



PMEG6002ELD

60 V, 0.2 A low VF Schottky barrier rectifier

13 August 2026

Product data sheet

1. General description

Planar Schottky barrier rectifier with an integrated guard ring for stress protection, encapsulated in a SOD882D (DFN1006D-2) leadless ultra small Surface-Mounted Device (SMD) plastic package with visible and solderable side pads.

2. Features and benefits

- Average forward current: $I_{F(AV)} \leq 0.2$ A
- Reverse voltage: $V_R \leq 60$ V
- Low forward voltage: $V_F \leq 600$ mV
- Solderable side pads
- Package height typ. 0.37 mm

3. Applications

- LED backlight for mobile application
- Low voltage rectification
- High efficiency DC-to-DC conversion
- Switch Mode Power Supply (SMPS)
- Low power consumption applications

4. Quick reference data

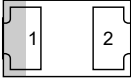
Table 1. Quick reference data

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
$I_{F(AV)}$	average forward current	$\delta = 0.5$; $f = 20$ kHz; $T_{amb} \leq 130$ °C; square wave	[1]	-	-	0.2	A
		$\delta = 0.5$; $f = 20$ kHz; $T_{sp} \leq 140$ °C; square wave		-	-	0.2	A
V_R	reverse voltage	$T_j = 25$ °C		-	-	60	V
V_F	forward voltage	$I_F = 200$ mA; pulsed; $t_p \leq 300$ μ s; $\delta \leq 0.02$; $T_j = 25$ °C		-	540	600	mV
I_R	reverse current	$V_R = 10$ V; pulsed; $t_p \leq 2$ ms; $\delta \leq 0.02$; $T_j = 25$ °C		-	2	10	μ A

[1] Device mounted on a ceramic PCB, Al_2O_3 , standard footprint.

5. Pinning information

Table 2. Pinning information

Pin	Symbol	Description	Simplified outline	Graphic symbol
1	K	cathode[1]	 Transparent top view DFN1006D-2 (SOD882D)	 <i>sym001</i>
2	A	anode		

[1] The marking bar indicates the cathode.

6. Ordering information

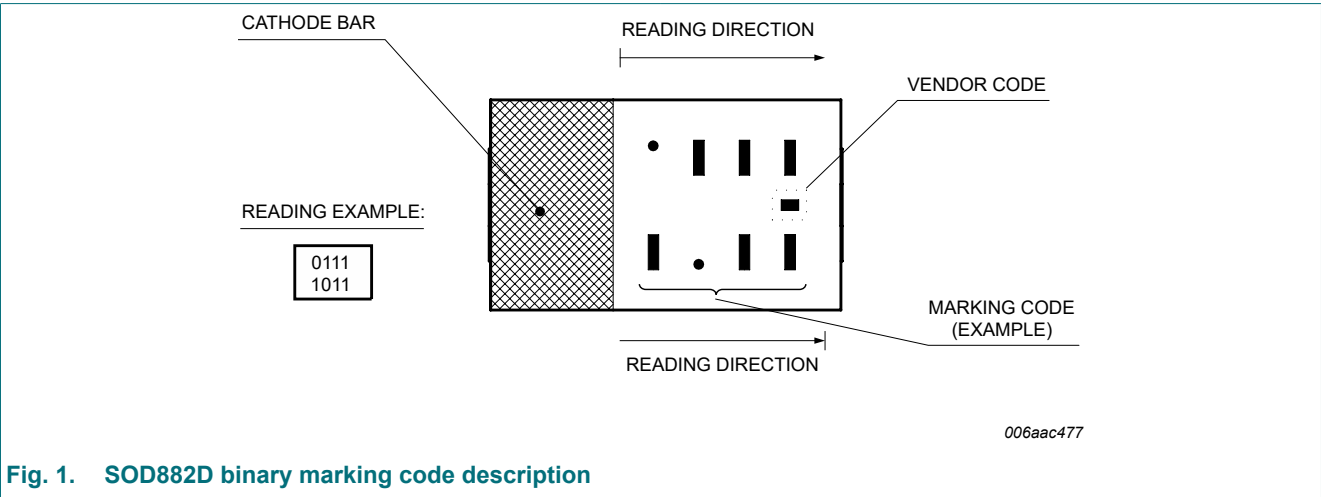
Table 3. Ordering information

Type number	Package		
	Name	Description	Version
PMEG6002ELD	DFN1006D-2	leadless ultra small plastic package with side-wettable flanks (SWF); 2 terminals; 0.65 mm pitch; 1 mm x 0.6 mm x 0.4 mm body	SOD882D

7. Marking

Table 4. Marking codes

Type number	Marking code
PMEG6002ELD	1111 1010



8. Limiting values

Table 5. Limiting values
In accordance with the Absolute Maximum Rating System (IEC 60134).

