

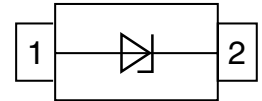
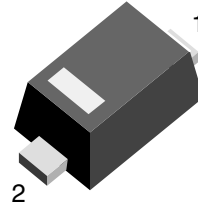
## Small Signal Zener Diodes

### Features

- With the BZX584C..-02V series vishay offers a Z-Diode in the tiny SOD-523 plastic package. Made for space sensitive applications the BZX584C..-02V series has a zener voltage tolerance of  $\pm 5\%$ .
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



**RoHS**  
COMPLIANT



18426

### Mechanical Data

**Case:** SOD-523

**Weight:** approx. 1.6 mg

**Packaging codes/options:**

GS08/3 k per 7" reel (8 mm tape), 15 k/box

### Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Power dissipation		$P_{tot}$	200 <sup>1)</sup>	mW

Note:

<sup>1)</sup> Device on fiberglass substrate

### Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		$R_{thJA}$	680 <sup>1)</sup>	K/W
Thermal resistance junction to soldering point		$R_{thJS}$	100	K/W
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 65 to + 150	$^{\circ}\text{C}$

Note:

<sup>1)</sup> Device on fiberglass substrate

# BZX584C-02V Series

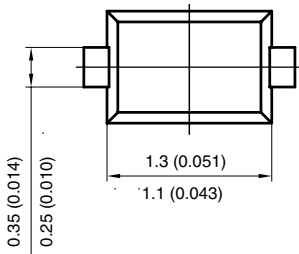


Vishay Semiconductors

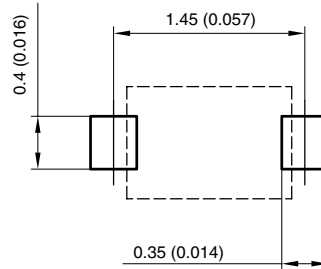
## Electrical Characteristics

Part number	Marking code	Zener voltage range		Dynamic resistance		Test current	Temp. coefficient of zener voltage		Test current	Reverse leakage current	
		$V_Z$ at 5 mA		$r_{zj}$ at $I_{ZT1}$	$r_{zj}$ at $I_{ZT2}$	$I_{ZT1}$	$\alpha_{VZ}$ at 5 mA		$I_{ZT2}$	$I_R$	at $V_R$
		V		$\Omega$		mA	$10^{-4}/^{\circ}\text{C}$		mA	$\mu\text{A}$	V
		min	max				min	max			
BZX584C2V4-02V	2	2.2	2.6	70 ( $\leq 100$ )	275 ( $\leq 600$ )	5	-9	-4	1	50	1
BZX584C2V7-02V	3	2.5	2.9	75 ( $\leq 100$ )	300 ( $\leq 600$ )	5	-9	-4	1	20	1
BZX584C3V0-02V	4	2.8	3.2	80 ( $\leq 95$ )	325 ( $\leq 600$ )	5	-9	-3	1	10	1
BZX584C3V3-02V	5	3.1	3.5	85 ( $\leq 95$ )	350 ( $\leq 600$ )	5	-8	-3	1	5	1
BZX584C3V6-02V	6	3.4	3.8	85 ( $\leq 90$ )	375 ( $\leq 600$ )	5	-8	-3	1	5	1
BZX584C3V9-02V	7	3.7	4.1	85 ( $\leq 90$ )	400 ( $\leq 600$ )	5	-7	-3	1	3	1
BZX584C4V3-02V	8	4	4.6	80 ( $\leq 90$ )	410 ( $\leq 600$ )	5	-6	-1	1	3	1
BZX584C4V7-02V	9	4.4	5	50 ( $\leq 80$ )	425 ( $\leq 500$ )	5	-5	+2	1	3	2
BZX584C5V1-02V	1	4.8	5.4	40 ( $\leq 60$ )	400 ( $\leq 480$ )	5	-3	+4	1	2	2
