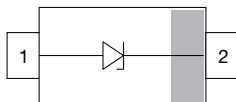
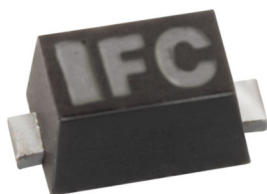


Small Signal Zener Diodes



LINKS TO ADDITIONAL RESOURCES



FEATURES

- With the BZX584C... Series Vishay offers a Z-diode in the tiny SOD-523 plastic package. Made for space sensitive applications the BZX584C... Series has a Zener voltage tolerance of $\pm 5\%$
- AEC-Q101 qualified available
- Base P/N-G3 - RoHS-compliant, commercial grade
- Base P/N-HG3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



PRIMARY CHARACTERISTICS		
PARAMETER	VALUE	UNIT
V_Z range nom.	2.2 to 36	V
Test current I_{ZT}	2; 5	mA
V_Z specification	Pulse current	
Circuit configuration	Single	

ORDERING INFORMATION			
DEVICE NAME	ORDERING CODE	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
BZX584Cxxx- Series	BZX584Cxxx-G3-08	8000 (8 mm tape on 7" reel)	8000
	BZX584Cxxx-HG3-08		

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	1.32 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	Peak temperature max. 260 °C

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ °C}$, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Power dissipation	On FR-4 board with recommended soldering footprint	P_{tot}	200	mW	
	On FR-4 board with 5 mm x 5 mm footprint		300	mW	
Thermal resistance junction to ambient air	According to JEDEC® 51-3 on FR-4 board with recommended soldering footprint	R_{thJA}	600	K/W	
	According to JEDEC 51-3 on FR-4 board with 5 mm x 5 mm footprint		400	K/W	
Thermal resistance junction to lead	Infinite heatsink	R_{thJL}	200	K/W	
Junction temperature		T_j	150	°C	
Storage temperature range		T_{stg}	-65 to +150	°C	

