



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**Initial PCN#20250429002.2
BQ79118, BQ79718 and BQ79758 die revision, marking, and datasheet changes for
select devices**

Date: October 24, 2025
To: MOUSER PCN

Dear Customer:

This is an information-only announcement of a change to a device that is currently offered by Texas Instruments.

The changes discussed within this notification are for your information only.

Any negotiated alternative change requirements will be provided via the customer's defined process. Customers with previously negotiated, special requirements will be handled separately. Any inquiries should be directed to your local Field Sales Representative.

For questions regarding this notice, contact your local Field Sales Representative or the Change Management team.

Sincerely,

Change Management Team
SC Business Services

20250429002.2
Information Only
Attachments

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, you have recently purchased these devices. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
BQ79758QPAPRQ1	NULL

Technical details of this Product Change follow on the next page(s).

PCN Number:	20250429002.2	Notification Date:	October 24, 2025																		
Title:	BQ79118, BQ79718 and BQ79758 die revision, marking, and datasheet changes																				
Customer Contact:	Change Management team	Dept:	Quality Services																		
Proposed 1st Ship Date:	April 22, 2026	Sample requests accepted until:	December 23, 2025*																		
*Sample requests received after December 23, 2025 will not be supported.																					
Change Type:																					
<input type="checkbox"/>	Assembly Site	<input checked="" type="checkbox"/>	Design																		
<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Data Sheet																		
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change																		
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site																		
<input checked="" type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process																		
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material																		
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process																		
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site																		
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials																		
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process																		
Initial PCN Details																					
Description of Change:																					
This notification is to inform of design and marking changes to the devices. This is a design change to improve Zener performance. If more information or if an 8D is needed, please contact m-xiong@ti.com .																					
<table border="1"> <thead> <tr> <th>Material</th> <th>Top marking (OLD)</th> <th>Top marking (NEW)</th> </tr> </thead> <tbody> <tr> <td>BQ79718PAPRQ1</td> <td>BQ79718Q</td> <td>BQ79718BQ</td> </tr> <tr> <td>BQ79118QPAPRQ1</td> <td>BQ79118Q</td> <td>BQ79118BQ</td> </tr> <tr> <td>BQ79718VCPAPRQ1</td> <td>BQ79718VQ</td> <td>BQ79718BQ</td> </tr> <tr> <td>BQ79718VPAPRQ1</td> <td>BQ79718VQ</td> <td>BQ79718BQ</td> </tr> <tr> <td>BQ79758QPAPRQ1</td> <td>BQ79758Q</td> <td>BQ79758BQ</td> </tr> </tbody> </table>				Material	Top marking (OLD)	Top marking (NEW)	BQ79718PAPRQ1	BQ79718Q	BQ79718BQ	BQ79118QPAPRQ1	BQ79118Q	BQ79118BQ	BQ79718VCPAPRQ1	BQ79718VQ	BQ79718BQ	BQ79718VPAPRQ1	BQ79718VQ	BQ79718BQ	BQ79758QPAPRQ1	BQ79758Q	BQ79758BQ
Material	Top marking (OLD)	Top marking (NEW)																			
BQ79718PAPRQ1	BQ79718Q	BQ79718BQ																			
BQ79118QPAPRQ1	BQ79118Q	BQ79118BQ																			
BQ79718VCPAPRQ1	BQ79718VQ	BQ79718BQ																			
BQ79718VPAPRQ1	BQ79718VQ	BQ79718BQ																			
BQ79758QPAPRQ1	BQ79758Q	BQ79758BQ																			
Qual details are provided in the Qual Data Section.																					
Reason for Change:																					
To improve device robustness																					
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):																					
Positive																					
Changes to product identification resulting from this PCN:																					
Die Rev designator will change as shown in the table and sample label below:																					
<table border="1"> <thead> <tr> <th>Current</th> <th>New</th> </tr> <tr> <th>Die Rev [2P]</th> <th>Die Rev [2P]</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>B</td> </tr> </tbody> </table>				Current	New	Die Rev [2P]	Die Rev [2P]	A	B												
Current	New																				
Die Rev [2P]	Die Rev [2P]																				
A	B																				
The product datasheet(s) is updated as seen in the change revision history below:																					

