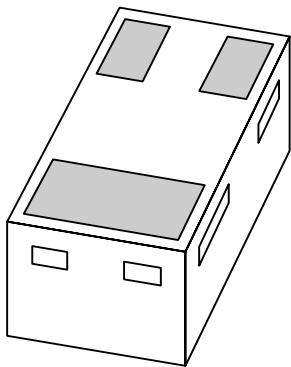


DATA SHEET



BAT54CM Schottky barrier double diode

Product specification

2003 Nov 11

Schottky barrier double diode

BAT54CM

FEATURES

- Low forward voltage
- Leadless ultra small plastic package (1.0 × 0.6 × 0.5 mm)
- Boardspace 1.17 mm² (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 ₁)
2	anode (a ₂)
3	common cathode

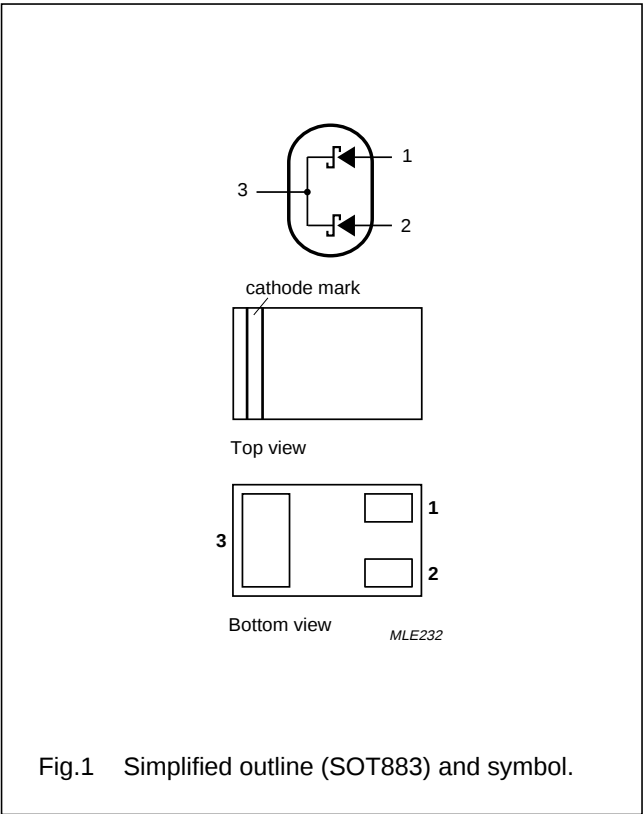


Fig.1 Simplified outline (SOT883) and symbol.

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

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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 µm 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 µm copper strip line.

Soldering

Reflow soldering is the only recommended soldering method.

