



# BZX884D-C12

Voltage regulator diode

Rev. 1 — 12 October 2017

Preliminary 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

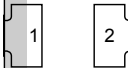
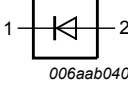
- Power dissipation comparable to SOT23
- Package height typ. 0.37 mm
- AEC-Q101 qualified

### 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 <sup>[1]</sup>	 Transparent top view	 006aab040
2	A	anode		

[1] The marking bar indicates the cathode.

### 3 Ordering information

Table 2. Ordering information

Type number	Package		
	Name	Description	Version
BZX884D-C12	-	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-C12	0110 0011

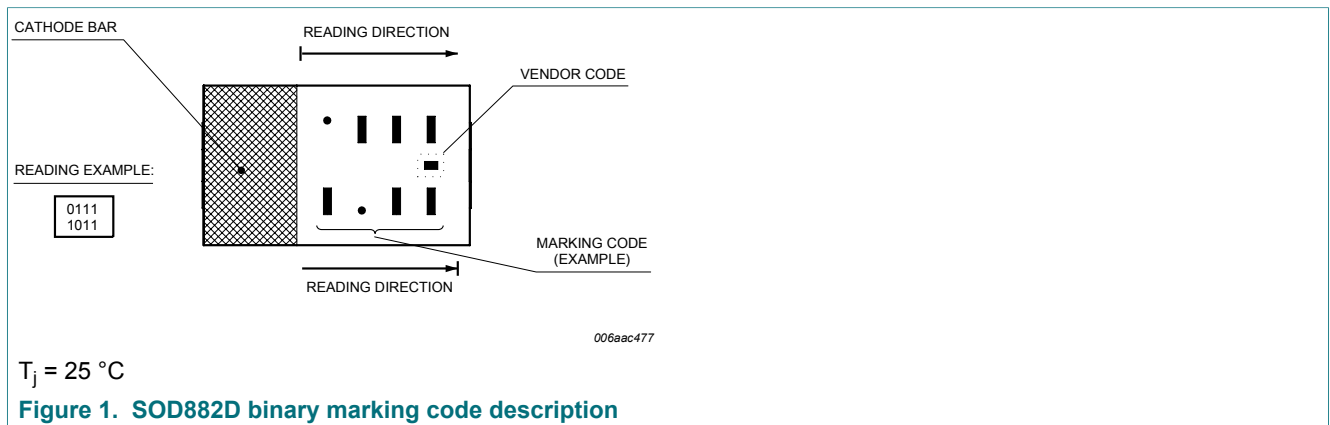


Figure 1. SOD882D binary marking code description

## 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	$t_p = 100 \mu\text{s}$ ; square wave; $T_{amb} = 25 \text{ }^\circ\text{C}$ ; prior to surge	-		
$P_{tot}$	total power dissipation	$T_{amb} = 25 \text{ }^\circ\text{C}$	[1]	250	mW
$T_j$	junction temperature		-	150	$^\circ\text{C}$
$T_{amb}$	ambient temperature		-55	+150	$^\circ\text{C}$
$T_{stg}$	storage temperature		-65	+150	$^\circ\text{C}$

[1] Refer to SOD882 standard mounting conditions (footprint), FR4 with 60  $\mu$  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

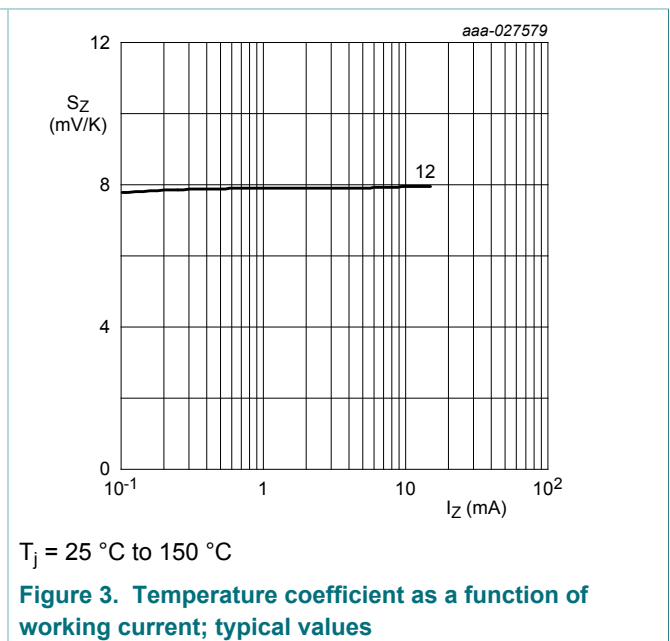
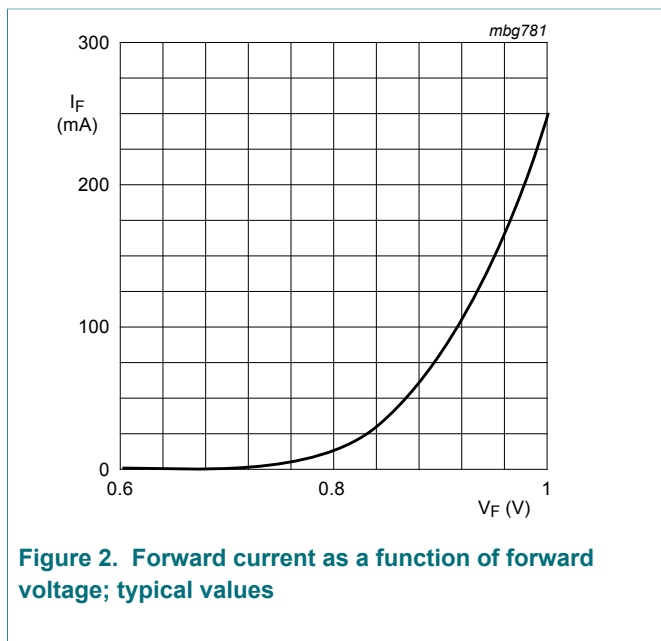
**Table 6. Characteristics**

