



BAS116VY

Low-leakage triple switching diode

16 July 2026

Product data sheet

1. General description

Epitaxial, medium-speed switching, electrically isolated triple diode in a very small SOT363-3 (SC-88) Surface-Mounted Device (SMD) plastic package.

2. Features and benefits

- Low leakage current: max. 5 nA
- Switching time: typical 0.8 μ s
- Continuous reverse voltage: maximum 75 V
- Repetitive peak reverse voltage: maximum 85 V
- Repetitive peak forward current: maximum 500 mA

3. Applications

- Low-leakage current applications in surface mounted circuits

4. Quick reference data

Table 1. Quick reference data

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Per diode						
V_R	reverse voltage	$T_j = 25\text{ }^{\circ}\text{C}$	-	-	75	V
I_R	reverse current	$V_R = 75\text{ V}$; pulsed; $T_j = 25\text{ }^{\circ}\text{C}$	-	-	5	nA

5. Pinning information

Table 2. Pinning information

Pin	Symbol	Description	Simplified outline	Graphic symbol
1	A1	anode (diode 1)	Transparent top view TSSOP6 (SOT363-3)	006aab106
2	A2	anode (diode 2)		
3	A3	anode (diode 3)		
4	K3	cathode (diode 3)		
5	K2	cathode (diode 2)		
6	K1	cathode (diode 1)		

6. Ordering information

Table 3. Ordering information

Type number	Package		
	Name	Description	Version
BAS116VY	TSSOP6	Plastic surface-mounted package; 6 leads	SOT363-3

7. Marking

Table 4. Marking codes

Type number	Marking code[1]
BAS116VY	2J%

[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 _{RRM}	repetitive peak reverse voltage	T _j = 25 °C		-	85	V
V _R	reverse voltage			-	75	V
I _F	forward current	single diode loaded; T _{amb} = 25 °C	[1]	-	180	mA
I _{FSM}	non-repetitive peak forward current	t _p = 50 µs; square wave; T _{j(init)} = 25 °C		-	10	A
		t _p = 10 ms; square wave; T _{j(init)} = 25 °C		-	1.5	A
I _{FRM}	repetitive peak forward current	t _p ≤ 1 ms; δ ≤ 0.25; T _j = 25 °C		-	1	A
P _{tot}	total power dissipation	T _j ≤ 25 °C	[1]	-	250	mW
Per device						
T _j	junction temperature			-	150	°C
T _{amb}	ambient temperature			-55	150	°C
T _{stg}	storage temperature			-65	150	°C

