BZX884D-B10

Voltage regulator diode

Rev. 1 — 11 October 2017 Product data sheet

1 Product profile

1.1 General description

General-purpose Zener diode, encapsulated in an SOD882D leadless ultra small Surface-Mounted Device (SMD) plastic package with visible and solderable side pads.

1.2 Features and benefits

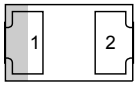
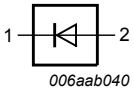
- Power dissipation comparable to SOT23
- Package height typ. 0.37 mm
- AEC-Q101 qualified

1.3 Applications

- General regulation functions
- Mobile applications
- ElectroStatic Discharge (ESD) ultra high-speed switching
- High-frequency applications
- Mobile communication, digital cameras, PDAs and PCMCIA cards

2 Pinning information

Table 1. Pinning

Pin	Symbol	Description	Simplified outline	Graphic symbol
1	K	cathode[1]	 Transparent top view	
2	A	anode		

[1] The marking bar indicates the cathode.

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3 Ordering information

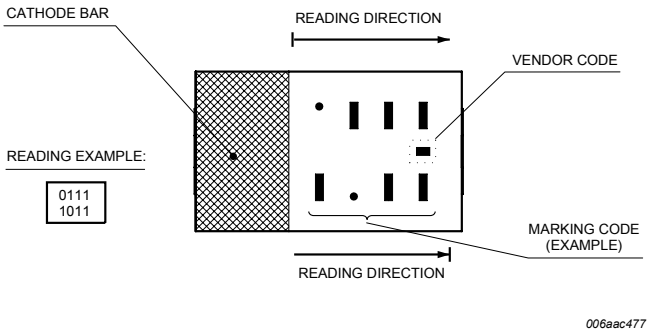
Table 2. Ordering information

Type number	Package		
	Name	Description	Version
BZX884D-B10	-	leadless ultra small plastic package; 2 terminals; body 1.0 x 0.6 x 0.4 mm	SOD882D

4 Marking

Table 3. Marking Codes

Type number	Marking Code
BZX884D-B10	0110 0010



T_j = 25 °C

Figure 1. SOD882D binary marking code description

5 Limiting values

Table 4. Limiting values

In accordance with the Absolute Maximum Rating System (IEC 60134).

Symbol	Parameter	Conditions		Min	Max	Unit
I_F	forward current			-	200	mA
I_{ZSM}	non-repetitive peak reverse current	t_p = 100 µs; square wave; T_{amb} = 25 °C; prior to surge		-		
P_{tot}	total power dissipation	T_{amb} = 25 °C	[1]	-	250	mW
T_j	junction temperature			-	150	°C
T_{amb}	ambient temperature			−55	+150	°C
T_{stg}	storage temperature			−65	+150	°C

[1] Refer to SOD882 standard mounting conditions (footprint), FR4 with 60 µ copper strip line.

6 Thermal characteristics

Table 5. Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$R_{th(j-a)}$	thermal resistance from junction to ambient	in free air	-	-	500	K/W

7 Characteristics

Table 6. Characteristics

T_j = 25 °C unless otherwise specified.

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V_F	forward voltage	I_F = 10 mA		-	-	0.9	V
I_R	reverse current	V_R = 7 V		-	-	200	nA

BZX884-B	Working voltage V_Z (V); at I_Z = 5 mA		Differential resistance r_{diff} (Ω);				Temperature coefficient S_Z (mV/K);	Diode capacit. C_d (pF)[1]	Non-repetitive peak reverse current I_{ZSM} (A) at t_p = 100 µs; T_{amb} = 25°C
	Tol. ± 2%		at I_{Ztest} = 1 mA		at I_{Ztest} = 5 mA				
	Min	Max	Typ	Max	Typ	Max	Typ	Max	Max
10	9.80	10.20	20	150	2	10	6.0	110	3

[1] f = 1 MHz; V_R = 0 V

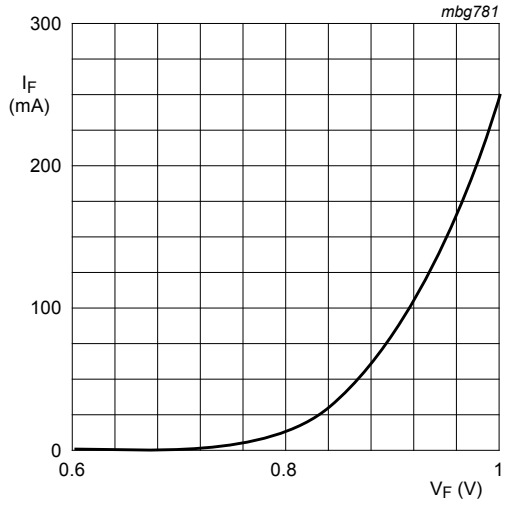
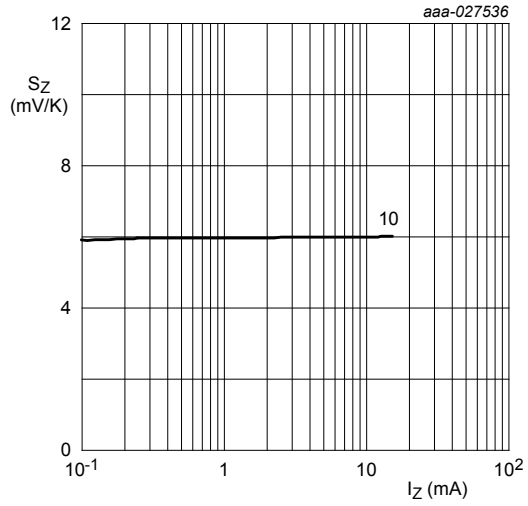


