Frequently Asked Questions Customer Inquiries Revision: 30 August 2022

External

Document Information

Information	Content
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Automotive qualification 1.

1.1 Are our products automotive qualified?

We have automotive qualified products available on our website. Automotive qualification can be checked per product:

Example:

Part number	Description	Status	Quick links		Shop link
☆ BAV99-Q	High-speed switching diode	Production	Datasheet % Document		₩ <u>Order</u>
	High-speed switching diode, encapsulated	Package version	SOT23	I _{FRM} (mA)	450
and the second	in a small SOT23 (TO-236AB) Surface- Mounted Device (SMD) plastic package.	Package name	SOT23	Configuration	dual series
A		Size (mm)	2.9 x 1.3 x 1	t _{rr} [max] (ns)	4
		V _R [max] (V)	100	I _F [max] (mA)	215
		I _{FSM} [max] (A)	4	Cd [max] (pF)	1.5
		V _F [max] (mV)	1000@IF=50mA	Automotive qualified	Y
		I _R [max] (nA)	1000@VR=75V		

1.2 Is AEC-Q101 the same as AEC-Q100?

No, <u>AEC-Q101</u> applies to discrete semiconductors "FAILURE MECHANISM BASED STRESS TEST QUALIFICATION FOR **DISCRETE SEMICONDUCTORS** IN AUTOMOTIVE APPLICATIONS" whereas AEC-Q100 applies to Integrated Circuits "FAILURE MECHANISM BASED STRESS TEST QUALIFICATION FOR **INTEGRATED CIRCUITS**".

1.3 What's the Automotive grade of Nexperia product?

Automotive grade is link to the part operating temperature, pls check the datasheet and find the grade information. Or please check the Tamb parameter data and algin to the Grade level in below table.

The part operating temperature grades are defined below:

Grade 0:	-40°C to +150°C ambient operating temperature range
Grade 1:	-40°C to +125°C ambient operating temperature range
Grade 2:	-40°C to +105°C ambient operating temperature range
Grade 3:	-40°C to +85°C ambient operating temperature range
Grade 4:	0°C to +70°C ambient operating temperature range

1.2. Features and benefits

- Programmable output voltage up to 36 V
- Three different reference voltage tolerances: Standard grade: 2 %
- A-Grade: 1 %
- B-Grade: 0.5 %
- Typical temperature drift: 9 mV (in a range of 0 °C up to 70 °C)

Low output noise
Typical output impedance: 0.2 Q

- Sink current capability: 1 mA to 100 mA
- AEC-Q100 qualified (grade 1)

Tamb	ambient temperature			
	TL431XCDBZR	0	+70	°C
	TL431XIDBZR	-40	+85	°C
	TL431XQDBZR TL431XFDT	-40	+125	°C

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2. Certifications: ISO, IEC, other

2.1 Which ISO certificates are available?

Nexperia has corporate certifications for ISO 9001 quality standard and IATF 16949 automotive standard.

The manufacturing sites have a certified environmental and occupational health and safety (EHS) management system (in accordance with the standards ISO 14001 and ISO 45001).

Certificates from our internal sites can be found at Certifications | Nexperia

3. Certificates from our subcontractors are available on their own homepage. Discontinued products and replacement parts

3.1 Is my product discontinued?

By searching for the product in Nexperia website, the product status" End of life" indicates it's discontinued.

If want to know more details about the discontinuation & replacement parts, please check the Discontinuation Notification on MyLogin: Login | Nexperia under "My Change Notification".

SEARCH			
Home Search results			

Search results for "BUK7510-100B"

Filter by: Products (1) Documents (1)

☆ Be	st match		
PDF	BUK7510-100B	BUK7510 - 100B N-channel TrenchMOS standard level FET Important notice Dear Customer, On 7 February 2017	↓ <u>Download</u>

Products (1)

Part number	Description	Status	Quick links	Shop link
BUK7510-100B	N-channel TrenchMOS standard level FET	End of life	 Datasheet Documentation 	₩ <u>Order</u>



4. Documentation

4.1 Where can I register Mylogin?

Please click <u>Register | Nexperia</u> to start the Nexperia account registration process.