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

9. Thermal characteristics

Table 6. Thermal characteristics

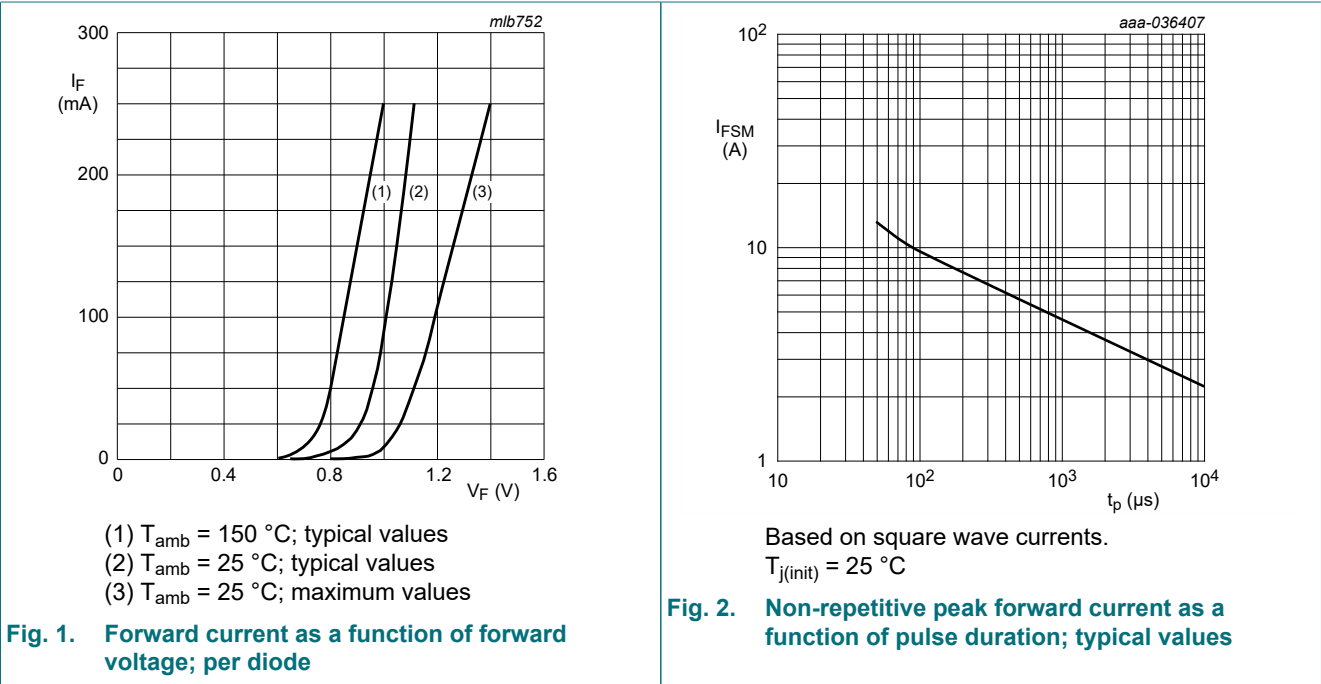
Symbol	Parameter	Conditions		Min	Typ	Max	Unit
$R_{th(j-a)}$	thermal resistance from junction to ambient	in free air	[1]	-	-	500	K/W

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

10. Characteristics

Table 7. Characteristics

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
Per diode							
V_F	forward voltage	$I_F = 1\text{ mA}; T_j = 25\text{ }^{\circ}\text{C}$		-	-	0.9	V
		$I_F = 10\text{ mA}; T_j = 25\text{ }^{\circ}\text{C}$		-	-	1	V
		$I_F = 50\text{ mA}; T_j = 25\text{ }^{\circ}\text{C}$		-	-	1.1	V
		$I_F = 150\text{ mA}; T_j = 25\text{ }^{\circ}\text{C}$		-	-	1.25	V
I_R	reverse current	$V_R = 75\text{ V}; \text{pulsed}; T_j = 25\text{ }^{\circ}\text{C}$		-	-	5	nA
		$V_R = 75\text{ V}; \text{pulsed}; T_j = 150\text{ }^{\circ}\text{C}$		-	3	80	nA
C_d	diode capacitance	$V_R = 0\text{ V}; f = 1\text{ MHz}; T_j = 25\text{ }^{\circ}\text{C}$		-	2	-	pF
t_{rr}	reverse recovery time	$I_F = 10\text{ mA}; I_R = 10\text{ mA}; R_L = 100\text{ }\Omega;$ $I_{R(\text{meas})} = 1\text{ mA}; T_j = 25\text{ }^{\circ}\text{C}$		-	0.8	3	μs



