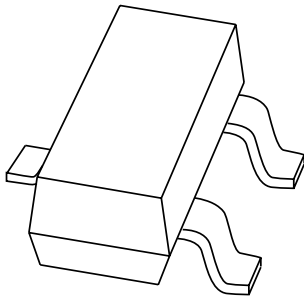


# DATA SHEET



## **BAT720** Schottky barrier diode

Product specification  
Supersedes data of 1998 Jan 21

1999 May 26

# Schottky barrier diode

# BAT720

### FEATURES

- Ultra high switching speed
- Low forward voltage
- Guard ring protected
- Small plastic SMD package.

### APPLICATIONS

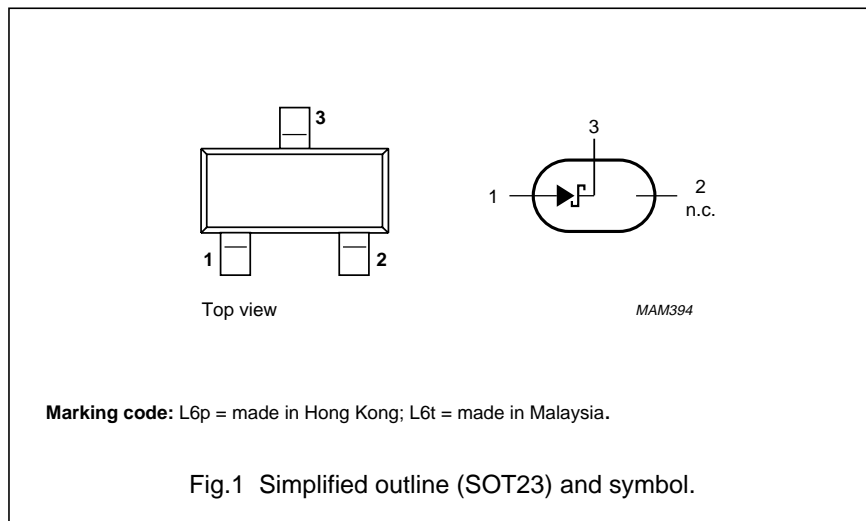
- Ultra high-speed switching
- Voltage clamping
- Protection circuits.

### PINNING

PIN	DESCRIPTION
1	anode
2	not connected
3	cathode

### DESCRIPTION

Planar Schottky barrier diode with an integrated guard ring for stress protection in a small SOT23 plastic SMD package.



### LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_R$	continuous reverse voltage		–	40	V
$I_F$	continuous forward current		–	500	mA
$I_{FSM}$	non-repetitive peak forward current	$t_p < 10$ ms	–	2	A
$T_{stg}$	storage temperature		–65	+150	°C
$T_j$	junction temperature		–	125	°C

## Schottky barrier diode

## BAT720

**ELECTRICAL CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_F$	forward voltage	$I_F = 500\text{ mA}$ ; see Fig.2	–	550	mV
$I_R$	reverse current	$V_R = 35\text{ V}$ ; see Fig.3	–	100	$\mu\text{A}$
		$V_R = 35\text{ V}$ ; $T_j = 100\text{ }^\circ\text{C}$ ; see Fig.3	–	10	mA
$C_d$	diode capacitance	$f = 1\text{ MHz}$ ; $V_R = 0$ ; see Fig.4	60	90	pF