	Why register?
Registration	Welcome to My Nexperia, your free personal workbench. The My Nexperia account contains all your Nexperia activity and allows for advanced support features. An accou
E-mail *	gives access to several benefits, like:
taufik.huan@nexperia.com	Ask questions to our specialists & track your support tickets
Full name *	View your recent visited products Your downloaded documents
	Your searches
	Your Product Change Notifications Newsletter subscriptions
Password *	Register now, and create an account for your free personal workbench.
	Regiser now, and create an account of your nee personal workbenen.
Password confirmation *	
Region *	
Select your region	•
□ I agree to the <u>Terms and Conditions</u>	
Register	

4.2 Where can I request a PPAP?

Please contact your Nexperia account manager and regional SQE.

In case you don't have an account manager, please raise a request through our Technical Support form which is available <u>here</u>.

Do note that you are required to log in to your My Nexperia account to file a request. If you don't have an account yet, you can register for one through the same link.

5. ESD

5.1 What ESD HBM (Human Body Model) level does a product have?

Data for our products can be found in our data sheets or quality information page.

Note: ESD MM (Machine Model) is an obsolete standard.

5.2 Can ESD CDM (Charged Device Model) information be given?

ESD testing according to CMD model is not applicable for BG Bipolar Discretes products due to their small size. Please refer to our <u>AEC Q101 ESD statement CDM</u> in attachment for more details. For other products, please check with SQE or raise a ticket in HD+ for support.

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6. MSL and shelf life and longevity

6.1 What MSL (Moisture Sensitivity Level) applies to my Nexperia product?

MSL data is available on the product page.

Example:

Quality, reliabili	ty & chemical content				
Type number	Orderable part number	Chemical content	RoHS / RHF	MSL	MSL leadfree
BAV99-Q	BAV99-QVL	<u>BAV99-Q</u>	COMPLIANT	1	1
BAV99-Q	BAV99-QR	<u>BAV99-Q</u>	COMPLIANT	1	1

6.2 What shelf life is guaranteed by Nexperia products?

Nexperia states that our products have up to four years or 48 months shelf life, if the standard storage conditions are met, and a defined solder profile is used (according to JEDEC JSTD 020-E).

6.3 What longevity is guaranteed by Nexperia products?

Please refer to Longevity statement <u>https://www.nexperia.com/support/longevity.html</u>

6.4 What is the start of production date of Nexperia products?

Please refer to the 1st Revision date of Datasheet. For BG Bipolar Discretes -Q portfilio, please refer to related non Q version datasheet.

7. Product Change Notification (PCN)

7.1 Where can I find the qualification report?

A Self Qualification Report (SQR) can be downloaded from MyLogin: Login | Nexperia

After login, you need to search for the PCN based on the PCN-Number and download the SQR file.

7.2 Where can I find a list of PCN affected products?

The affected product types can be found under MyLogin: Login | Nexperia

7.3 How do I request PCN samples for qualification purpose?

Please contact your local Nexperia account manager.

7.4 Are the PCN samples available at the Sample Store?

PCN samples can only be ordered via your local Nexperia account manager.

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7.5 Where can I find information on the first date code after product change implementation?

Please contact your local Nexperia account manager.

8. Reliability

8.1 How can I find reliability reports for a product?

The reliability reports are available on our homepage, under product information and "Documentation".

Example:

Product details Documentation Support	Ordering		
Documentation (3)			
File name	Title	Туре	Date
BAV99-Q	High-speed switching diode	Data sheet	2021-06-07
BAV99-Q_Nexperia_Product_Reliability	BAV99-Q Nexperia Product Reliability	Quality document	2022-03-21

8.2 What are the conditions of the Failure In Time (FIT) calculation?

Please check the reliability report (see chapter 8.1).

9. RoHS / Chemical / Analysis reports

9.1 Are our products compliant to RoHS (EU-RoHS) and/or China RoHS?

Please check the product page on <u>www.nexperia.com</u> under "Quality, reliability & chemical content" tab:

Exami	ble	:

Quality, reliabili	ty & chemical content				
Type number	Orderable part number	Chemical content	RoHS / RHF	MSL	MSL leadfree
BAV99-Q	BAV99-QVL	BAV99-Q		1	1
BAV99-Q	BAV99-QR	<u>BAV99-Q</u>	COMPLIANT	1	1

The symbols are explained in more detail under Environmental Product Labelling.

