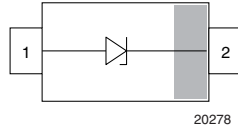




**THE DATASHEET OF  
BZX584C4V7**



## Small Signal Zener Diodes



### FEATURES

- With the BZX584C...-V-G-Series Vishay offers a Z-diode in the tiny SOD-523 plastic package. Made for space sensitive applications the BZX584C...-V-G-Series has a Zener voltage tolerance of  $\pm 5\%$
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**  
**GREEN**  
(5-2008)

### DESIGN SUPPORT TOOLS

[click logo to get started](#)

**3D**  
Models  
Available

PRIMARY CHARACTERISTICS		
PARAMETER	VALUE	UNIT
V <sub>Z</sub> range nom.	2.4 to 51	V
Test current I <sub>ZT</sub>	2; 5	mA
V <sub>Z</sub> specification	Pulse current	
Circuit configuration	Single	

ORDERING INFORMATION			
DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
BZX584Cxxx-V-G-series	BZX584Cxxx-V-G-series-08	3000 (8 mm tape on 7" reel)	3000

#### Note

- xxx stands for any part number/voltage group, as shown in the table of page 2

PACKAGE				
PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOD-523	1.4 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals

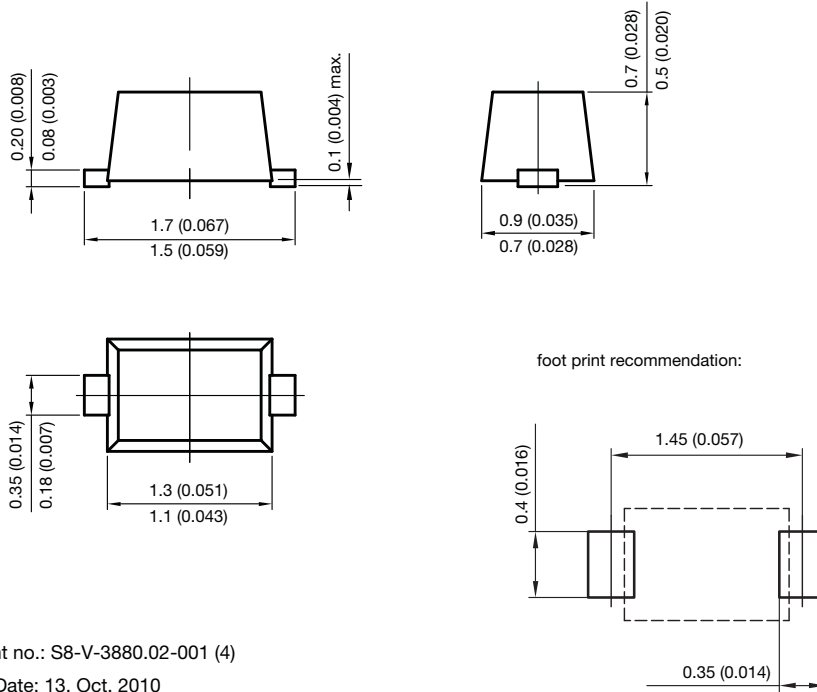
ABSOLUTE MAXIMUM RATINGS (T <sub>amb</sub> = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Power dissipation	Device on fiberglass substrate	P <sub>tot</sub>	200	mW
Thermal resistance junction to ambient air	Device on fiberglass substrate	R <sub>thJA</sub>	680	K/W
Junction temperature		T <sub>j</sub>	150	°C
Storage temperature range		T <sub>stg</sub>	-65 to +150	°C



