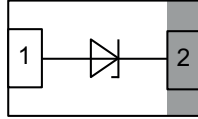


## Small Signal Zener Diodes



### MARKING (example only)



Bar = cathode marking  
 X = date code  
 YY = type code (see page 2)

### LINKS TO ADDITIONAL RESOURCES



### FEATURES

- Silicon planar Zener diodes
- Low leakage current, low noise
- Excellent stability
- Surge rated
- $\pm 2\%$  Zener voltage tolerance
- Leadless ultra small DFN1006-2A package (1 mm × 0.6 mm × 0.45 mm)
- Power dissipation better than SOT-23
- Surface-mounted device (SMD) plastic package with visible and sidewall plated / wettable flanks
- Soldering can be checked by standard visual inspection. No X-ray inspection necessary to meet automotive AOI requirements
- AEC-Q101 qualified available
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



PRIMARY CHARACTERISTICS		
PARAMETER	VALUE	UNIT
$V_Z$ range nom.	4.7 to 47	V
Test current $I_{ZT}$	2; 5	mA
$V_Z$ specification	Pulse current	
Circuit configuration	Single	

ORDERING INFORMATION				
DEVICE NAME	ORDERING CODE	AEC-Q101 QUALIFIED	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
BZX884BxxxL Series	BZX884Bxxx-G3-08	no	10 000 (8 mm tape on 7" reel)	10 000
	BZX884Bxxx-HG3-08	yes		10 000

#### 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
DFN1006-2A	0.83 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	$P_{tot}$	300	mW
Non-repetitive peak reverse power	$t_p = 100\ \mu\text{s}$	$P_{ZSM}$	26	W
Maximum junction temperature		$T_{j\ max.}$	150	°C
Storage temperature range		$T_{stg}$	-55 to +150	°C
Operating temperature range		$T_{op}$	-55 to +150	°C



<b>THERMAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	according to JEDEC <sup>®</sup> 51-3 on FR-4 board with recommended soldering footprint	$R_{thJA}$	420	K/W
Thermal resistance junction to lead		$R_{thJL}$	100	K/W

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	MAX.	UNIT
Forward voltage	$I_F = 10\text{ mA}$	$V_F$	0.9	V