Symbol	Parameter	Conditions		Min	Max	Unit
V _R	reverse voltage	T _j = 25 °C		-	60	V
I _F	forward current	T _{sp} ≤ 140 °C		-	0.28	A
I _{F(AV)}	average forward current	δ = 0.5; f = 20 kHz; T _{amb} ≤ 130 °C; square wave	[1]	-	0.2	A
		δ = 0.5; f = 20 kHz; T _{sp} ≤ 140 °C; square wave		-	0.2	A
I _{FRM}	repetitive peak forward current	t _p ≤ 1 ms; δ ≤ 0.25		-	1	A
I _{FSM}	non-repetitive peak forward current	t _p = 8 ms; square wave; T _{j(init)} = 25 °C		-	3	A
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C	[2]	-	370	mW
			[3]	-	735	mW
			[1]	-	1090	mW
T _j	junction temperature			-	150	°C
T _{amb}	ambient temperature			-55	150	°C
T _{stg}	storage temperature			-65	150	°C

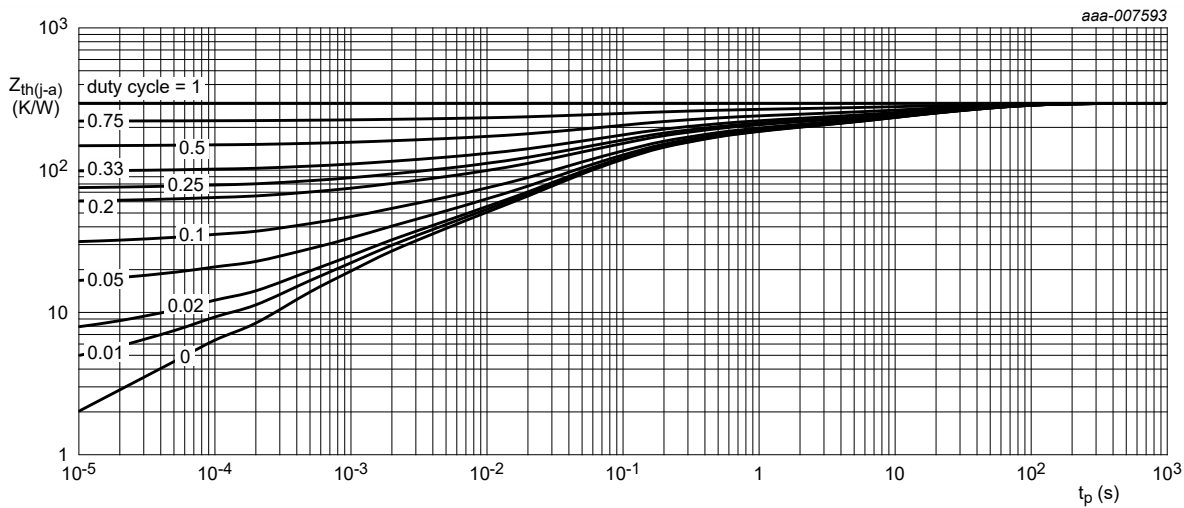
- [1] Device mounted on a ceramic PCB, Al₂O₃, standard footprint.
[2] Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint.
[3] Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for cathode 1 cm².