Changes from Revision B (March 2025) to Revision C (October 2025)	Page
• Added corner pins for $\pm 750V$ CDM.....	7
• Removed T_{SHUT_HYS} and T_{SHUT_FALL} two specs.....	8
• Updated $I_{ACT(IDLE)}$ TYP/MAX values from 3.5/4.1 to 3.6/4.3.....	8
• Updated TSREF disabled to TSREF enabled for $I_{ACT(IDLE)}$	8
• Updated $I_{PROTCOMP}$ TYP/MAX values from 1/1.4 to 1.16/1.6.....	8
• Updated I_{TSREF} TYP/MAX values from 0.35/0.5 to 0.52/0.7.....	8
• Updated I_{BAT} active mode (with ADCs OFF) MAX value from 275 to 675.....	8
• Updated I_{BAT} active mode (with ADCs ON) MAX value from 1500 to 1900.....	8
• Updated V_{TSREF_UV} min/typ/max from 3.6/3.7/3.8 to 3.5/3.6/3.7.....	8
• Updated Figure 6-34	53
• Updated Figure 6-69	88
• Updated DEV_CONF5 bitmap entry.....	124
• Updated Figure 7-6	252
• Added BOM guidelines for stable LDOIN operation.....	262
• Updated from BQ79718VQ to BQ79718BQ.....	274

Product Folder	Current Datasheet Number	New Datasheet Number	Link to full datasheet
BQ79718V-Q1	SLUSFD3B	SLUSFD3C	The document is not available on the TI website. Please contact the document owner at z-wang3@ti.com or visit the MySecure site for a copy of the full datasheet.

Sample product shipping label (not actual product label)



Product Affected

BQ79118QPAPRQ1	BQ79718PAPRQ1	BQ79718VCPAPRQ1	BQ79718VPAPRQ1
BQ79758QPAPRQ1			

Automotive Qualification Summary
(As per AEC and JEDEC Guidelines)
Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: <u>PEQ79758PAPQ1</u>
Test Group A - Accelerated Environment Stress Tests								
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	3/0/0
PC	A1.1	-	3	22	SAM Precon Pre	Review for delamination	-	3/66/0
PC	A1.2	-	3	22	SAM Precon Post	Review for delamination	-	3/66/0
HAST	A2.1	JEDEC JESD22-A110	3	77	Biased HAST	110C/85%RH	264 Hours	3/231/0
HAST	A2.1.2	-	3	1	Cross Section, post bHAST, 1X	Post stress cross section	Completed	3/3/0
HAST	A2.1.3	-	3	3	Wire Bond Shear, post bHAST, 1X	Post stress	-	3/9/0
HAST	A2.1.4	-	3	3	Bond Pull over Stitch, post bHAST, 1X	Post stress	-	3/9/0
HAST	A2.1.5	-	3	3	Bond Pull over Ball, post bHAST, 1X	Post stress	-	3/9/0
HAST	A2.2	JEDEC JESD22-A110	3	70	Biased HAST	110C/85%RH	528 Hours	3/210/0
HAST	A2.2.1	-	3	22	SAM Analysis, post bHAST 2X	Review for delamination	Completed	3/66/0
HAST	A2.2.2	-	3	1	Cross Section, post bHAST, 2X	Post stress cross section	Completed	3/3/0
HAST	A2.2.3	-	3	3	Wire Bond Shear, post bHAST, 2X	Post stress	-	3/9/0
HAST	A2.2.4	-	3	3	Bond Pull over Stitch, post bHAST, 2X	Post stress	-	3/9/0
HAST	A2.2.5	-	3	3	Bond Pull over Ball, post bHAST, 2X	Post stress	-	3/9/0