Figure 2. Forward current as a function of forward voltage; typical values

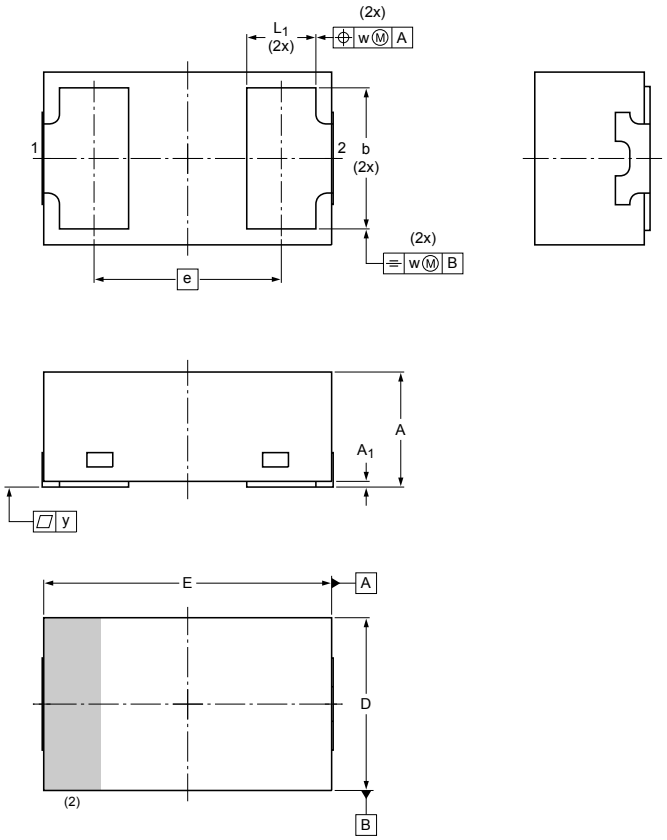


T_j = 25 °C to 150 °C

Figure 3. Temperature coefficient as a function of working current; typical values

8 Package outline

DFN1006D-2: Leadless ultra small plastic package; 2 terminals; body 1 x 0.6 x 0.4 mm **SOD882D**



Dimensions

Unit		A(1)	A1	b	D	E	e	L1	w	y
mm	max	0.4	0.04	0.55	0.65	1.05		0.30	0.1	0.03
	nom			0.50	0.60	1.00	0.65	0.25		
	min			0.45	0.55	0.95		0.22		

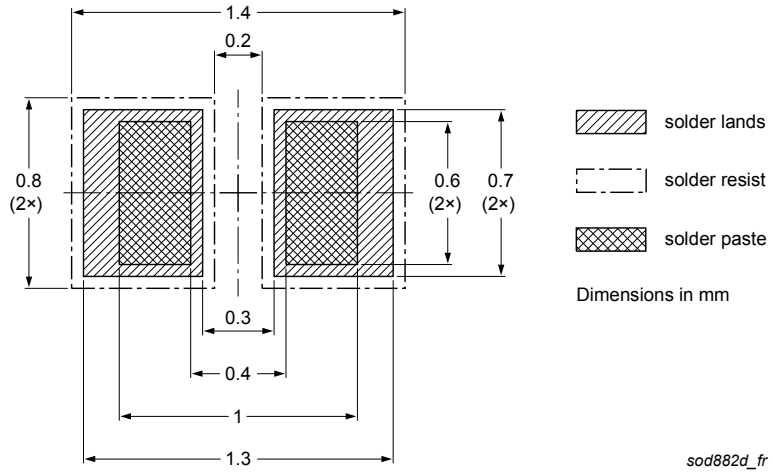
Note
1. Dimension including plating thickness.
2. The marking bar indicates the cathode (if applicable).

sod882d_po

Outline version	References				European projection	Issue date
	IEC	JEDEC	JEITA			
SOD882D						~~10-09-27~~ 12-05-01

Figure 4. Package outline SOD882D

9 Soldering



Reflow soldering is the only recommended soldering method.
Dimensions in mm.

Figure 5. Reflow soldering footprint SOD882D

10 Revision history

Table 7. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
BZX884D-B10 v 1	20171011	Product data sheet	-	-

11 Legal information

11.1 Data sheet status

Document status[1][2]	Product status[3]	Definition
Objective [short] data sheet	Development	This document contains data from the objective specification for product development.
Preliminary [short] data sheet	Qualification	This document contains data from the preliminary specification.
Product [short] data sheet	Production	This document contains the product specification.

[1] Please consult the most recently issued document before initiating or completing a design.
[2] The term 'short data sheet' is explained in section "Definitions".
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