9. Thermal characteristics

Table 6. Thermal characteristics

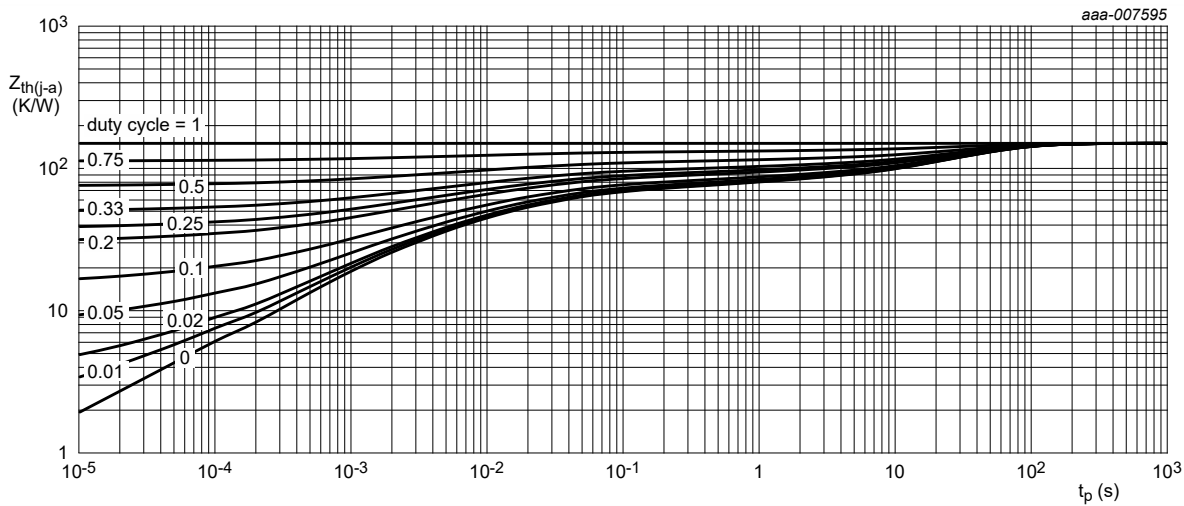
Symbol	Parameter	Conditions		Min	Typ	Max	Unit
R _{th(j-a)}	thermal resistance from junction to ambient	in free air	[1] [2]	-	-	340	K/W
			[1] [3]	-	-	170	K/W
			[1] [4]	-	-	115	K/W
R _{th(j-sp)}	thermal resistance from junction to solder point		[5]	-	-	20	K/W

- [1] For Schottky barrier diodes thermal runaway has to be considered, as in some applications the reverse power losses P_R are a significant part of the total power losses.
[2] Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.
[3] Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for cathode 1 cm².
[4] Device mounted on a ceramic PCB, Al₂O₃, standard footprint.
[5] Soldering point of cathode tab.



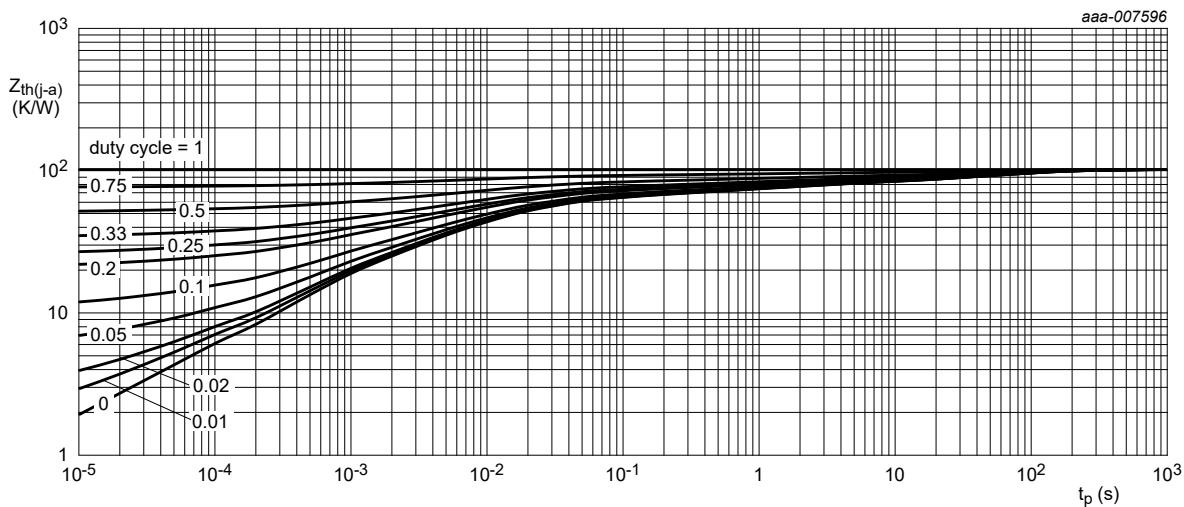
FR4 PCB, standard footprint

Fig. 2. Transient thermal impedance from junction to ambient as a function of pulse duration; typical values



FR4 PCB, mounting pad for cathode 1 cm²

Fig. 3. Transient thermal impedance from junction to ambient as a function of pulse duration; typical values



