

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number: 1PS79SB40,699
Manufacturer: Nexperia USA Inc.
Package: SC-79, SOD-523
Availability: Please confirm with sales

Product Page:

<https://antrexco.com/product/details/nexperia-usa-inc/1ps79sb40-699.html>

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Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.



1PS79SB40

General-purpose Schottky diode

6 August 2026

Product data sheet

1. General description

General-purpose Schottky diode in a SOD523 (SC-79) ultra small and flat lead Surface-Mounted Device (SMD) plastic package.

2. Features and benefits

- High switching speed
- Low leakage current
- High breakdown voltage
- Low capacitance
- AEC-Q101 qualified

3. Applications

- Ultra high-speed switching
- Voltage clamping

4. Quick reference data

Table 1. Quick reference data

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
I_F	forward current		-	-	120	mA
V_F	forward voltage	$I_F = 1 \text{ mA}$; pulsed; $t_p \leq 300 \mu\text{s}$; $\delta \leq 0.02$; $T_{\text{amb}} = 25 \text{ }^\circ\text{C}$	-	-	380	mV
V_R	reverse voltage	$T_j = 25 \text{ }^\circ\text{C}$	-	-	40	V

5. Pinning information

Table 2. Pinning information

Pin	Symbol	Description	Simplified outline	Graphic symbol
1	K	cathode[1]	 SC-79 (SOD523)	 aaa-003679
2	A	anode		

[1] The marking bar indicates the cathode.

6. Ordering information

Table 3. Ordering information

Type number	Package		
	Name	Description	Version
1PS79SB40	SC-79	plastic, surface-mounted package; 2 leads; 1.2 mm x 0.8 mm x 0.6 mm body	SOD523

7. Marking

Table 4. Marking codes

Type number	Marking code
1PS79SB40	T

8. Limiting values

Table 5. Limiting values

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

Symbol	Parameter	Conditions		Min	Max	Unit
V _R	reverse voltage	T _j = 25 °C		-	40	V
I _F	forward current			-	120	mA
I _{FRM}	repetitive peak forward current	t _p ≤ 1 s; δ ≤ 0.5		-	120	mA
I _{FSM}	non-repetitive peak forward current	t _p ≤ 10 ms; T _{j(init)} = 25 °C		-	200	mA
T _j	junction temperature			-	150	°C
T _{amb}	ambient temperature			-65	150	°C
T _{stg}	storage temperature			-65	150	°C

9. Thermal characteristics

Table 6. Thermal characteristics

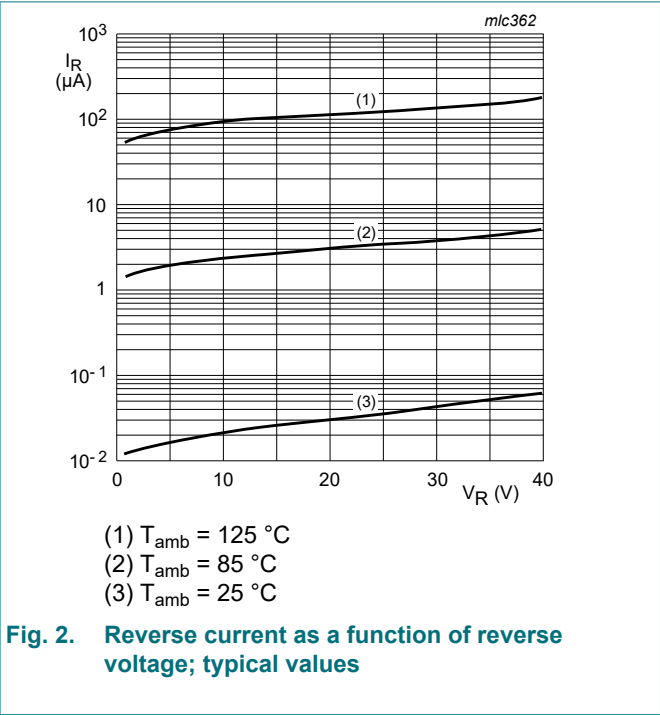
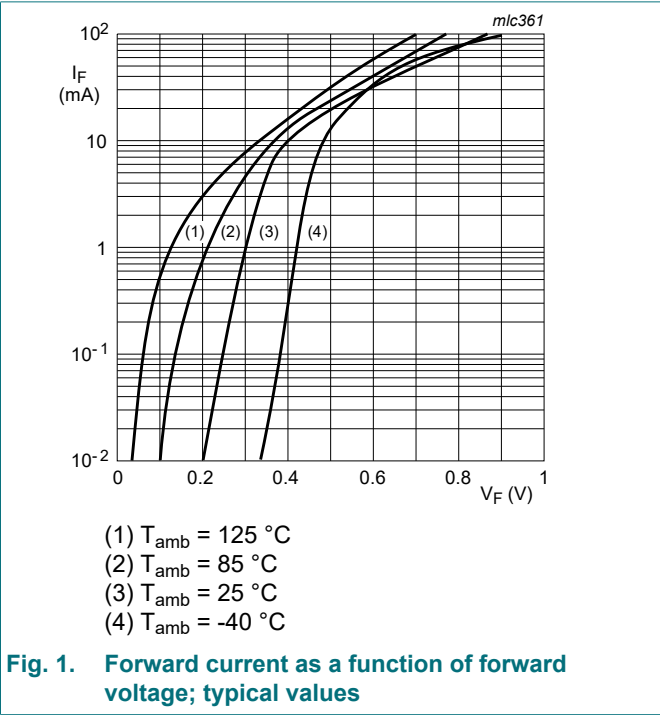
Symbol	Parameter	Conditions		Min	Typ	Max	Unit
R _{th(j-a)}	thermal resistance from junction to ambient	in free air	[1]	-	-	450	K/W