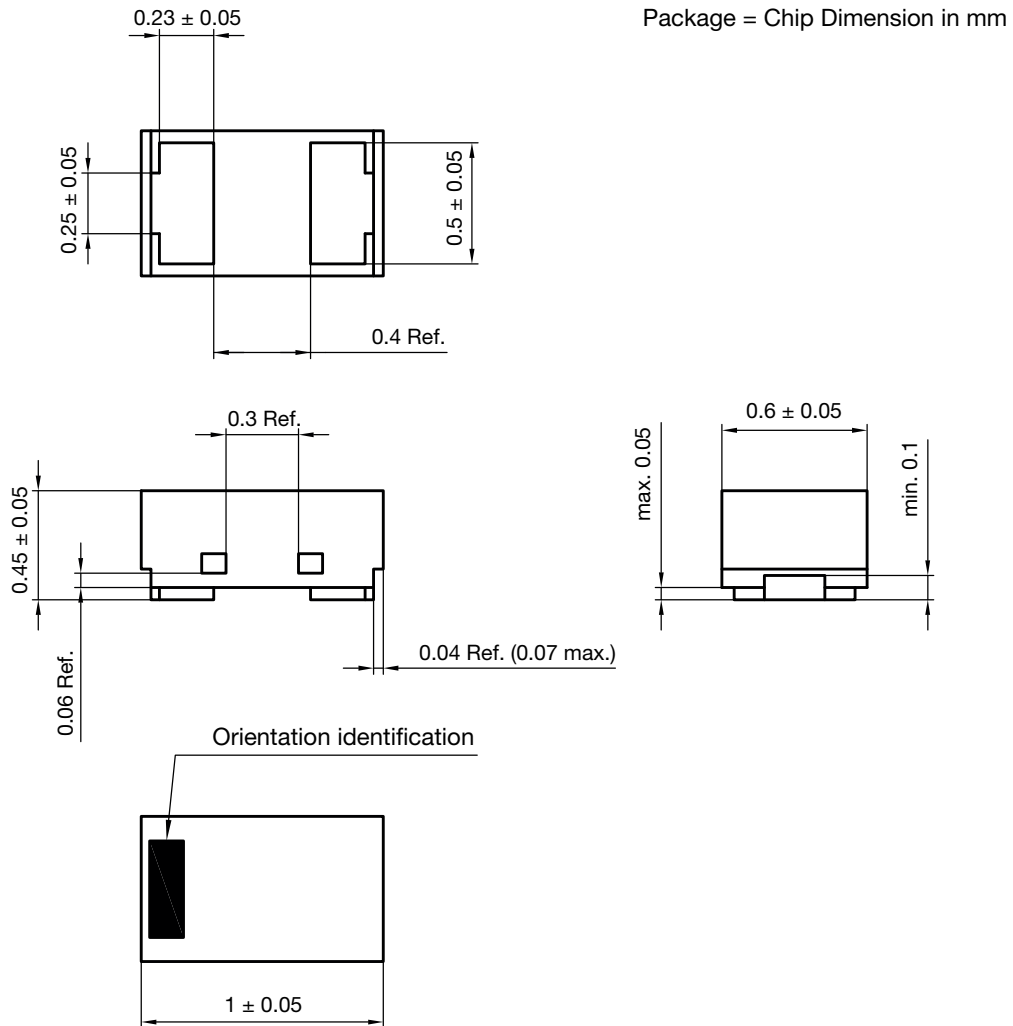
<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)												
PART NUMBER	TYPE CODE	ZENER VOLTAGE RANGE <sup>(1)</sup>			TEST CURRENT		REVERSE LEAKAGE CURRENT		DYNAMIC RESISTANCE		TEMPERATURE COEFFICIENT OF ZENER VOLTAGE	
		$V_Z$ at $I_{ZT1}$			$I_{ZT1}$	$I_{ZT2}$	$I_R$ at $V_R$		$Z_Z$ at $I_{ZT1}$	$Z_{ZK}$ at $I_{ZT2}$	$\alpha_{VZ}$ at $I_{ZT1}$	
		V			mA		$\mu\text{A}$	V	$\Omega$		$10^{-4}/^{\circ}\text{C}$	
		MIN.	NOM.	MAX.			MAX.		MAX.	MAX.	MIN.	MAX.
BZX884B4V7L	AK	4.61	4.7	4.79	5	1	3	2	80	500	-5	2
BZX884B5V1L	AL	5	5.1	5.2	5	1	2	2	60	480	-3	4
BZX884B5V6L	AN	5.49	5.6	5.71	5	1	1	2	40	400	-2	6
BZX884B6V2L	AO	6.08	6.2	6.32	5	1	3	4	10	150	-1	7
BZX884B6V8L	AP	6.66	6.8	6.94	5	1	2	4	15	80	2	7
BZX884B7V5L	AS	7.35	7.5	7.65	5	1	1	5	15	80	3	7
BZX884B8V2L	AT	8.04	8.2	8.36	5	1	0.7	5	15	80	4	7
BZX884B9V1L	AU	8.92	9.1	9.28	5	1	0.5	6	15	100	5	8
BZX884B10L	AV	9.8	10	10.2	5	1	0.2	7	20	150	5	8
BZX884B11L	AX	10.78	11	11.22	5	1	0.1	8	20	150	5	9
BZX884B12L	AY	11.76	12	12.24	5	1	0.1	8	25	150	6	9
BZX884B13L	A2	12.74	13	13.26	5	1	0.1	8	30	170	7	9
BZX884B15L	A3	14.7	15	15.3	5	1	0.05	10.5	30	200	7	9
BZX884B16L	A5	15.68	16	16.32	5	1	0.05	11.2	40	200	8	9.5
BZX884B18L	A9	17.64	18	18.36	5	1	0.05	12.6	45	225	8	10
BZX884B20L	BA	19.6	20	20.4	5	1	0.05	14	55	225	8	10
BZX884B22L	BB	21.56	22	22.44	5	1	0.05	15.4	55	250	8	10
BZX884B24L	BD	23.52	24	24.48	5	1	0.05	16.8	70	250	8	10
BZX884B27L	BE	26.46	27	27.54	2	0.5	0.05	18.9	80	300	8	10
BZX884B30L	BG	29.4	30	30.6	2	0.5	0.05	21	80	300	8	10
BZX884B33L	BH	32.34	33	33.66	2	0.5	0.05	23.1	80	325	8	10
BZX884B36L	BJ	35.28	36	36.72	2	0.5	0.05	25.2	90	350	8	10
BZX884B39L	BK	38.22	39	39.78	2	0.5	0.05	27.3	130	350	10	12
BZX884B43L	BL	42.14	43	43.86	2	35	0.05	30.1	150	375	10	12
BZX884B47L	BN	46.06	47	47.94	2	0.5	0.05	32.9	170	375	10	12

**Notes**

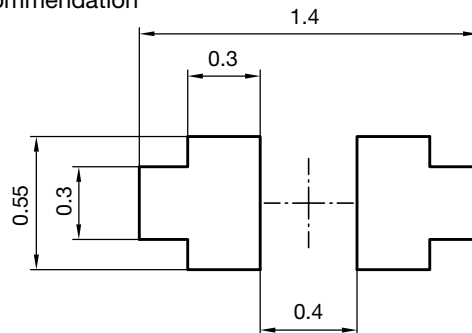
<sup>(1)</sup> Pulse test  $t_p = 5\text{ ms}$