<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)												
PART NUMBER	MARKING CODE	ZENER VOLTAGE RANGE			TEST CURRENT		REVERSE LAKEGE CURRENT		DYNAMIC RESISTANCE		TEMPERATURE COEFFICIENT OF ZENER VOLTAGE	
		$V_Z$ at $I_{ZT1}$			$I_{ZT1}$	$I_{ZT2}$	$I_R$ at $V_R$		$Z_z$ at $I_{ZT1}$	$Z_{ZK}$ at $I_{ZT2}$	$\alpha_{VZ}$ at $I_{ZT1}$	
		V			mA		$\mu\text{A}$	V	$\Omega$		$10^{-4}/^{\circ}\text{C}$	
		MIN.	NOM.	MAX.			MAX.		MAX.	MAX.	MIN.	MAX.
BZX584C2V4-V-G	.2	2.2	2.4	2.6	5	1	50	1	70 ( $\leq 100$ )	275 ( $\leq 600$ )	-9	-4
BZX584C2V7-V-G	.3	2.5	2.7	2.9	5	1	20	1	75 ( $\leq 100$ )	300 ( $\leq 600$ )	-9	-4
BZX584C3V0-V-G	.4	2.8	3.0	3.2	5	1	10	1	80 ( $\leq 95$ )	325 ( $\leq 600$ )	-9	-3
BZX584C3V3-V-G	.5	3.1	3.3	3.5	5	1	5	1	85 ( $\leq 95$ )	350 ( $\leq 600$ )	-8	-3
BZX584C3V6-V-G	.6	3.4	3.6	3.8	5	1	5	1	85 ( $\leq 90$ )	375 ( $\leq 600$ )	-8	-3
BZX584C3V9-V-G	.7	3.7	3.9	4.1	5	1	3	1	85 ( $\leq 90$ )	400 ( $\leq 600$ )	-7	-3
BZX584C4V3-V-G	.8	4	4.3	4.6	5	1	3	1	80 ( $\leq 90$ )	410 ( $\leq 600$ )	-6	-1
BZX584C4V7-V-G	.9	4.4	4.7	5	5	1	3	2	50 ( $\leq 80$ )	425 ( $\leq 500$ )	-5	2
BZX584C5V1-V-G	.1	4.8	5.1	5.4	5	1	2	2	40 ( $\leq 60$ )	400 ( $\leq 480$ )	-3	4
BZX584C5V6-V-G	.0	5.2	5.6	6	5	1	1	2	15 ( $\leq 40$ )	80 ( $\leq 400$ )	-2	6
BZX584C6V2-V-G	.1	5.8	6.2	6.6	5	1	3	4	6 ( $\leq 10$ )	40 ( $\leq 150$ )	-1	7
BZX584C6V8-V-G	.2	6.4	6.8	7.2	5	1	2	4	6 ( $\leq 15$ )	30 ( $\leq 80$ )	2	7
BZX584C7V5-V-G	.3	7	7.5	7.9	5	1	1	5	6 ( $\leq 15$ )	30 ( $\leq 80$ )	3	7
BZX584C8V2-V-G	.4	7.7	8.2	8.7	5	1	0.7	5	6 ( $\leq 15$ )	40 ( $\leq 80$ )	4	7
BZX584C9V1-V-G	.5	8.5	9.1	9.6	5	1	0.5	6	6 ( $\leq 15$ )	40 ( $\leq 100$ )	5	8
BZX584C10-V-G	.6	9.4	10	10.6	5	1	0.2	7	8 ( $\leq 20$ )	50 ( $\leq 150$ )	5	8
BZX584C11-V-G	.7	10.4	11	11.6	5	1	0.1	8	10 ( $\leq 20$ )	50 ( $\leq 150$ )	5	9
BZX584C12-V-G	.8	11.4	12	12.7	5	1	0.1	8	10 ( $\leq 25$ )	50 ( $\leq 150$ )	6	9
BZX584C13-V-G	.9	12.4	13	14.1	5	1	0.1	8	10 ( $\leq 30$ )	50 ( $\leq 170$ )	7	9
BZX584C15-V-G	.1	13.8	15	15.6	5	1	0.1	8	10 ( $\leq 30$ )	50 ( $\leq 200$ )	7	9
BZX584C16-V-G	.2	15.3	16	17.1	5	1	0.05	0.7 $V_{Znom.}$	10 ( $\leq 40$ )	50 ( $\leq 200$ )	8	9.5
BZX584C18-V-G	.3	16.8	18	19.1	5	1	0.05	0.7 $V_{Znom.}$	10 ( $\leq 45$ )	50 ( $\leq 225$ )	8	9.5
BZX584C20-V-G	.4	18.8	20	21.2	5	1	0.05	0.7 $V_{Znom.}$	15 ( $\leq 55$ )	60 ( $\leq 225$ )	8	10
BZX584C22-V-G	.5	20.8	22	23.3	5	1	0.05	0.7 $V_{Znom.}$	20 ( $\leq 55$ )	60 ( $\leq 250$ )	8	10
BZX584C24-V-G	.6	22.8	24	25.6	5	1	0.05	0.7 $V_{Znom.}$	25 ( $\leq 70$ )	60 ( $\leq 250$ )	8	10
BZX584C27-V-G	.7	25.1	27	28.9	2	0.5	0.05	0.7 $V_{Znom.}$	25 ( $\leq 80$ )	65 ( $\leq 300$ )	8	10
BZX584C30-V-G	.8	28	30	32	2	0.5	0.05	0.7 $V_{Znom.}$	30 ( $\leq 80$ )	70 ( $\leq 300$ )	8	10
BZX584C33-V-G	.9	31	33	35	2	0.5	0.05	0.7 $V_{Znom.}$	35 ( $\leq 80$ )	75 ( $\leq 325$ )	8	10
BZX584C36-V-G	.0	34	36	38	2	0.5	0.05	0.7 $V_{Znom.}$	35 ( $\leq 90$ )	80 ( $\leq 350$ )	8	10
BZX584C39-V-G	.1	37	39	41	2	0.5	0.05	0.7 $V_{Znom.}$	40 ( $\leq 130$ )	80 ( $\leq 350$ )	10	12
BZX584C43-V-G	.2	40	43	46	2	0.5	0.05	0.7 $V_{Znom.}$	45 ( $\leq 150$ )	85 ( $\leq 375$ )	10	12
BZX584C47-V-G	.3	44	47	50	2	0.5	0.05	0.7 $V_{Znom.}$	50 ( $\leq 170$ )	85 ( $\leq 375$ )	10	12
BZX584C51-V-G	.4	48	51	54	2	0.5	0.05	0.7 $V_{Znom.}$	60 ( $\leq 180$ )	85 ( $\leq 400$ )	10	12



## PACKAGE DIMENSIONS in millimeters (inches): SOD-523



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