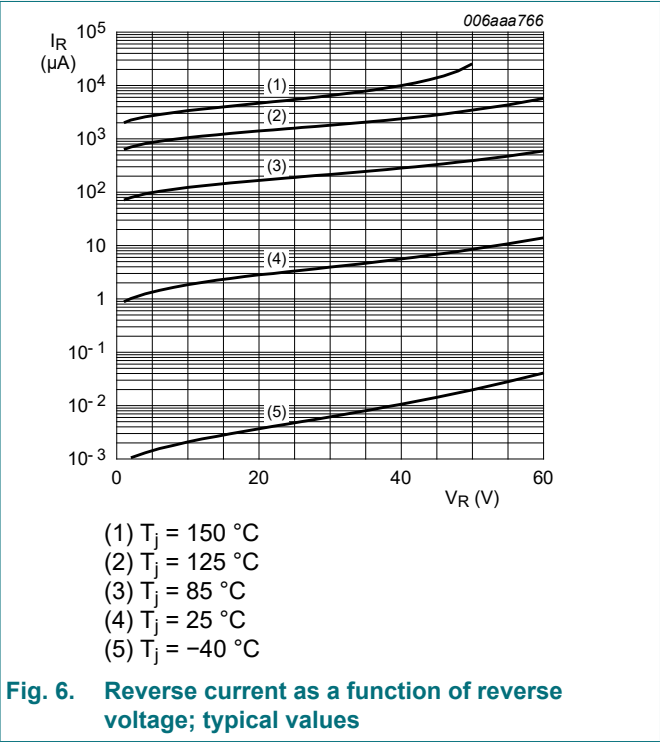
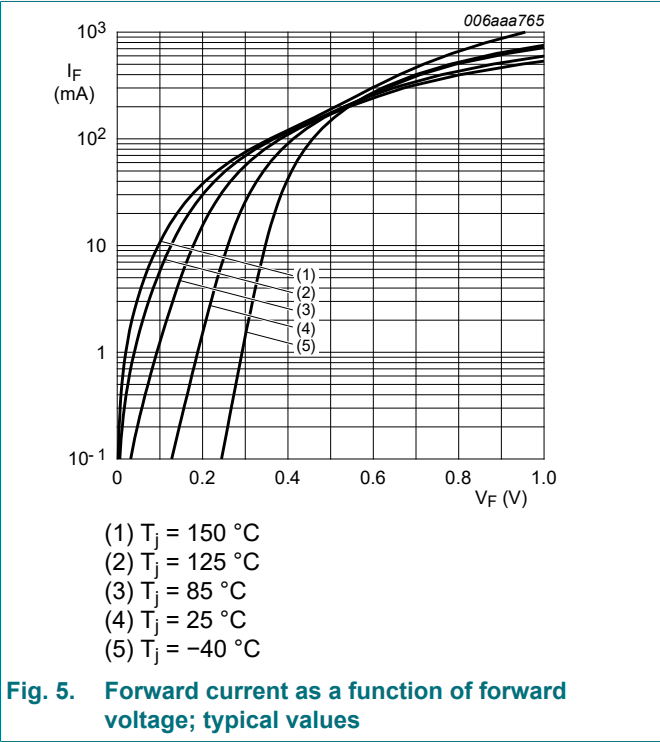
Ceramic PCB, Al₂O₃, standard footprint

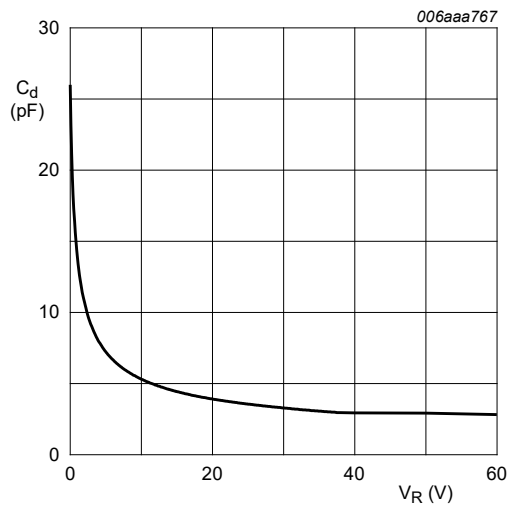
Fig. 4. Transient thermal impedance from junction to ambient as a function of pulse duration; typical values

