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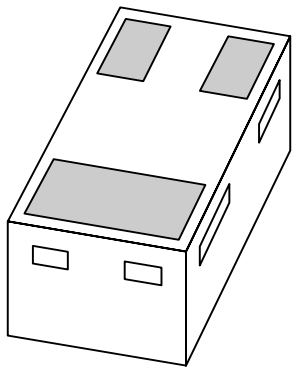
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If you have any questions related to the data sheet, please contact our nearest sales office via e-mail or telephone (details via [salesaddresses@nexperia.com](mailto:salesaddresses@nexperia.com)). Thank you for your cooperation and understanding,

Kind regards,

Team Nexperia

# DATA SHEET



**BAT54CM**

Schottky barrier double diode

# Schottky barrier double diode

# BAT54CM

### FEATURES

- Low forward voltage
- Leadless ultra small plastic package (1.0 × 0.6 × 0.5 mm)
- Boardspace 1.17 mm<sup>2</sup> (approx. 10% of SOT23)
- Power dissipation comparable to SOT23.

### APPLICATIONS

- Ultra high-speed switching
- Voltage clamping
- Protection circuits
- Mobile communications, digital (still) cameras, PDAs and PCMCIA cards.

### DESCRIPTION

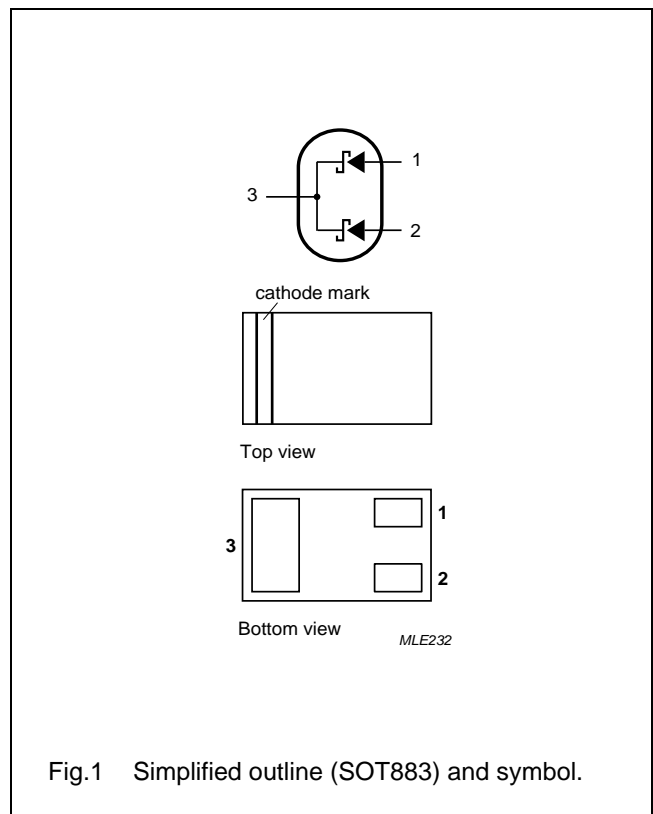
Planar Schottky barrier double diode encapsulated in a SOT883 leadless ultra small plastic package.

### MARKING

TYPE NUMBER	MARKING CODE
BAT54CM	S3

### PINNING

PIN	DESCRIPTION
1	anode (a <sub>1</sub> )
2	anode (a <sub>2</sub> )
3	common cathode



### ORDERING INFORMATION

TYPE NUMBER	PACKAGE		
	NAME	DESCRIPTION	VERSION
BAT54CM	–	leadless ultra small plastic package; 3 solder lands; body 1.0 × 0.6 × 0.5 mm	SOT883

## Schottky barrier double diode

## BAT54CM

**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_R$	continuous reverse voltage		–	30	V
$I_F$	continuous forward current		–	200	mA
$I_{FRM}$	repetitive peak forward current	$t_p \leq 1$ s; $\delta \leq 0.5$	–	300	mA
$I_{FSM}$	non-repetitive peak forward current	$t_p < 10$ ms	–	600	mA
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	150	°C
$P_{tot}$	total power dissipation (per package)	$T_{amb} \leq 25$ °C; note 1	–	250	mW

**Note**

1. Refer to SOT883 standard mounting conditions (footprint); FR4 with 60  $\mu$ m copper strip line.

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	500	K/W

**Note**

1. Refer to SOT883 standard mounting conditions (footprint), FR4 with 60  $\mu$ m copper strip line.

**Soldering**

Reflow soldering is the only recommended soldering method.

**ELECTRICAL CHARACTERISTICS**

$T_{amb} = 25$  °C unless otherwise specified.