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

10. Characteristics

Table 7. Characteristics

Symbol	Parameter	Conditions		Min	Typ	Max	Unit
V _F	forward voltage	I _F = 1 mA; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _{amb} = 25 °C		-	-	380	mV
		I _F = 10 mA; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _{amb} = 25 °C		-	-	500	mV
		I _F = 40 mA; pulsed; t _p ≤ 300 μs; δ ≤ 0.02; T _{amb} = 25 °C		-	-	1	V
I _R	reverse current	V _R = 30 V; T _{amb} = 25 °C		-	-	1	μA
		V _R = 40 V; T _{amb} = 25 °C		-	-	10	μA
C _d	diode capacitance	V _R = 0 V; f = 1 MHz; T _{amb} = 25 °C		-	-	5	pF



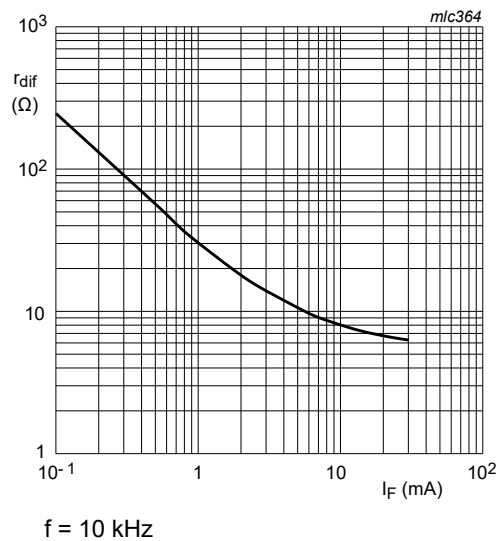


Fig. 3. Differential resistance as a function of forward current; typical values

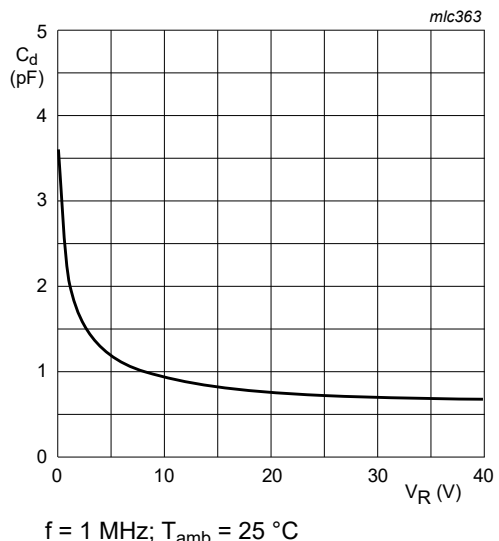


Fig. 4. Diode capacitance as a function of reverse voltage; typical values

11. Test information

Quality information

This product has been qualified in accordance with the Automotive Electronics Council (AEC) standard Q101 - *Stress test qualification for discrete semiconductors*, and is suitable for use in automotive applications.

12. Package outline

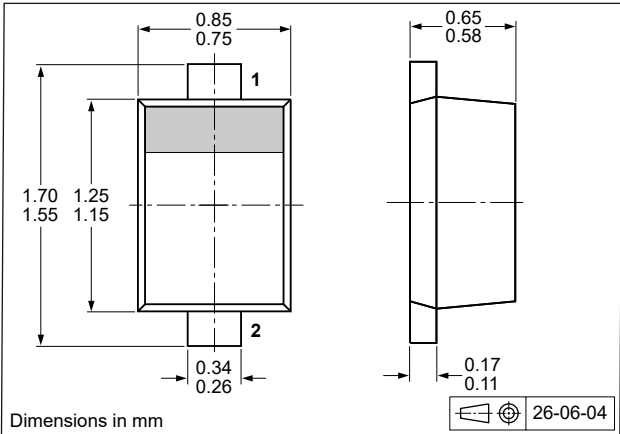


Fig. 5. Package outline SC-79 (SOD523)