10. Characteristics

Table 7. Characteristics

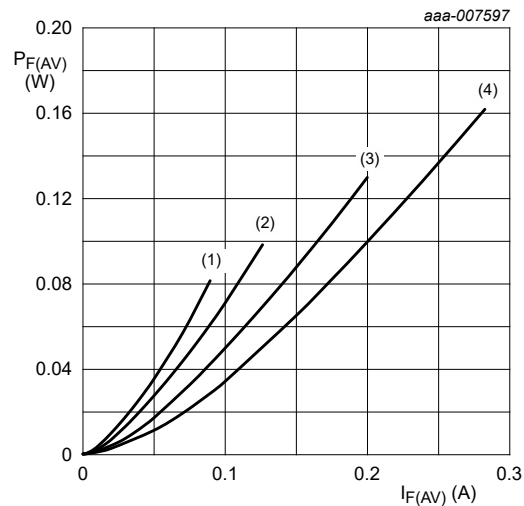
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V _F	forward voltage	I _F = 0.1 mA; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _J = 25 °C	-	130	170	mV
		I _F = 1 mA; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _J = 25 °C	-	190	230	mV
		I _F = 10 mA; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _J = 25 °C	-	260	300	mV
		I _F = 100 mA; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _J = 25 °C	-	410	470	mV
		I _F = 200 mA; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _J = 25 °C	-	540	600	mV
I _R	reverse current	V _R = 10 V; pulsed; t _p ≤ 2 ms; δ ≤ 0.02; T _J = 25 °C	-	2	10	μA
		V _R = 60 V; pulsed; t _p ≤ 2 ms; δ ≤ 0.02; T _J = 25 °C	-	20	100	μA
		V _R = 10 V; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _{amb} = 100 °C	-	310	-	μA
		V _R = 60 V; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _{amb} = 100 °C	-	2	-	mA
C _d	diode capacitance	V _R = 1 V; f = 1 MHz; T _J = 25 °C	-	15	20	pF
t _{rr}	reverse recovery time	I _F = 10 mA; I _R = 10 mA; I _{R(meas)} = 1 mA; R _L = 100 Ω; T _J = 25 °C	-	4.5	-	ns





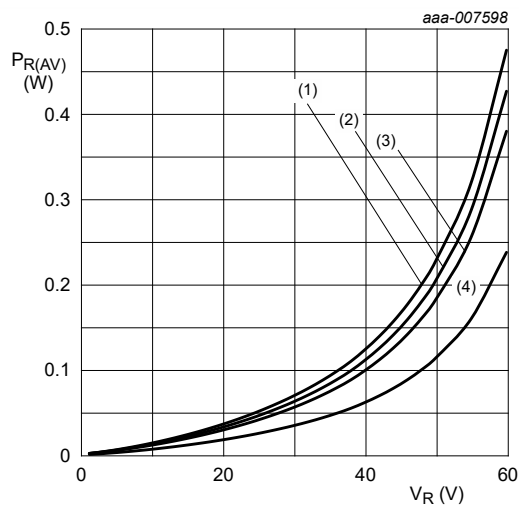
$f = 1 \text{ MHz}$; $T_{\text{amb}} = 25 \text{ }^{\circ}\text{C}$

Fig. 7. Diode capacitance as a function of reverse voltage; typical values



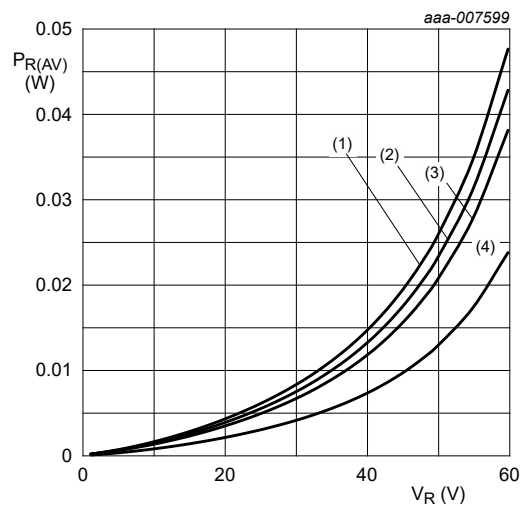
$T_j = 150 \text{ }^{\circ}\text{C}$
(1) $\delta = 0.1$; $f = 20 \text{ kHz}$
(2) $\delta = 0.2$; $f = 20 \text{ kHz}$
(3) $\delta = 0.5$; $f = 20 \text{ kHz}$
(4) $\delta = 1$ (DC)

Fig. 8. Average forward power dissipation as a function of average forward current; typical values



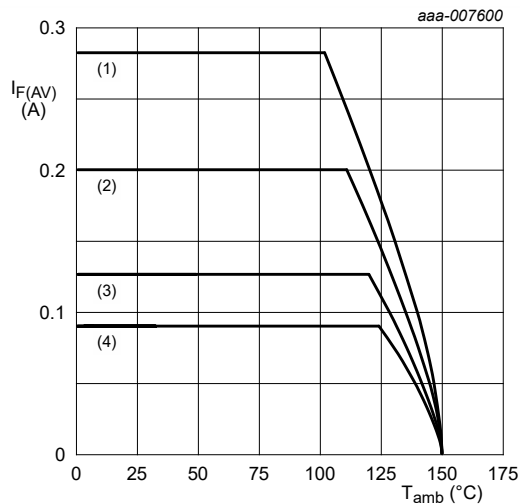
$T_j = 125 \text{ }^{\circ}\text{C}$
(1) $\delta = 1$ (DC)
(2) $\delta = 0.9$; $f = 20 \text{ kHz}$
(3) $\delta = 0.8$; $f = 20 \text{ kHz}$
(4) $\delta = 0.5$; $f = 20 \text{ kHz}$

