

BAT754S

Dual Schottky barrier diode

12 August 2026 Product data sheet

1. General description

Planar dual Schottky barrier diode with an integrated guard ring for stress protection, encapsulated in a small SOT23 Surface-Mounted Device (SMD) plastic package.

2. Features and benefits

- Low forward voltage
- Low capacitance

3. Applications

- Ultra high-speed switching
- Line termination
- Voltage clamping
- Reverse polarity protection

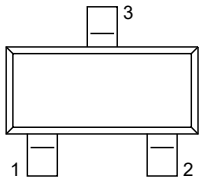
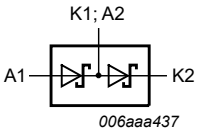
4. Quick reference data

Table 1. Quick reference data

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V_F	forward voltage	I_F = 100 mA; pulsed; $t_p \leq$ 300 µs; $\delta \leq$ 0.02; T_{amb} = 25 °C		-	600	-	mV
I_R	reverse current	V_R = 25 V; pulsed; $t_p \leq$ 300 µs; $\delta \leq$ 0.02; T_{amb} = 25 °C		-	-	2	µA
Per diode							
V_R	reverse voltage			-	-	30	V

5. Pinning information

Table 2. Pinning information

Pin	Symbol	Description	Simplified outline	Graphic symbol
1	A1	anode (diode 1)		
2	K2	cathode (diode 2)		
3	K1, A2	cathode (diode 1), anode (diode 2)		

SOT23

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6. Ordering information

Table 3. Ordering information

Type number	Package		
	Name	Description	Version
BAT754S	SOT23	plastic, surface-mounted package; 3 terminals; 1.9 mm pitch; 2.9 mm x 1.3 mm x 1 mm body	SOT23

7. Marking

Table 4. Marking codes

Type number	Marking code[1]
BAT754S	2N%

[1] % = placeholder for manufacturing site code

8. Limiting values

Table 5. Limiting values

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

Symbol	Parameter	Conditions		Min	Max	Unit
Per diode						
V_R	reverse voltage			-	30	V
I_F	forward current			-	200	mA
I_{FRM}	repetitive peak forward current	t_p < 1 s; δ < 0.5		-	300	mA
I_{FSM}	non-repetitive peak forward current	sine-wave pulse; t_p < 8.3 ms; $T_{j(init)}$ = 25 °C		-	600	mA
T_j	junction temperature			-	125	°C
T_{amb}	ambient temperature			-55	125	°C
T_{stg}	storage temperature			-65	150	°C

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]	-	-	500	K/W

[1] Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint.

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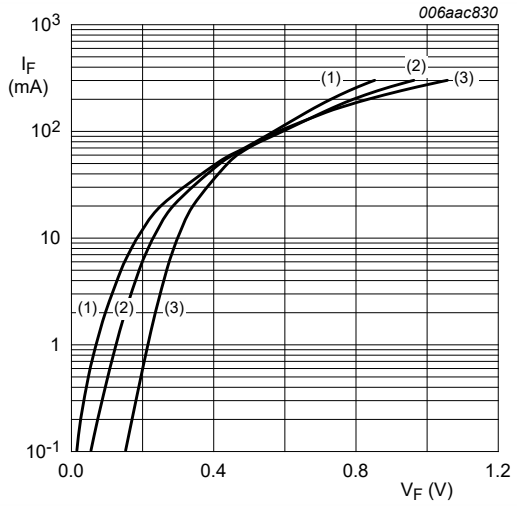
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10. Characteristics