$T_j = 25 \text{ }^\circ\text{C}$  unless otherwise specified.

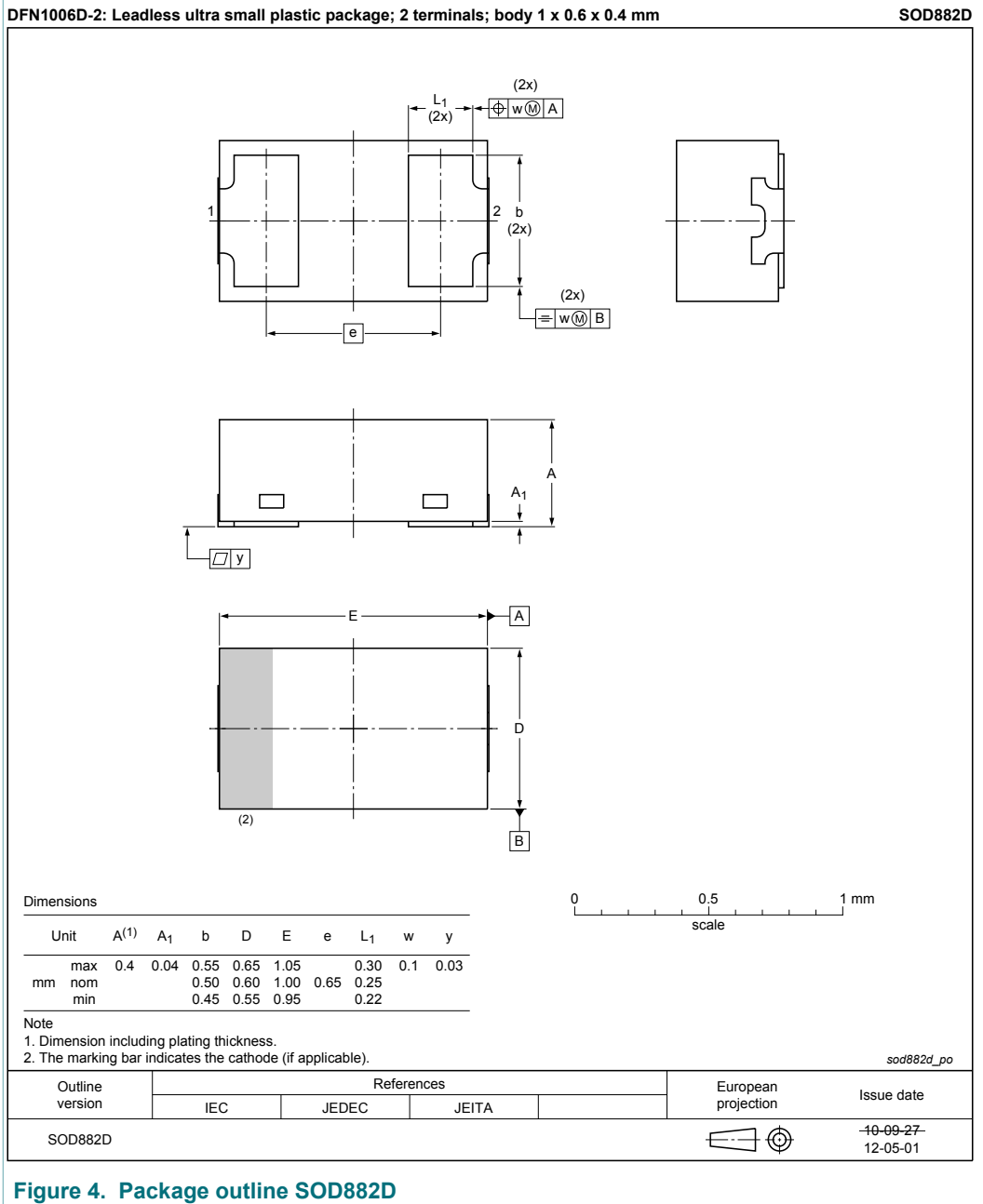
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$V_F$	forward voltage	$I_F = 10 \text{ mA}$	-	-	0.9	V
$I_R$	reverse current	$V_R = 8 \text{ V}$	-	-	100	nA