9.2 How can I check if a product is Halogen-Free or Lead-Free?

Please check the product page on <u>www.nexperia.com</u> under "Quality, reliability & chemical content" tab:

Quality, reliabili	ty & chemical content				
Type number	Orderable part number	Chemical content	RoHS / RHF	MSL	MSL leadfree
BAV99-Q	BAV99-QVL	<u>BAV99-Q</u>	COMPLIANT	1	1
BAV99-Q	BAV99-QR	BAV99-Q	EUICN ROHS D B6 D	1	1

The symbols are explained in more detail under Environmental Product Labelling.

9.3 How can I check what kind of RHF (RoHS Halogen Free) - indicator does my product have?

Please check the product page on <u>www.nexperia.com</u> under "Quality, reliability & chemical content" tab:

Quality, reliabili	ty & chemical content				
Type number	Orderable part number	Chemical content	RoHS / RHF	MSL	MSL leadfree
BAV99-Q	BAV99-QVL	<u>BAV99-Q</u>	COMPLIANT	1	1
BAV99-Q	BAV99-QR	BAV99-Q	COMPLIANT	1	1

The symbols are explained in more detail under Environmental Product Labelling.

9.4 Where can I get the chemical content?

Please check the product page on <u>www.nexperia.com</u> under "Quality, reliability & chemical content" tab:

Quality, reliabili	ity & chemical content				
Type number	Orderable part number	Chemical content	RoHS / RHF	MSL	MSL leadfree
BAV99-Q	BAV99-QVL	BAV99-Q	EUICN ROHS COMPLIANT	1	1
BAV99-Q	BAV99-QR	<u>BAV99-Q</u>	EU/CN RoHs D P6 D	1	1

If you need the chemical content for multiple products , please click here.

9.5 Where do I find information related to REACH conformity?

There is a REACH conformity standard letter available at <u>Environmental certifications | Nexperia</u>. The content of this page reflects a large part of our standard processing, however there may be exceptions.

10. Site Locations

10.1 Where is the wafer fabrication (diffusion site), the assembly / final test sites located?

All Nexperia manufacturing sites addresses are available on Nexperia website: Manufacturing | Nexperia

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11. Others questions (Product related)

11.1 What can I do if the data sheet is not available?

If the data sheet is not available at <u>www.nexperia.com</u>, please contact your local Nexperia account manager.

11.2 Where do I find models (e.g. SPICE, IBIS or thermal) for my products?

Data are available on the product information page under "Documentation". Otherwise raise a ticket in HD+. <u>SPICE Example:</u>

Product details	Documentation	Support	Ordering
Documentatio	on (6)		

File name	Title	Туре	Date
BAV99_SER	High-speed switching diodes	Data sheet	2018-04-04
ESYMDIO	Letter Symbols - Diodes General	Design support	1999-04-30
BAV99_Nexperia_Product_Quality	BAV99 Nexperia Product Quality	Quality document	2019-05-20
BAV99_Nexperia_Product_Reliability	BAV99 Nexperia Product Reliability	Quality document	2022-03-21
BAV99	BAV99 SPICE model	SPICE model	2021-12-20

IBIS Example:

ing	
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Documentation (6)

File name	Title	Туре	Date
24LVC1G74	Single D-type flip-flop with set and reset; positive edge trigger	Data sheet	2021-09-20
M10343	MicroPak soldering information	Application note	2021-05-31
AN11009	Pin FMEA for LVC family	Application note	2019-01-09
Ivc1g74	74LVC1G74 IBIS model	IBIS model	2014-10-20
74LVC1G74GN_Nexperia_Product_Reliability	74LVC1G74GN Nexperia Product Reliability	Quality document	2022-05-04
REFLOW_BG-BD-1	Reflow soldering profile	Reflow soldering	2021-04-06

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Thermal Example:

<u>Website</u>

Product details	Documentation
i i o d d c c d c cuito	Documentation

Support Ordering

Documentation (17)