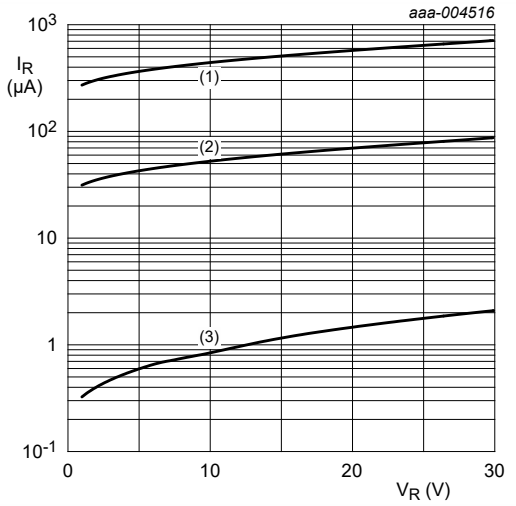
Table 7. Characteristics

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V_F	forward voltage	I_F = 0.1 mA; pulsed; $t_p \leq$ 300 µs; $\delta \leq$ 0.02; T_{amb} = 25 °C		-	-	200	mV
		I_F = 1 mA; pulsed; $t_p \leq$ 300 µs; $\delta \leq$ 0.02; T_{amb} = 25 °C		-	-	260	mV
		I_F = 10 mA; pulsed; $t_p \leq$ 300 µs; $\delta \leq$ 0.02; T_{amb} = 25 °C		-	-	340	mV
		I_F = 30 mA; pulsed; $t_p \leq$ 300 µs; $\delta \leq$ 0.02; T_{amb} = 25 °C		-	-	420	mV
		I_F = 100 mA; pulsed; $t_p \leq$ 300 µs; $\delta \leq$ 0.02; T_{amb} = 25 °C		-	600	-	mV
I_R	reverse current	V_R = 25 V; pulsed; $t_p \leq$ 300 µs; $\delta \leq$ 0.02; T_{amb} = 25 °C		-	-	2	µA
C_d	diode capacitance	V_R = 1 V; f = 1 MHz; T_{amb} = 25 °C		-	-	10	pF



(1) T_{amb} = 125 °C
(2) T_{amb} = 85 °C
(3) T_{amb} = 25 °C

Fig. 1. Forward current as a function of forward voltage; typical values



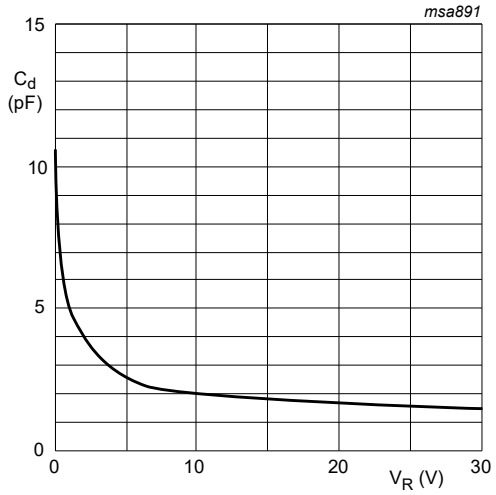
(1) T_{amb} = 125 °C
(2) T_{amb} = 85 °C
(3) T_{amb} = 25 °C

