}$
	BZP63-27	BZP64-27		-	-	350		
	BZP63-33	BZP64-33		-	-	500		
	BZP63-39	BZP64-39		-	-	700		
Dynamical resistance (information value)	BZP63-22	BZP64-22	$r_z$	-	-	20	m $\Omega$	at $I_Z = 10\text{ A}$
	BZP63-27	BZP64-27		-	-	35		
	BZP63-33	BZP64-33		-	-	50		
	BZP63-39	BZP64-39		-	-	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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