## PACKAGE DIMENSIONS in millimeters: DFN1006-2A



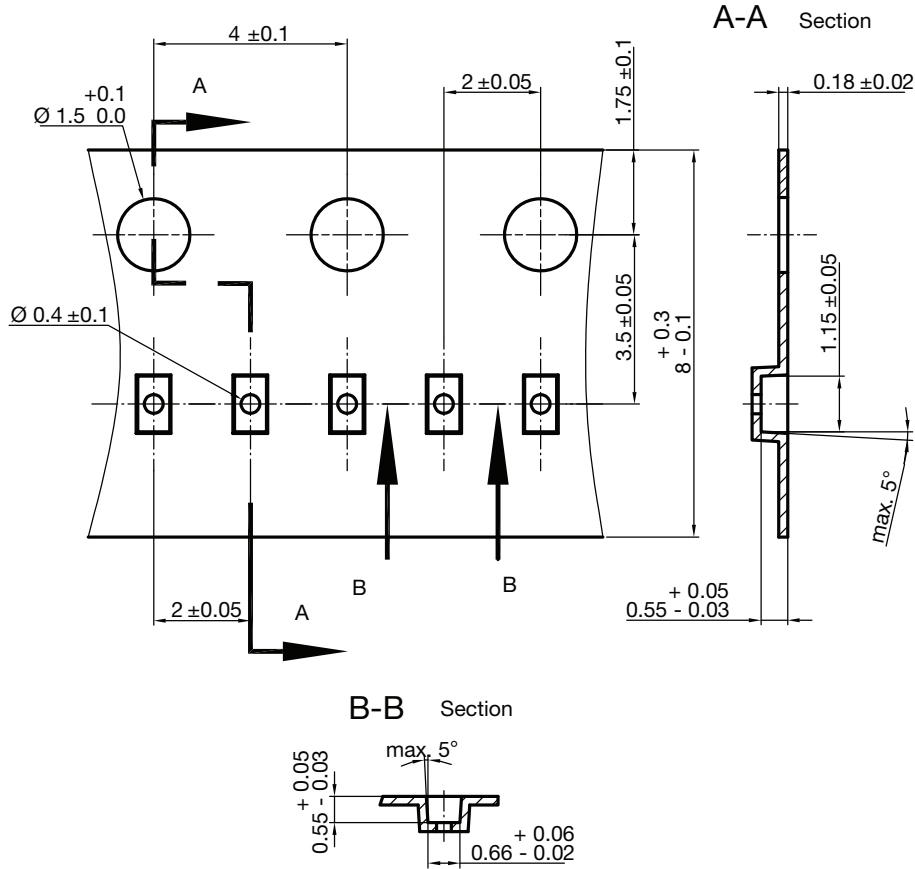
### Footprint recommendation



Document no.: S8-V-3906.04-059 (4)  
Created - Date: 11-Jul-2018  
Rev.5 - Date: 17-Sep-2021

23191

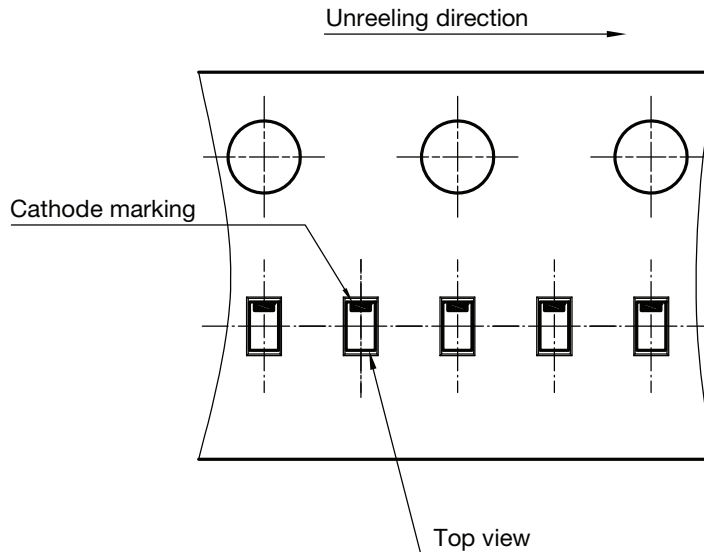
**CARRIER TAPE DFN1006-2A**



S8-V-3906.04-063 (4)  
created 28.10.2019

surface resistance:  $10^5 - 10^{11} \frac{\text{OHMS}}{\text{SQ}}$   
Cumulative tolerances of 10 sprocket holes is  $\pm 0.2 \text{ mm}$

**ORIENTATION IN CARRIER TAPE DFN1006-2A**



S8-V-3906.04-064 (4)  
created 28.10.2019



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