Fig. 2. Reverse current as a function of reverse voltage; typical values

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f = 1 MHz; T_{amb} = 25 °C

Fig. 3. Diode capacitance as a function of reverse voltage; typical values

11. Package outline

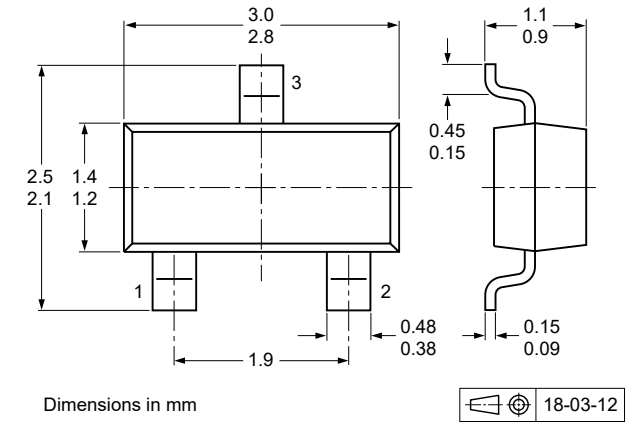


Fig. 4. Package outline SOT23

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12. Soldering

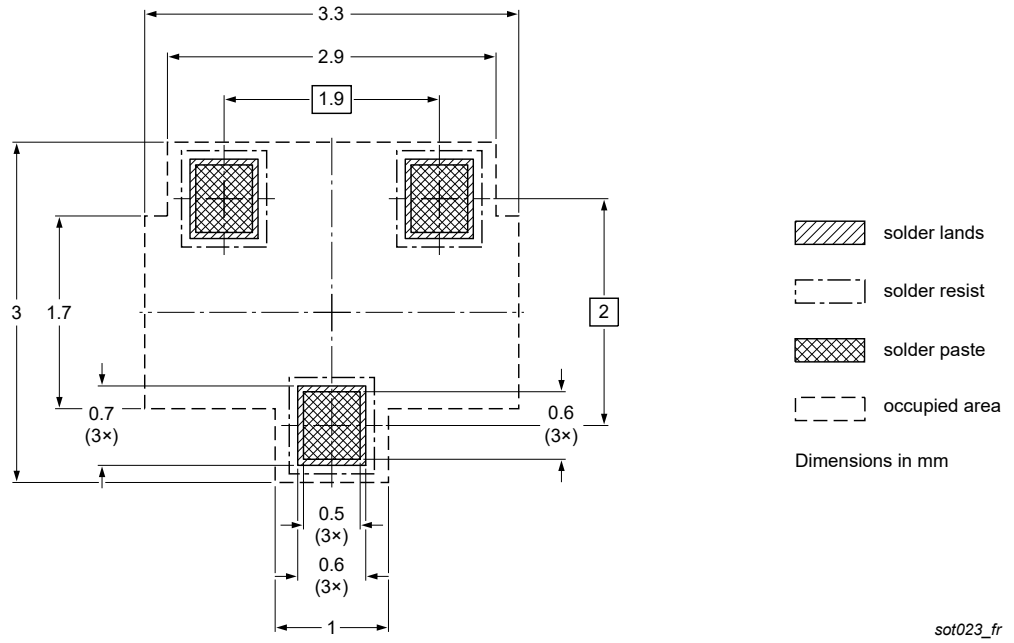


Fig. 5. Reflow soldering footprint for SOT23

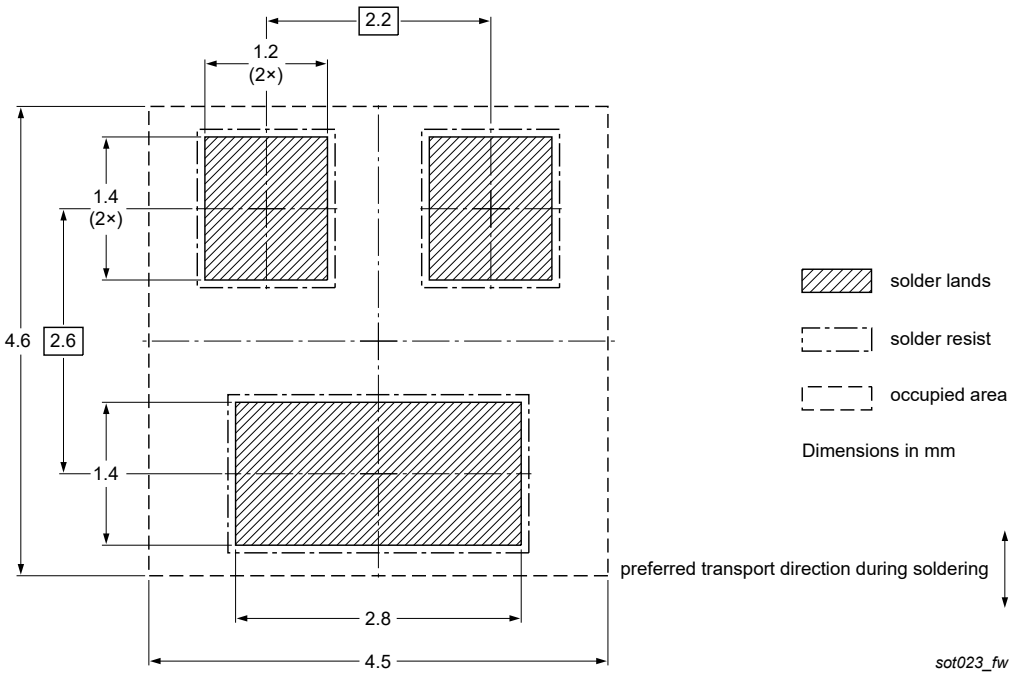


Fig. 6. Wave soldering footprint for SOT23

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13. Revision history

Table 8. Revision history

Data sheet ID	Release date	Data sheet status	Change notice	Supersedes
BAT754S v.5	20260812	Product data sheet	-	BAT754S v.4
Modifications:	• Product(s) changed to non-automotive qualification. Please refer to nexperia.com for automotive (-Q) product alternative(s).			
BAT754S v.4	20241121	Product data sheet	-	BAT754_SERIES v.3
BAT754_SERIES v.3	20121009	Product data sheet	-	BAT754_SERIES v.2
BAT754_SERIES v.2	20030325	Product data sheet	-	BAT754_SERIES v.1
BAT754_SERIES v.1	19990805	Product specification	-	-

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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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