ELECTRICAL CHARACTERISTICS

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

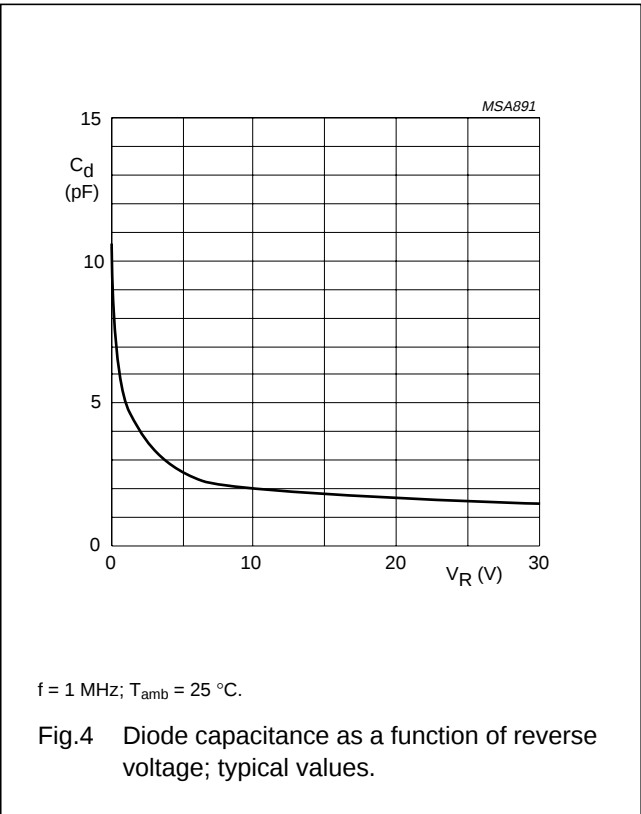
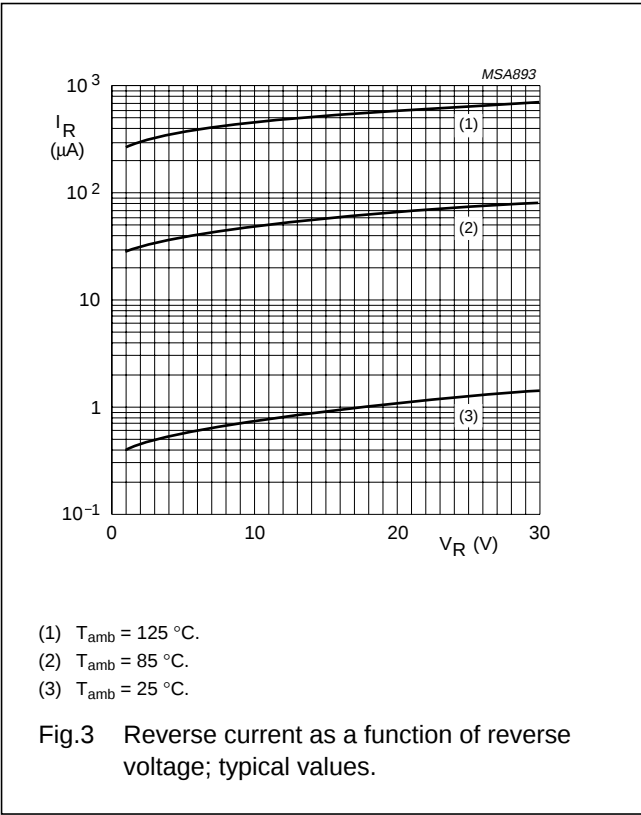
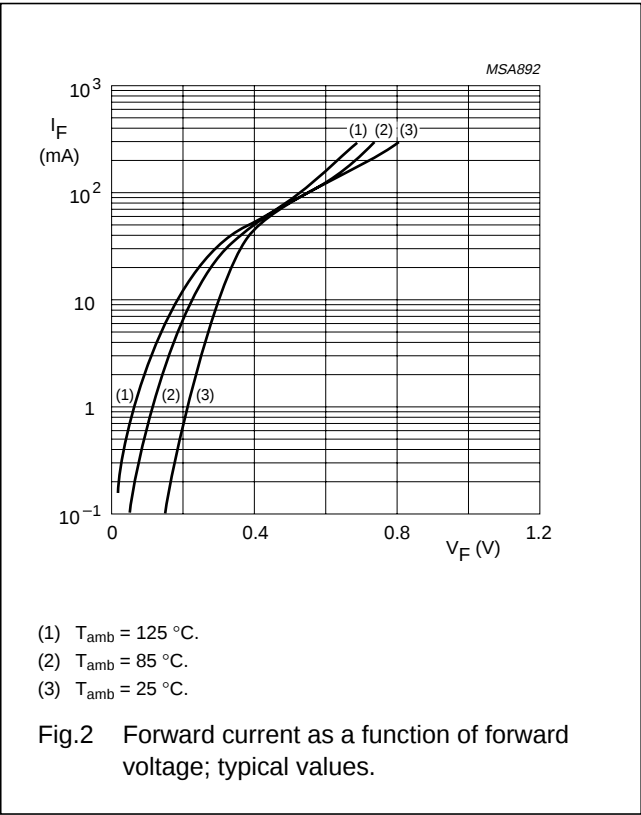
SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
Per diode				
V_F	forward voltage	see Fig.2; $I_F = 0.1$ mA $I_F = 1$ mA $I_F = 10$ mA $I_F = 30$ mA $I_F = 100$ mA	240 320 400 500 800	mV mV mV mV mV
I_R	continuous reverse current	$V_R = 25$ V; note 1; see Fig.3	2	µA
C_d	diode capacitance	$f = 1$ MHz; $V_R = 1$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

Note

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

Schottky barrier double diode

BAT54CM



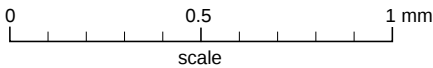
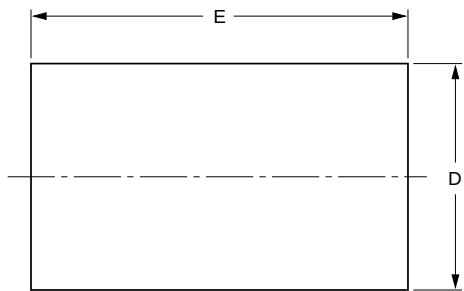
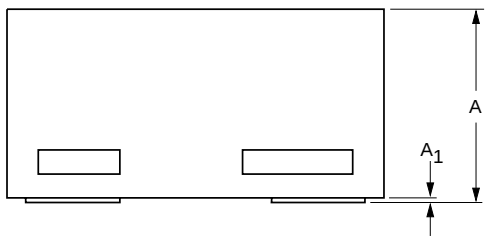
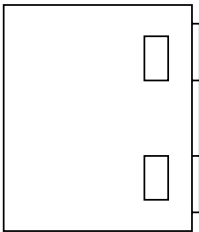
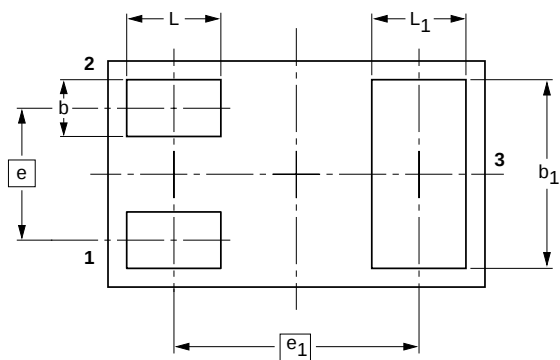
Schottky barrier double diode

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PACKAGE OUTLINE

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

SOT883

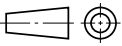


DIMENSIONS (mm are the original dimensions)

UNIT	A ⁽¹⁾	A ₁ max.	b	b ₁	D	E	e	e ₁	L	L ₁
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

LEVEL	DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾⁽³⁾	DEFINITION
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