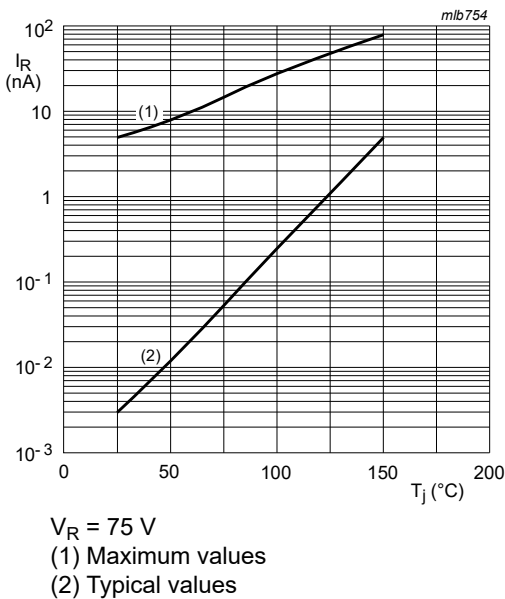


Fig. 3. Reverse current as a function of junction temperature

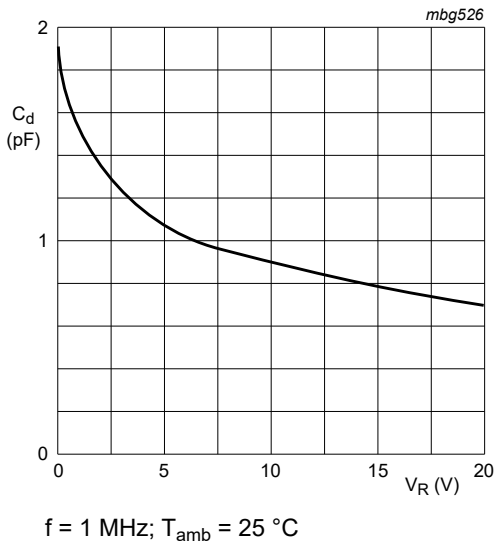


Fig. 4. Diode capacitance as a function of reverse voltage; typical values

11. Test information

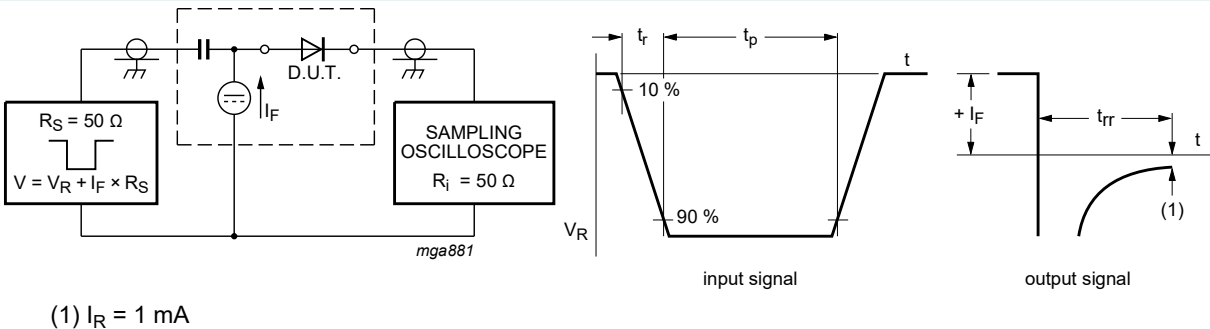


Fig. 5. Reverse recovery time test circuit and waveforms

12. Package outline

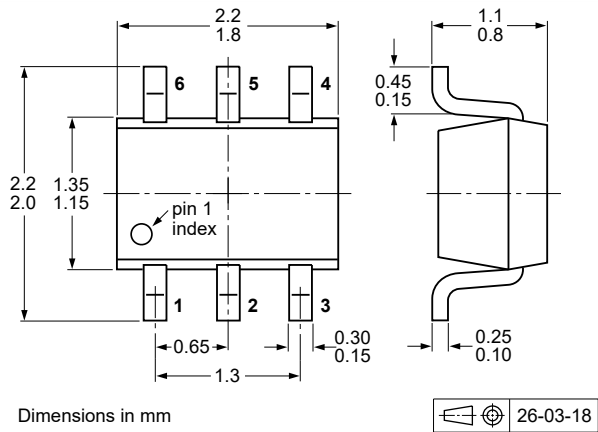


Fig. 6. Package outline TSSOP6 (SOT363-3)