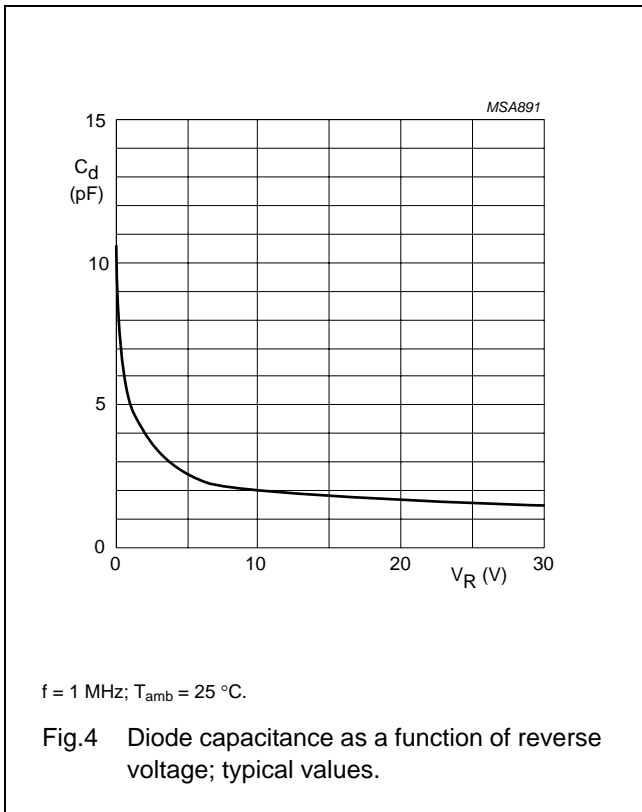
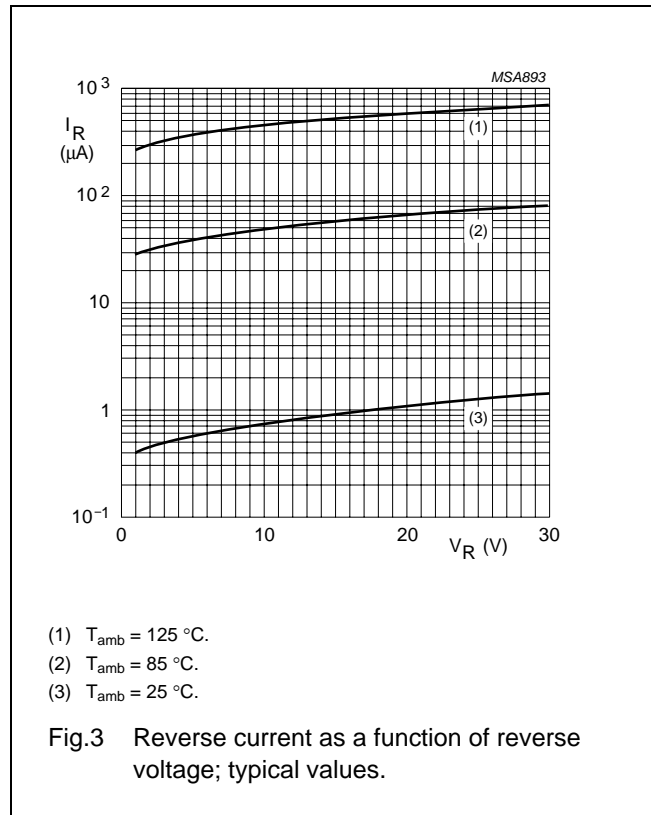
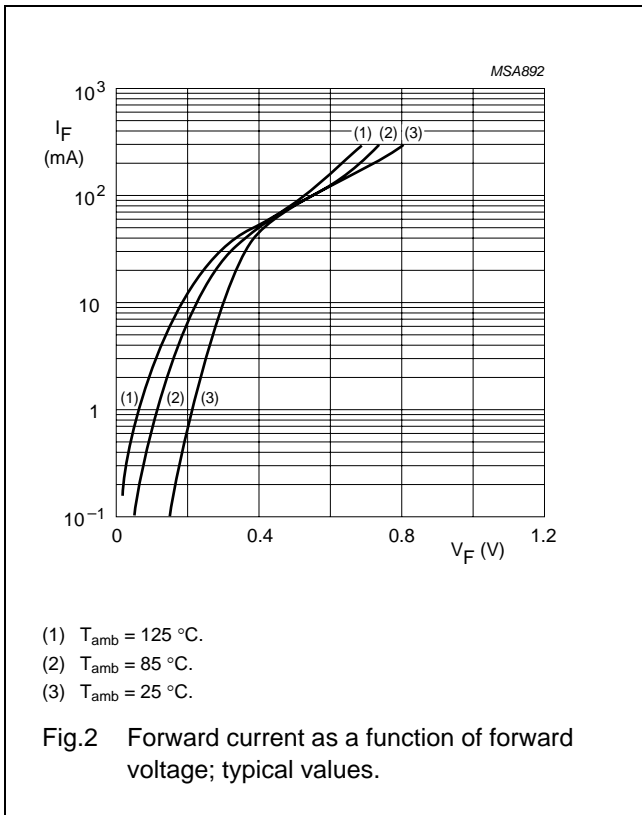
SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
<b>Per diode</b>				
$V_F$	forward voltage	see Fig.2; $I_F = 0.1$ mA $I_F = 1$ mA $I_F = 10$ mA $I_F = 30$ mA $I_F = 100$ mA	240 320 400 500 800	mV mV mV mV mV
$I_R$	continuous reverse current	$V_R = 25$ V; note 1; see Fig.3	2	$\mu$ A
$C_d$	diode capacitance	$f = 1$ MHz; $V_R = 1$ V; see Fig.4	10	pF