Fig. 9. Average reverse power dissipation as a function of reverse voltage; typical values



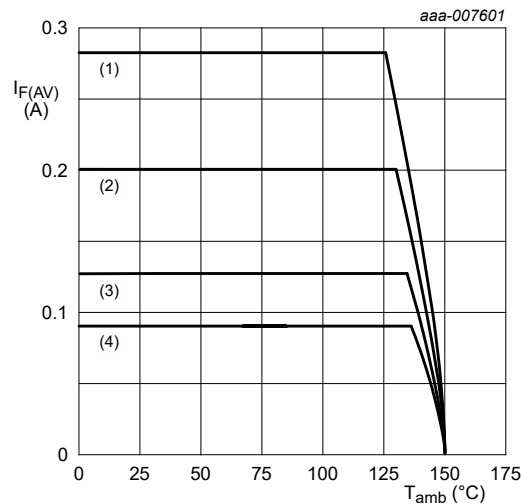
$T_j = 85 \text{ }^{\circ}\text{C}$
(1) $\delta = 1$ (DC)
(2) $\delta = 0.9$; $f = 20 \text{ kHz}$
(3) $\delta = 0.8$; $f = 20 \text{ kHz}$
(4) $\delta = 0.5$; $f = 20 \text{ kHz}$

Fig. 10. Average reverse power dissipation as a function of reverse voltage; typical values



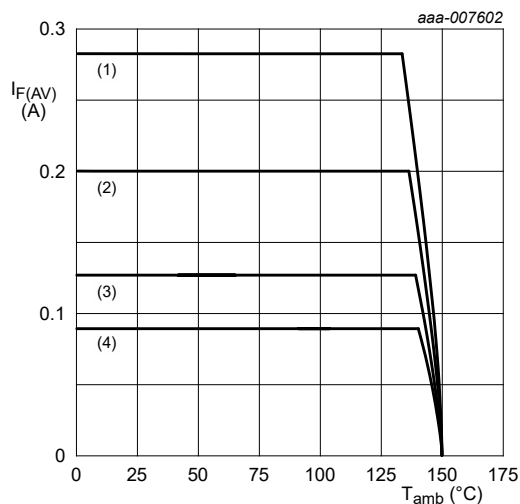
FR4 PCB, standard footprint
 $T_j = 150$ °C
(1) $\delta = 1$ (DC)
(2) $\delta = 0.5$; $f = 20$ kHz
(3) $\delta = 0.2$; $f = 20$ kHz
(4) $\delta = 0.1$; $f = 20$ kHz

Fig. 11. Average forward current as a function of ambient temperature; typical values



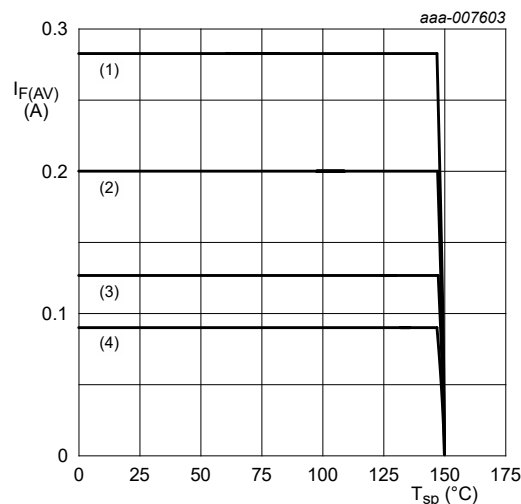
FR4 PCB, mounting pad for cathode 1 cm²
 $T_j = 150$ °C
(1) $\delta = 1$ (DC)
(2) $\delta = 0.5$; $f = 20$ kHz
(3) $\delta = 0.2$; $f = 20$ kHz
(4) $\delta = 0.1$; $f = 20$ kHz

Fig. 12. Average forward current as a function of ambient temperature; typical values



Ceramic PCB, Al₂O₃, standard footprint
 $T_j = 150$ °C
(1) $\delta = 1$ (DC)
(2) $\delta = 0.5$; $f = 20$ kHz
(3) $\delta = 0.2$; $f = 20$ kHz
(4) $\delta = 0.1$; $f = 20$ kHz

Fig. 13. Average forward current as a function of ambient temperature; typical values



$T_j = 150$ °C
(1) $\delta = 1$ (DC)
(2) $\delta = 0.5$; $f = 20$ kHz
(3) $\delta = 0.2$; $f = 20$ kHz
(4) $\delta = 0.1$; $f = 20$ kHz