BZX884 -C	Working voltage $V_Z$ (V); at $I_Z = 5$ mA  Tol. $\pm 5\%$		Differential resistance $r_{diff}$ ( $\Omega$ );				Temperature coefficient $S_Z$ (mV/K);	Diode capacit. $C_d$ (pF) <sup>[1]</sup>	Non-repetitive peak reverse current $I_{ZSM}$ (A) at $t_p =$ 100 $\mu$ s; $T_{amb} =$ 25°C
			at $I_{Ztest} = 1$ mA		at $I_{Ztest} = 5$ mA				
	Min	Max	Typ	Max	Typ	Max	Typ	Max	Max
12	11.40	12.60	25	150	2	10	7.9	105	2.5

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

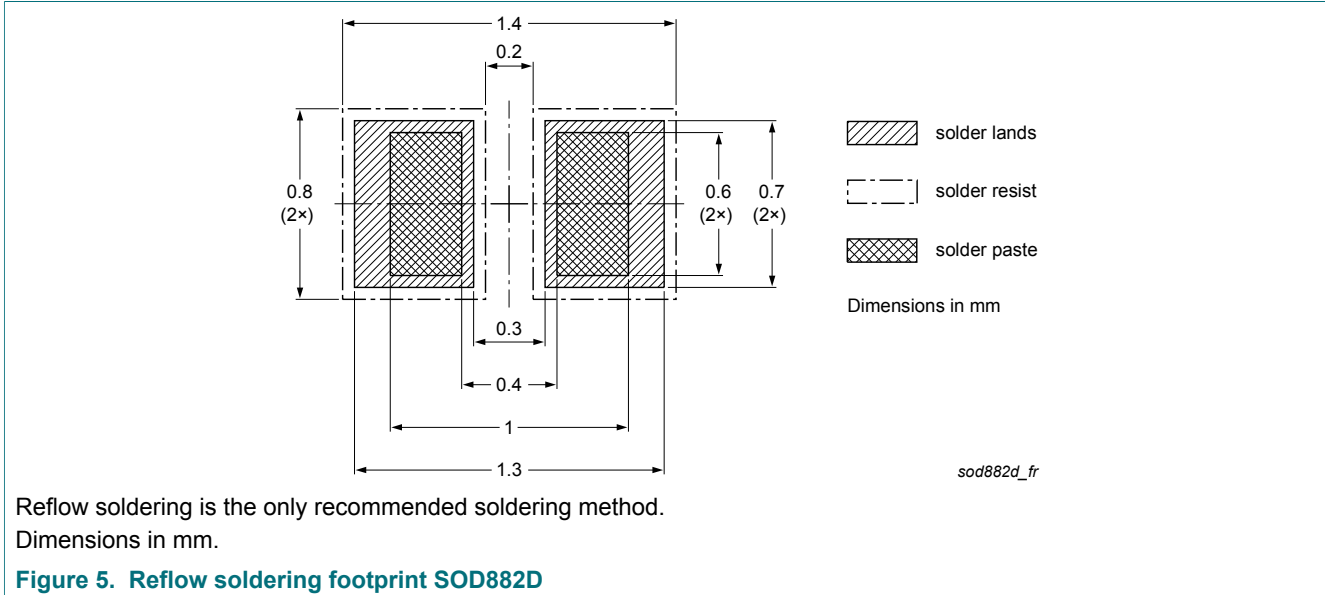


**8 Package outline**



**Figure 4. Package outline SOD882D**

**9 Soldering**



## 10 Revision history

Table 7. Revision history

Document ID	Release date	Data sheet status	Change notice	Supersedes
BZX884D-C12 v.1	20171012	Preliminary data sheet	-	-

## 11 Legal information

### 11.1 Data sheet status

Document status <sup>[1][2]</sup>	Product status <sup>[3]</sup>	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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