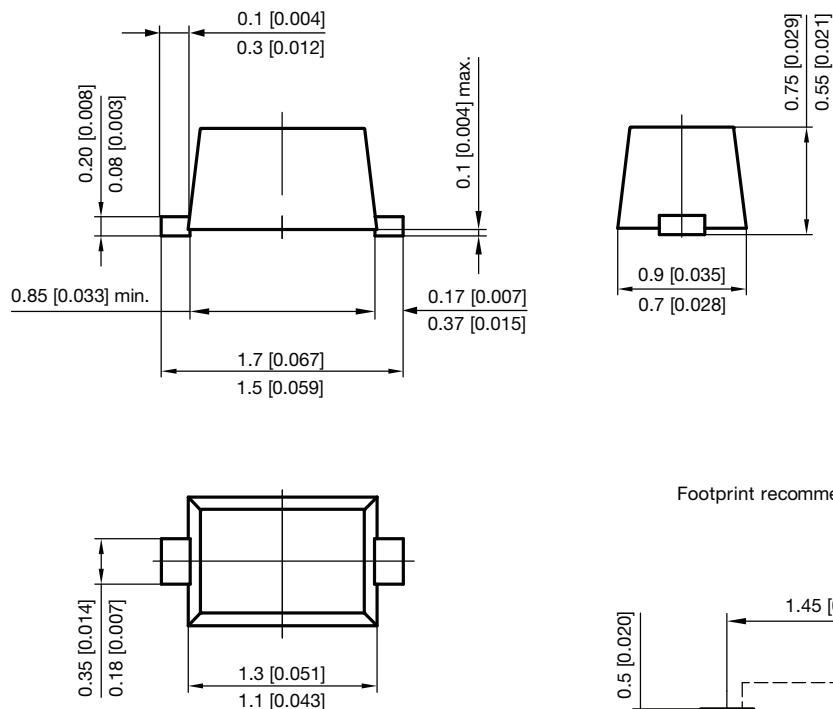


ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)												
PART NUMBER	MARKING CODE	ZENER VOLTAGE RANGE ⁽¹⁾			TEST CURRENT		REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE		TEMPERATURE COEFFICIENT OF ZENER VOLTAGE	
		V_Z at I_{ZT1}			I_{ZT1}	I_{ZT2}	I_R at V_R		Z_Z at I_{ZT1}	Z_{ZK} at I_{ZT2}	α_{VZ} at I_{ZT1}	
		V			mA		μA	V	Ω		$10^{-4}/^{\circ}\text{C}$	
		MIN.	NOM.	MAX.			MAX.		MAX.	MAX.	MIN.	MAX.
BZX584C2V2	:T	2	2.2	2.4	5	1	100	1	65 (≤ 120)	250 (≤ 600)	-9	-4
BZX584C2V4	:2	2.2	2.4	2.6	5	1	50	1	70 (≤ 100)	275 (≤ 600)	-9	-4
BZX584C2V7	:3	2.5	2.7	2.9	5	1	20	1	75 (≤ 100)	300 (≤ 600)	-9	-4
BZX584C3V0	:4	2.8	3.0	3.2	5	1	10	1	80 (≤ 100)	325 (≤ 600)	-9	-3
BZX584C3V3	:5	3.1	3.3	3.5	5	1	5	1	85 (≤ 95)	350 (≤ 600)	-8	-3
BZX584C3V6	:6	3.4	3.6	3.8	5	1	5	1	85 (≤ 95)	375 (≤ 600)	-8	-3
BZX584C3V9	:7	3.7	3.9	4.1	5	1	3	1	85 (≤ 90)	400 (≤ 600)	-7	-3
BZX584C4V3	:8	4	4.3	4.6	5	1	3	1	80 (≤ 90)	410 (≤ 600)	-6	-1
BZX584C4V7	:9	4.4	4.7	5	5	1	3	2	50 (≤ 80)	425 (≤ 500)	-5	2
BZX584C5V1	:1	4.8	5.1	5.4	5	1	2	2	40 (≤ 60)	400 (≤ 480)	-3	4
BZX584C5V6	:0	5.2	5.6	6	5	1	1	2	15 (≤ 40)	80 (≤ 400)	-2	6
BZX584C6V2	:1	5.8	6.2	6.6	5	1	3	4	6 (≤ 10)	40 (≤ 150)	-1	7
BZX584C6V8	:2	6.4	6.8	7.2	5	1	2	4	6 (≤ 15)	30 (≤ 80)	2	7
BZX584C7V5	:3	7	7.5	7.9	5	1	1	5	6 (≤ 15)	30 (≤ 80)	3	7
BZX584C8V2	:4	7.7	8.2	8.7	5	1	0.7	5	6 (≤ 15)	40 (≤ 80)	4	7
BZX584C9V1	:5	8.5	9.1	9.6	5	1	0.5	6	6 (≤ 15)	40 (≤ 100)	5	8
BZX584C10	:6	9.4	10	10.6	5	1	0.2	7	8 (≤ 20)	50 (≤ 150)	5	8
BZX584C11	:7	10.4	11	11.6	5	1	0.1	8	10 (≤ 20)	50 (≤ 150)	5	9
BZX584C12	:8	11.4	12	12.7	5	1	0.1	8	10 (≤ 25)	50 (≤ 150)	6	9
BZX584C13	:9	12.4	13	14.1	5	1	0.1	8	10 (≤ 30)	50 (≤ 170)	7	9
BZX584C15	:1	13.8	15	15.6	5	1	0.1	8	10 (≤ 30)	50 (≤ 200)	7	9
BZX584C16	:2	15.3	16	17.1	5	1	0.05	0.7 $V_{Znom.}$	10 (≤ 40)	50 (≤ 200)	8	9.5
BZX584C18	:3	16.8	18	19.1	5	1	0.05	0.7 $V_{Znom.}$	10 (≤ 45)	50 (≤ 225)	8	9.5
BZX584C20	:4	18.8	20	21.2	5	1	0.05	0.7 $V_{Znom.}$	15 (≤ 55)	60 (≤ 225)	8	10
BZX584C22	:5	20.8	22	23.3	5	1	0.05	0.7 $V_{Znom.}$	20 (≤ 55)	60 (≤ 250)	8	10
BZX584C24	:6	22.8	24	25.6	5	1	0.05	0.7 $V_{Znom.}$	25 (≤ 70)	60 (≤ 250)	8	10
BZX584C27	:7	25.1	27	28.9	2	0.5	0.05	0.7 $V_{Znom.}$	25 (≤ 80)	65 (≤ 300)	8	10
BZX584C30	:K	28	30	32	2	0.5	0.05	0.7 $V_{Znom.}$	30 (≤ 80)	70 (≤ 300)	8	10
BZX584C33	:9	31	33	35	2	0.5	0.05	0.7 $V_{Znom.}$	35 (≤ 80)	75 (≤ 325)	8	10
BZX584C36	:Q	34	36	38	2	0.5	0.05	0.7 $V_{Znom.}$	35 (≤ 90)	80 (≤ 350)	8	10

Note(1) Pulse test $t_P = 10\text{ ms}$



PACKAGE DIMENSIONS in millimeters [inches]: **SOD-523**



Document no.: S8-V-3880.02-003 (4)

Created - Date: 04. April 2017

Rev. 4 - Date: 03. Aug. 2020

23093



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.