Fig. 14. Average forward current as a function of solder point temperature; typical values

11. Test information

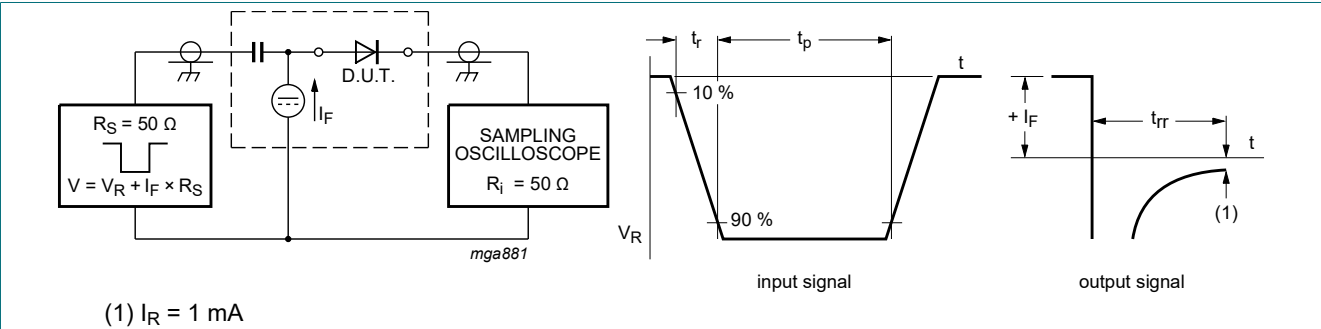


Fig. 15. Reverse recovery time: test circuit and waveforms

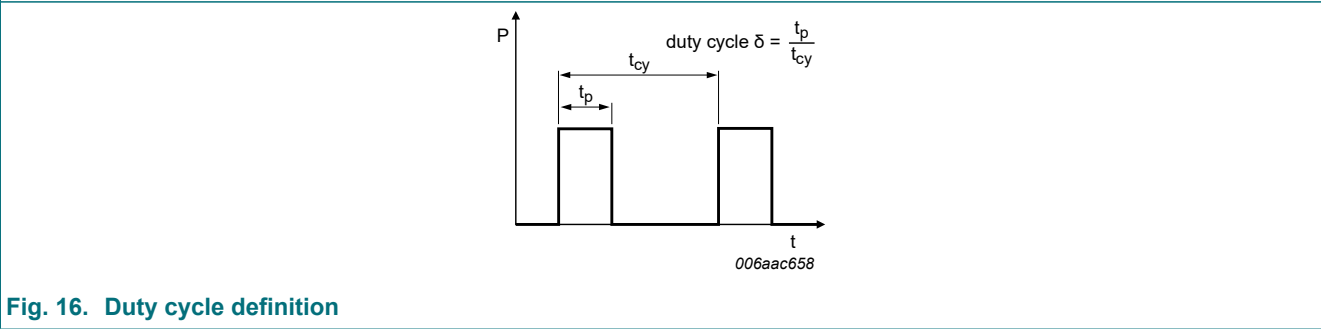


Fig. 16. Duty cycle definition

The current ratings for the typical waveforms are calculated according to the equations:

$I_{F(AV)} = I_M \times \delta$ with I_M defined as peak current

$I_{RMS} = I_{F(AV)}$ at DC

$I_{RMS} = I_M \times \sqrt{\delta}$ with I_{RMS} defined as RMS current.