13. Soldering

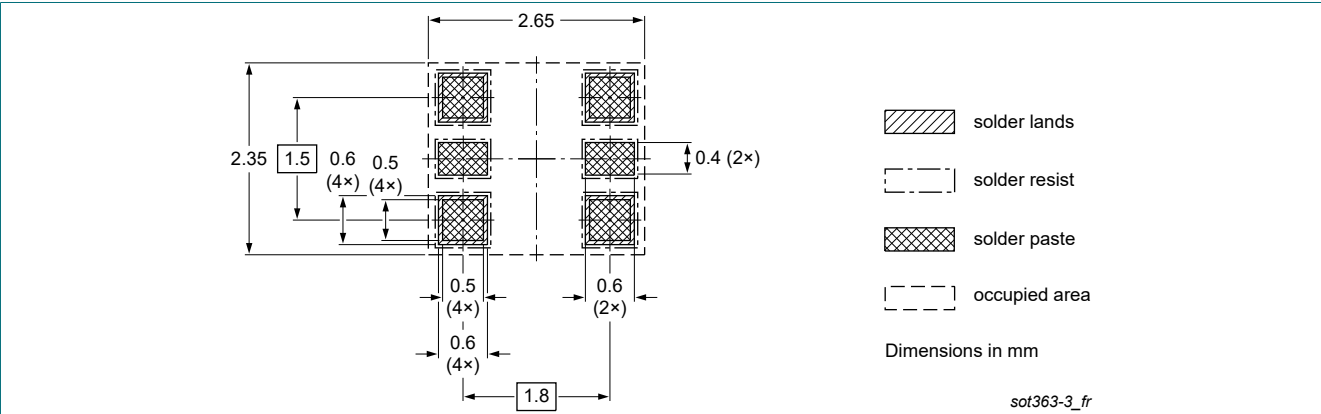


Fig. 7. Reflow soldering footprint for TSSOP6 (SOT363-3)

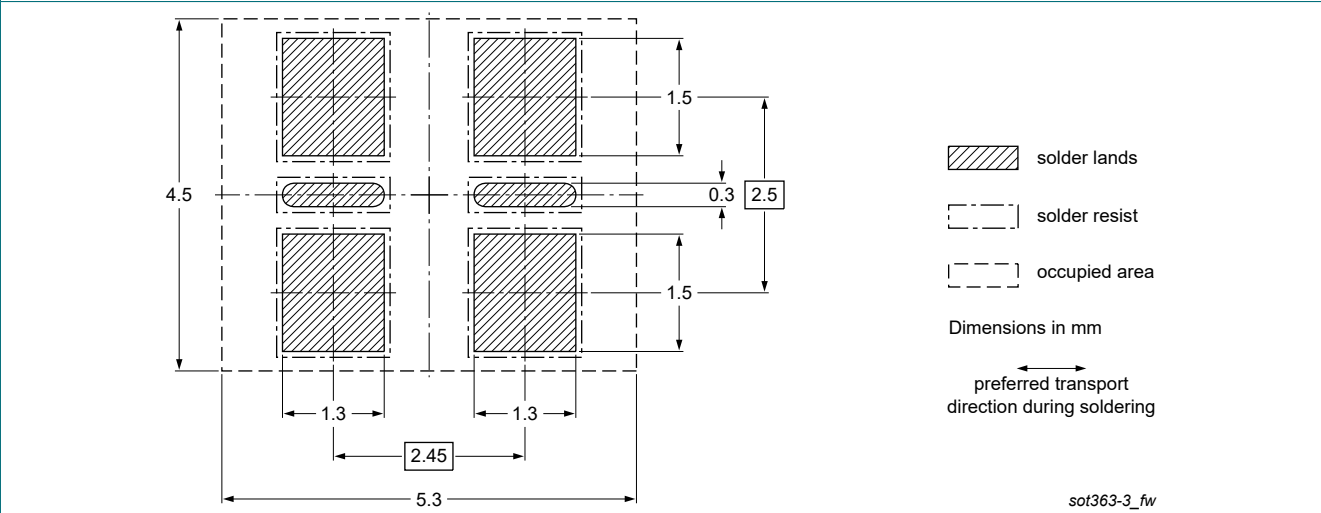


Fig. 8. Wave soldering footprint for TSSOP6 (SOT363-3)

14. Revision history

Table 8. Revision history

Data sheet ID	Release date	Data sheet status	Change notice	Supersedes
BAS116VY v.2	20260716	Product data sheet	-	BAS116VY v.1
Modifications:	• Package changed from SOT363 to SOT363-3			
BAS116VY v.1	20230419	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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