BZX584C5V6-02V	0	5.2	6	15 ( $\leq 40$ )	80 ( $\leq 400$ )	5	-2	+6	1	1	2
BZX584C6V2-02V	1	5.8	6.6	6 ( $\leq 10$ )	40 ( $\leq 150$ )	5	-1	+7	1	3	4
BZX584C6V8-02V	2	6.4	7.2	6 ( $\leq 15$ )	30 ( $\leq 80$ )	5	+2	+7	1	2	4
BZX584C7V5-02V	3	7	7.9	6 ( $\leq 15$ )	30 ( $\leq 80$ )	5	+3	+7	1	1	5
BZX584C8V2-02V	4	7.7	8.7	6 ( $\leq 15$ )	40 ( $\leq 80$ )	5	+4	+7	1	0.7	5
BZX584C9V1-02V	5	8.5	9.6	6 ( $\leq 15$ )	40 ( $\leq 100$ )	5	+5	+8	1	0.5	6
BZX584C10-02V	6	9.4	10.6	8 ( $\leq 20$ )	50 ( $\leq 150$ )	5	+5	+8	1	0.2	7
BZX584C11-02V	7	10.4	11.6	10 ( $\leq 20$ )	50 ( $\leq 150$ )	5	+5	+9	1	0.1	8
BZX584C12-02V	8	11.4	12.7	10 ( $\leq 25$ )	50 ( $\leq 150$ )	5	+6	+9	1	0.1	8
BZX584C13-02V	9	12.4	14.1	10 ( $\leq 30$ )	50 ( $\leq 170$ )	5	+7	+9	1	0.1	8
BZX584C15-02V	0	13.8	15.6	10 ( $\leq 30$ )	50 ( $\leq 200$ )	5	+7	+9	1	0.1	8
BZX584C16-02V	1	15.3	17.1	10 ( $\leq 40$ )	50 ( $\leq 200$ )	5	+8	+9.5	1	0.05	$0.7 V_{Znom}$
BZX584C18-02V	2	16.8	19.1	10 ( $\leq 45$ )	50 ( $\leq 225$ )	5	+8	+9.5	1	0.05	$0.7 V_{Znom}$
BZX584C20-02V	3	18.8	21.2	15 ( $\leq 55$ )	60 ( $\leq 225$ )	5	+8	+10	1	0.05	$0.7 V_{Znom}$
BZX584C22-02V	4	20.8	23.3	20 ( $\leq 55$ )	60 ( $\leq 250$ )	5	+8	+10	1	0.05	$0.7 V_{Znom}$
BZX584C24-02V	5	22.8	25.6	25 ( $\leq 70$ )	60 ( $\leq 250$ )	5	+8	+10	1	0.05	$0.7 V_{Znom}$
BZX584C27-02V	6	25.1	28.9	25 ( $\leq 80$ )	65 ( $\leq 300$ )	2	+8	+10	0.5	0.05	$0.7 V_{Znom}$
BZX584C30-02V	K	28	32	30 ( $\leq 80$ )	70 ( $\leq 300$ )	2	+8	+10	0.5	0.05	$0.7 V_{Znom}$
BZX584C33-02V	e	31	35	35 ( $\leq 80$ )	75 ( $\leq 325$ )	2	+8	+10	0.5	0.05	$0.7 V_{Znom}$
BZX584C36-02V	q	34	38	35 ( $\leq 90$ )	80 ( $\leq 350$ )	2	+8	+10	0.5	0.05	$0.7 V_{Znom}$
BZX584C39-02V	fl	37	41	40 ( $\leq 130$ )	80 ( $\leq 350$ )	2	+10	+12	0.5	0.05	$0.7 V_{Znom}$
BZX584C43-02V	l	40	46	45 ( $\leq 150$ )	85 ( $\leq 375$ )	2	+10	+12	0.5	0.05	$0.7 V_{Znom}$
BZX584C47-02V	L	44	50	50 ( $\leq 170$ )	85 ( $\leq 375$ )	2	+10	+12	0.5	0.05	$0.7 V_{Znom}$
BZX584C51-02V	M	48	54	60 ( $\leq 180$ )	85 ( $\leq 400$ )	2	+10	+12	0.5	0.05	$0.7 V_{Znom}$

**Package Dimensions** in millimeters (inches): **SOD-523**



Foot print recommendation:



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 16864



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