12. Package outline

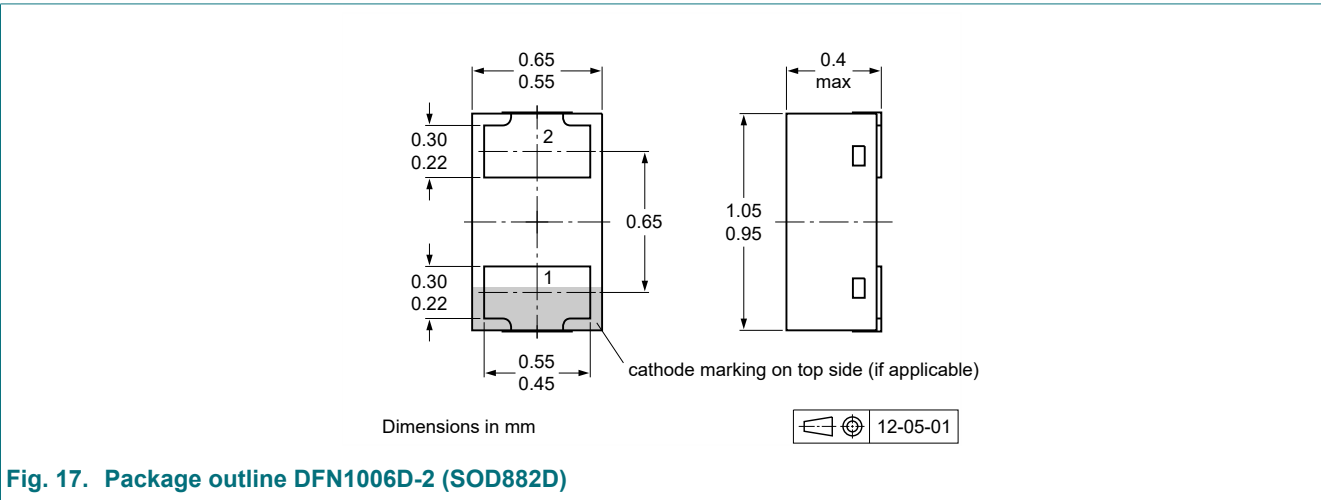


Fig. 17. Package outline DFN1006D-2 (SOD882D)

13. Soldering

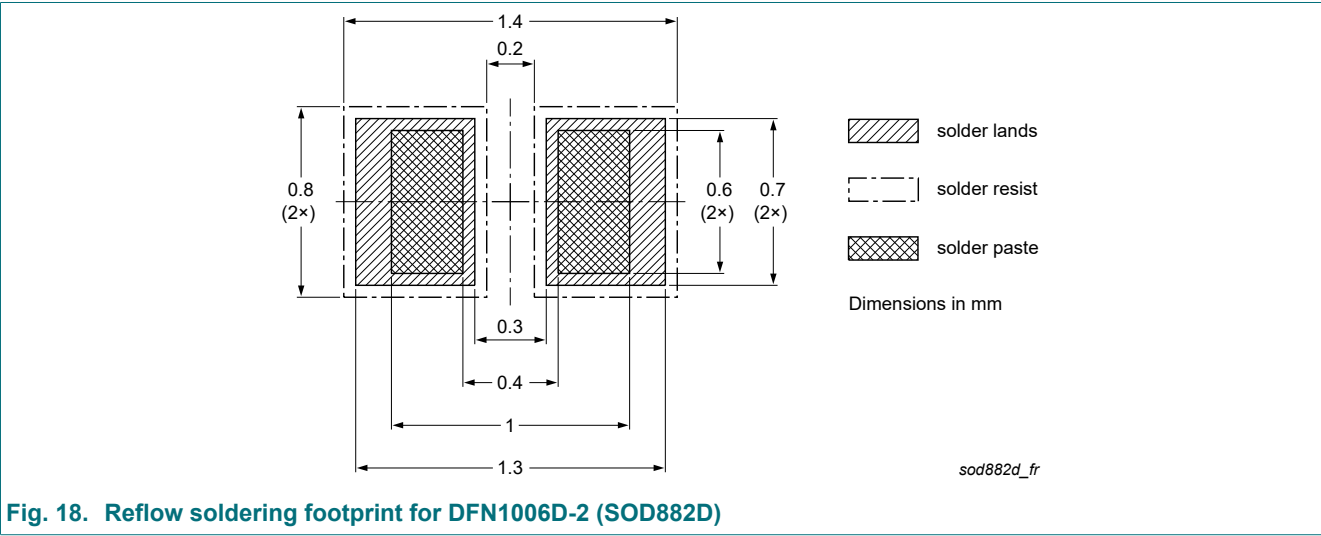


Fig. 18. Reflow soldering footprint for DFN1006D-2 (SOD882D)

14. Revision history

Table 8. Revision history

Data sheet ID	Release date	Data sheet status	Change notice	Supersedes
PMEG6002ELD v.4	20260813	Product data sheet	-	PMEG6002ELD v.3
Modification:	- Product(s) changed to non-automotive qualification. Please refer to nexperia.com for automotive (-Q) product alternative(s). - Section "Packing information" removed.			
PMEG6002ELD v.3	20140205	Product data sheet	-	PMEG6002ELD v.2
PMEG6002ELD v.2	20131210	Product data sheet	-	PMEG6002ELD v.1
PMEG6002ELD v.1	20130503	Product data sheet	-	-

15. Legal information

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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Contents

1. General description..... 1

2. Features and benefits..... 1

3. Applications..... 1

4. Quick reference data..... 1

5. Pinning information.....2

6. Ordering information.....2

7. Marking.....2

8. Limiting values..... 3

9. Thermal characteristics..... 3

10. Characteristics..... 5

11. Test information..... 8

12. Package outline..... 8

13. Soldering..... 9

14. Revision history..... 10

15. Legal information..... 11

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