File name	Title	Туре	Date
BUK7613-60E	N-channel TrenchMOS standard level FET	Data sheet	2017-03-20
AN10273	Power MOSFET single-shot and repetitive avalanche ruggedness rating	Application note	2022-06-20
m <u>AN11158</u>	Understanding power MOSFET data sheet parameters	Application note	2020-07-06
AN11160	Designing RC Snubbers	Application note	2021-05-18
M <u>AN11156</u>	Using Power MOSFET Zth Curves	Application note	2021-01-04
AN11243	Failure signature of Electrical Overstress on Power MOSFETs	Application note	2017-12-21
AN11158_ZH	Understanding power MOSFET data sheet parameters	Application note	2021-01-04
M11261	RC Thermal Models	Application note	2021-03-18
AN11500	Using power MOSEETs in parallal	Application poto	2016 07 12

Datasheet:

9. Thermal characteristics

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
R _{th(j-mb)}	thermal resistance from junction to mounting base	Fig. 5	•		<mark>1.56</mark>	K/W
R _{th(j-a)}	thermal resistance from junction to ambient	minimum footprint ; mounted on a printed-circuit board		50	•	K/W

11.3 Where can I find the 3D model of a package?

The STEP 3D model is available on the package page. Or,by using the Search function (e.g. SOT23 3D Model) you can also find the marcom graphics & 3D model file. Please note that you may need additional software to open the file.

Example:

Home > Package > SOT23		SEARCH V SOT23 3D Model	
A Star	SOT23 plastic, surface-mounted package; 3 terminals; 1.9 mm pitch; 2.9 mm x 1.3 mm x 1 mm body Download package information	Home >> Sauth results Search results for "SOT23 3D Model" Filter by: Documents.(1)	
Details Products		package'), '1'); FLE_IVAME	

11.4 What is the correct standard product marking code?

The standard product marking code is usually found in the latest datasheet or on the product information pages under "Package" tab:

Example:

Package							
Type number	Orderable part number, (Ordering code (12NC))	Status	Marking	Package	Package information	Reflow-/Wave soldering	Packing
BAV99-Q	BAV99-QVL (9346 636 24235)	Active	A7%	P	<u>SOT23</u>	WAVE_BG-BD-1	<u>Reel 11" Q3/T4,</u> <u>LargePack</u>
	BAV99-QR (9346 636 24215)	Active	A7%	<u>(SOT23)</u>			<u>Reel 7" Q3/T4</u>

11.5 What does % or * in the product marking code stands for?

The % or * is symbol is a wildcard. This is replaced with a letter representing the assembly site.

Type number	Orderable part number, (Ordering code (12NC))	Status	Marking	Package	Package information	Reflow-/Wave soldering	Packing
BAV99-Q	BAV99-QVL (9346 636 24235)	Active	A <mark>'</mark> %	Ep	<u>SOT23</u>	WAVE_BG-BD-1	<u>Reel 11" Q3/T4,</u> <u>LargePack</u>
	BAV99-QR (9346 636 24215)	Active	A7%	(<u>SOT23)</u>			<u>Reel 7" Q3/T4</u>

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11.6 Where can I get information on product orientation in the tape?

The packing orientation only can be found in the packing document where there is also an explanation of what the quadrants mean. E.g.:

ype number	Orderable part number, (Ordering code (12NC))	Status	Marking	Package	Package information	Reflow-/Wave soldering	Packing
AV99-Q	BAV99-QR (934663624 <mark>215)</mark>	Active	A7%	Er	<u>SOT23</u>	REFLOW_BG-BD-1 WAVE_BG-BD-1	<u>SOT23_21</u>
	BAV99-QVL (93466362 <mark>4235)</mark>	Active	A7%	<u>(SOT23)</u>			<u>SOT23_23</u>
2. Produ	uct orientation						

Please note that some products are available in different orientations; they will differ in the "Orderable part number" or differ in the last 3 digits(235/215...) of the "Ordering code (12NC)".

11.7 Where do I find a detailed construction drawing of the tape and reel?

The drawing of the tape and reel is available on the product information page under "Package" tab:

Package

Type number	Orderable part number, (Ordering code (12NC))	Status	Marking	Package	Package information	Reflow-/Wave soldering	Packing
BAV99-Q	BAV99-QR (93466362 <mark>4215)</mark>	Active	A7%	Alle	<u>SOT23</u>	REFLOW_BG-BD-1 WAVE_BG-BD-1	<u>SOT23_215</u>
	BAV99-QVL (934663624 <mark>235)</mark>	Active	A7%	<u>(SOT23)</u>			<u>SOT23_235</u>