**Note**

1. Pulsed test:  $t_p \leq 300$   $\mu$ s;  $\delta \leq 0.02$ .

# Schottky barrier double diode

# BAT54CM



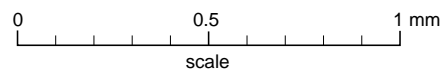
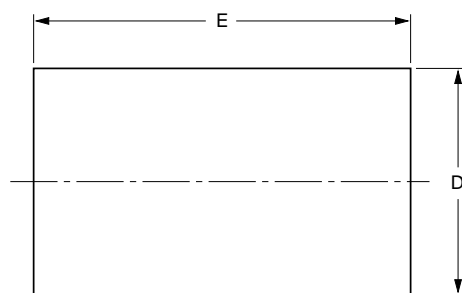
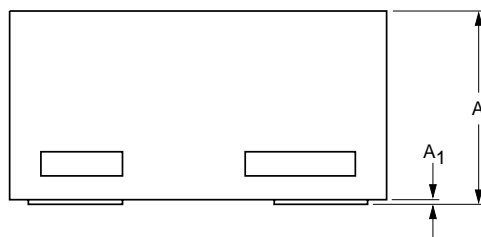
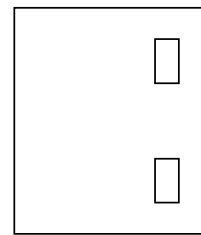
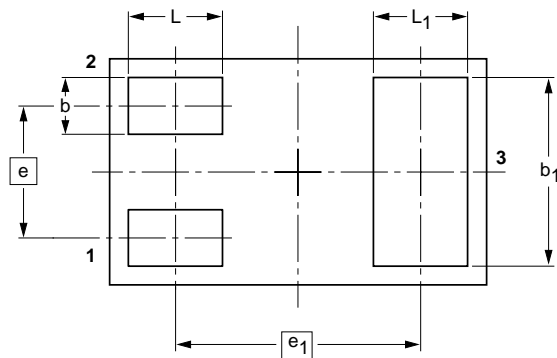
Schottky barrier double diode

BAT54CM

PACKAGE OUTLINE

Leadless ultra small plastic package; 3 solder lands; body 1.0 x 0.6 x 0.5 mm

SOT883



DIMENSIONS (mm are the original dimensions)

UNIT	A <sup>(1)</sup>	A <sub>1</sub> max.	b	b <sub>1</sub>	D	E	e	e <sub>1</sub>	L	L <sub>1</sub>
mm	0.50 0.46	0.03	0.20 0.12	0.55 0.47	0.62 0.55	1.02 0.95	0.35	0.65	0.30 0.22	0.30 0.22

Note

1. Including plating thickness

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	JEITA			
SOT883			SC-101			03-02-05 03-04-03

## Schottky barrier double diode

BAT54CM

## DATA SHEET STATUS

DOCUMENT STATUS <sup>(1)</sup>	PRODUCT STATUS <sup>(2)</sup>	DEFINITION
Objective data sheet	Development	This document contains data from the objective specification for product development.
Preliminary data sheet	Qualification	This document contains data from the preliminary specification.
Product data sheet	Production	This document contains the product specification.

## Notes

1. Please consult the most recently issued document before initiating or completing a design.
2. The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL <http://www.nxp.com>.

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# ***NXP Semiconductors***

## **Customer notification**

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## **Contact information**

For additional information please visit: **<http://www.nxp.com>**

For sales offices addresses send e-mail to: **[salesaddresses@nxp.com](mailto:salesaddresses@nxp.com)**

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