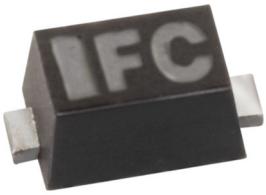
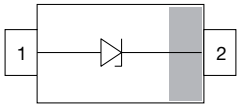
Small Signal Zener Diodes





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 ± 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

AUTOMOTIVE GRADE Available

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

LINKS TO ADDITIONAL RESOURCES

3D Models | Marking | Parametric Search | Order Samples

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 °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

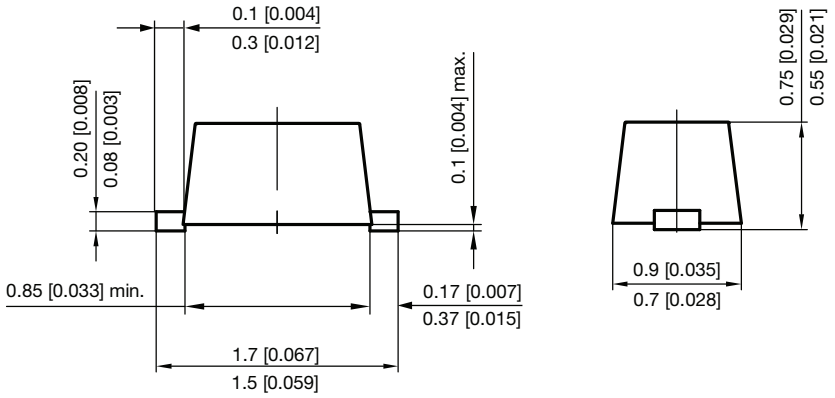
ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

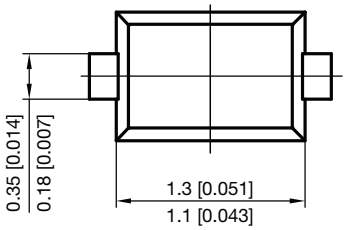
PART NUMBER	MARKING CODE	ZENER VOLTAGE RANGE (1)			TEST CURRENT		REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE		TEMPERATURE COEFFICIENT OF ZENER VOLTAGE	
		V_Z at I_{ZT1}			I_{ZT1}	I_{ZT2}	I_R at V_R		Z_Z at I_{ZT1}	Z_{ZK} at I_{ZT2}	α_{VZ} at I_{ZT1}	
		V			mA		µA	V	Ω		10^{-4}/°C	
		MIN.	NOM.	MAX.			MAX.		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	:ı	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	:T	7.7	8.2	8.7	5	1	0.7	5	6 (≤ 15)	40 (≤ 80)	4	7
BZX584C9V1	:S	8.5	9.1	9.6	5	1	0.5	6	6 (≤ 15)	40 (≤ 100)	5	8
BZX584C10	:R	9.4	10	10.6	5	1	0.2	7	8 (≤ 20)	50 (≤ 150)	5	8
BZX584C11	:P	10.4	11	11.6	5	1	0.1	8	10 (≤ 20)	50 (≤ 150)	5	9
BZX584C12	:7	11.4	12	12.7	5	1	0.1	8	10 (≤ 25)	50 (≤ 150)	6	9
BZX584C13	:5	12.4	13	14.1	5	1	0.1	8	10 (≤ 30)	50 (≤ 170)	7	9
BZX584C15	:4	13.8	15	15.6	5	1	0.1	8	10 (≤ 30)	50 (≤ 200)	7	9
BZX584C16	:ı	15.3	16	17.1	5	1	0.05	0.7 $V_{Znom.}$	10 (≤ 40)	50 (≤ 200)	8	9.5
BZX584C18	:2	16.8	18	19.1	5	1	0.05	0.7 $V_{Znom.}$	10 (≤ 45)	50 (≤ 225)	8	9.5
BZX584C20	:ㅓ	18.8	20	21.2	5	1	0.05	0.7 $V_{Znom.}$	15 (≤ 55)	60 (≤ 225)	8	10
BZX584C22	:ſ	20.8	22	23.3	5	1	0.05	0.7 $V_{Znom.}$	20 (≤ 55)	60 (≤ 250)	8	10
BZX584C24	:ƨ	22.8	24	25.6	5	1	0.05	0.7 $V_{Znom.}$	25 (≤ 70)	60 (≤ 250)	8	10
BZX584C27	:ヿ	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	:ɐ	31	33	35	2	0.5	0.05	0.7 $V_{Znom.}$	35 (≤ 80)	75 (≤ 325)	8	10
BZX584C36	:ף	34	36	38	2	0.5	0.05	0.7 $V_{Znom.}$	35 (≤ 90)	80 (≤ 350)	8	10

Note

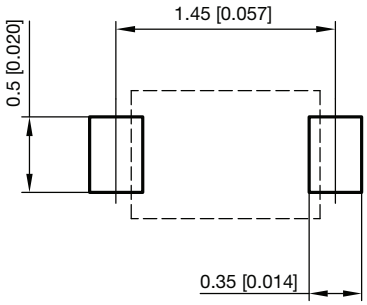
(1) Pulse test t_P = 10 ms

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





Footprint recommendation:



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