**THERMAL CHARACTERISTICS**

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

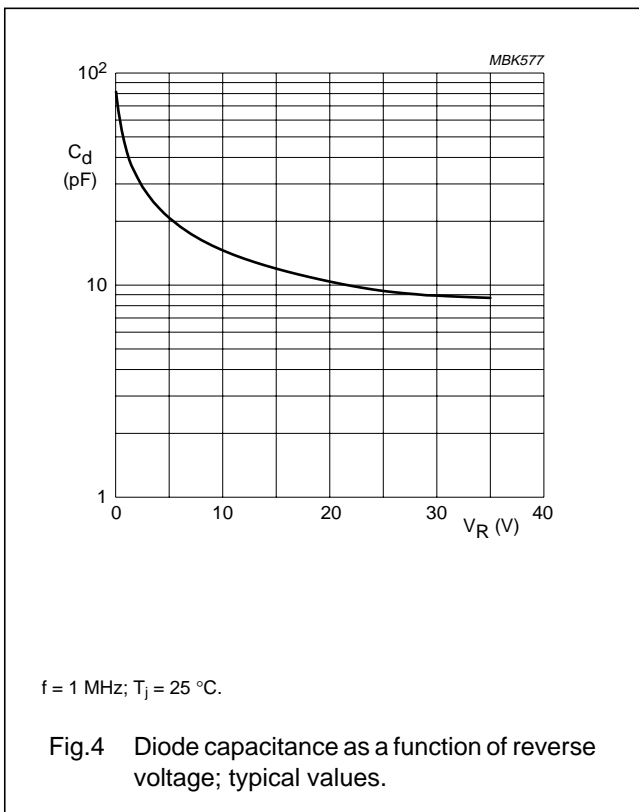
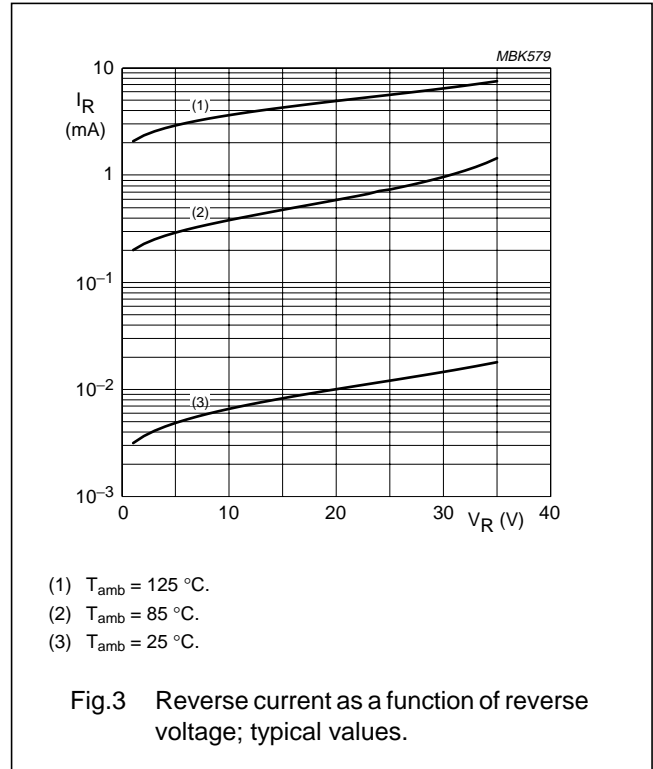
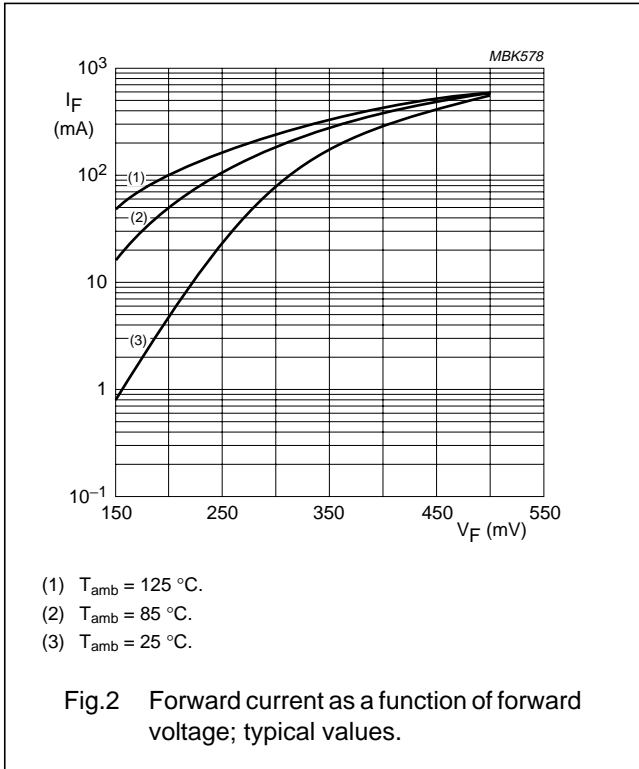
**Note**

1. Refer to SOT23 standard mounting conditions.

Schottky barrier diode

BAT720

GRAPHICAL DATA



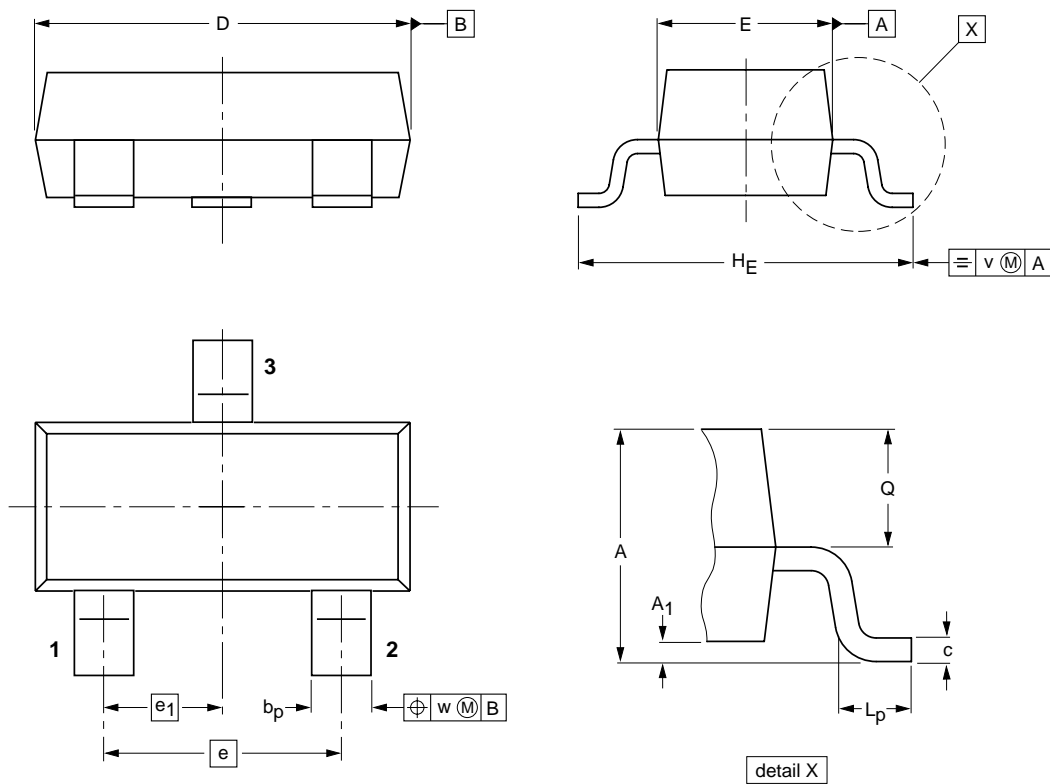
# Schottky barrier diode

# BAT720

## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max.	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

OUTLINE VERSION	REFERENCES				EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ			
SOT23						97-02-28

## Schottky barrier diode

BAT720

**DEFINITIONS**

<b>Data sheet status</b>	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
<b>Limiting values</b>	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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Schottky barrier diode

BAT720

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