13. Soldering

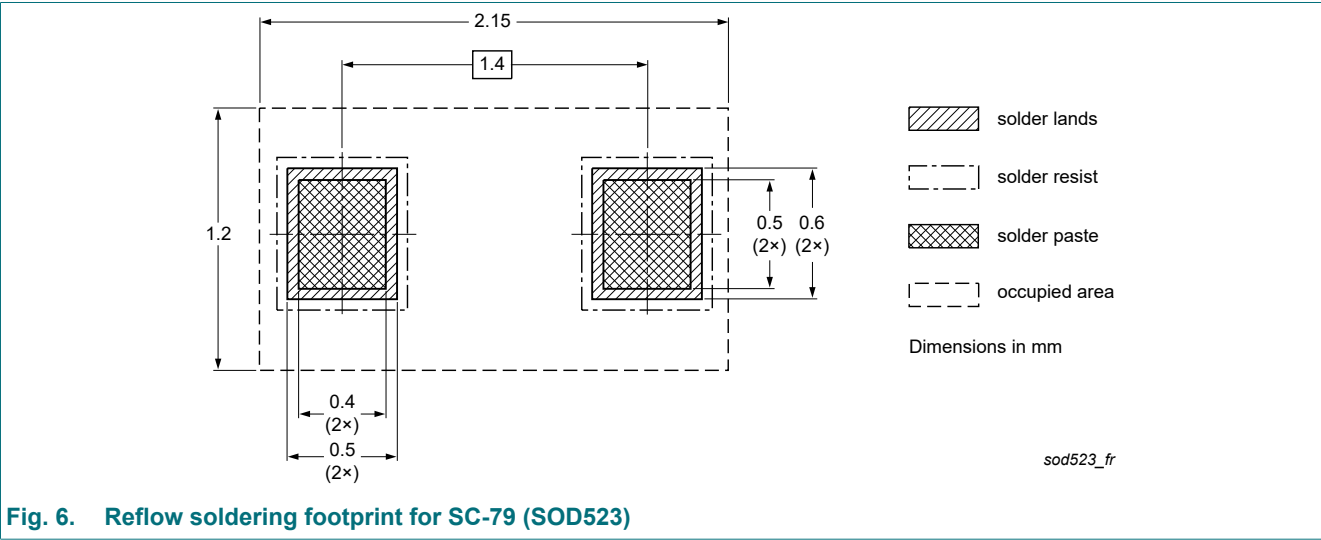


Fig. 6. Reflow soldering footprint for SC-79 (SOD523)

14. Revision history

Table 8. Revision history

Data sheet ID	Release date	Data sheet status	Change notice	Supersedes
1PS79SB40 v.12	20260806	Product data sheet	-	1PS79SB40 v.11
Modifications:	Aligned SOD523 package outline drawing			
1PS79SB40 v.11	20220307	Product data sheet	-	BAS40_1PSXXSB4X_SER_10
BAS40_1PSXXSB4X_SER_10	20210407	Product data sheet	-	BAS40_1PSXXSB4X_SER_9
BAS40_1PSXXSB4X_SER_9	20150318	Product data sheet	-	BAS40_1PSXXSB4X_SER_8
BAS40_1PSXXSB4X_SER_8	20100113	Product data sheet	-	BAS40_1PSXXSB4X_SER_7
BAS40_1PSXXSB4X_SER_7	20060512	Product data sheet	-	BAS40_1PSXXSB4X_SER_6
BAS40_1PSXXSB4X_SER_6	20050809	Product data sheet	-	1PS70SB40_3 1PS75SB45_2 1PS76SB40_3 1PS79SB40_2 1PS88SB48_3 BAS40H_1 BAS40L_1 BAS40-05V_1 BAS40-07V_1 BAS40W_3 BAS40_SERIES_5
1PS70SB40_3	19990426	Product specification	-	1PS70SB40_2
1PS75SB45_2	19990426	Product specification	-	1PS75SB45_1
1PS76SB40_3	20040126	Product specification	-	1PS76SB40_2
1PS79SB40_2	19990426	Product specification	-	1PS79SB40_1
1PS88SB48_3	20021107	Product specification	-	1PS88SB48_2
BAS40H_1	20050425	Product data sheet	-	-
BAS40L_1	20030520	Product specification	-	-
BAS40-05V_1	20021121	Product specification	-	-
BAS40-07V_1	20020327	Product specification	-	-
BAS40W_3	19990426	Product specification	-	BAS40W_2
BAS40_SERIES_5	20011010	Product specification	-	BAS40_4

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".
- [3] 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 <https://www.nexperia.com>.

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Contents

1. General description..... 1

2. Features and benefits..... 1

3. Applications..... 1

4. Quick reference data..... 1

5. Pinning information..... 1

6. Ordering information..... 2

7. Marking..... 2

8. Limiting values..... 2

9. Thermal characteristics..... 2

10. Characteristics..... 3

11. Test information..... 4

12. Package outline..... 4

13. Soldering..... 5

14. Revision history..... 6

15. Legal information..... 7

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