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: PBQ79758PAPQ1
TC	A4.1	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	3/231/0
TC	A4.1.1	-	3	22	SAM Analysis, post TC 1X	Review for delamination	Completed	3/66/0
TC	A4.1.2	-	3	1	Cross Section, post TC, 1X	Post stress cross section	Completed	3/3/0
TC	A4.1.3	-	3	3	Wire Bond Shear, post TC, 1X	Post stress	-	3/9/0
TC	A4.1.4	-	3	3	Bond Pull over Stitch, post TC, 1X	Post stress	-	3/9/0
TC	A4.1.5	-	3	3	Bond Pull over Ball, post TC, 1X	Post stress	-	3/9/0
TC	A4.2	JEDEC JESD22-A104 and Appendix 3	3	70	Temperature Cycle	-65C/150C	1000 Cycles	3/210/0
TC	A4.2.1	-	3	22	SAM Analysis, post TC, 2X	Review for delamination	Completed	3/66/0
TC	A4.2.2	-	3	1	Cross Section, post TC, 2X	Post stress cross section	Completed	3/3/0
TC	A4.2.3	-	3	3	Wire Bond Shear, post TC, 2X	Post stress	-	3/9/0
TC	A4.2.4	-	3	3	Bond Pull over Stitch, post TC, 2X	Post stress	-	3/9/0
TC	A4.2.5	-	3	3	Bond Pull over Ball, post TC, 2X	Post stress	-	3/9/0
HTSL	A6.1	JEDEC JESD22-A103	3	45	High Temperature Storage Life	150C	1000 Hours	3/135/0
HTSL	A6.1.1	-	3	1	Cross Section, post HTSL, 1X	Post stress cross section	Completed	3/3/0
HTSL	A6.2	JEDEC JESD22-A103	3	44	High Temperature Storage Life	150C	2000 Hours	3/132/0
HTSL	A6.2.1	-	3	1	Cross Section, post HTSL, 2X	Post stress cross section	Completed	3/3/0

- QBS: Qual By Similarity
- Qual Device PBQ79758PAPQ1 is qualified at MSL3 260C
- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles

Ambient Operating Temperature by Automotive Grade Level:

- Grade 0 (or E): -40C to +150C
- Grade 1 (or Q): -40C to +125C
- Grade 2 (or T): -40C to +105C
- Grade 3 (or I) : -40C to +85C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

- Room/Hot/Cold : HTOL, ED
- Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU
- Room : AC/uHAST

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

TI Qualification ID: R-NPD-2202-155

Qualification Results

Data Displayed as: Number of lots / Total sample size / Total failed

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: <u>BQ79718VPAPRQ1</u>	QBS Package, Process, Product Reference: <u>PBQ79758PAPQ1</u>
Test Group A - Accelerated Environment Stress Tests									
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	MSL3 260C	-	-	3/Pass
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST	110C/85%RH	264 Hours	-	3/231/0
AC/UHAST	A3	JEDEC JESD22-A102/JEDEC JESD22-A118	3	77	Autoclave	121C/15psig	96 Hours	-	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle	-65C/150C	500 Cycles	-	3/231/0
TC-BP	A4	MIL-STD883 Method 2011	1	5	Post Temp Cycle Bond Pull	-	-	-	1/5/0
HTSL	A6	JEDEC JESD22-A103	1	45	High Temperature Storage Life	150C	1000 Hours	-	3/135/0
Test Group B - Accelerated Lifetime Simulation Tests									
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test	125C	1000 Hours	3/231/0	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate	125C	48 Hours	3/2400/0	-
Test Group C - Package Assembly Integrity Tests									
Test Group D - Die Fabrication Reliability Tests									
EM	D1	JESD61	-	-	Electromigration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
TDDb	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements

Type	#	Test Spec	Min Lot Qty	SS / Lot	Test Name	Condition	Duration	Qual Device: <u>BQ79718VPAPRQ1</u>	QBS Package, Process, Product Reference: <u>PBQ79758PAPQ1</u>
HCI	D3	JESD60 & 28	-	-	Hot Carrier Injection	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
BTI	D4	-	-	-	Bias Temperature Instability	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
SM	D5	-	-	-	Stress Migration	-	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements
Test Group E - Electrical Verification Tests									
ESD	E2	AEC Q100-002	1	3	ESD HBM	-	2000 Volts	1/3/0	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	-	500 Volts	1/3/0	-
ESD	E3	AEC Q100-011	1	3	ESD CDM	Corner pins	750 Volts	1/3/0	-
LU	E4	AEC Q100-004	1	3	Latch-Up	Per AEC Q100-004	-	1/3/0	-
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67 Room, hot, and cold	-	3/90/0	-
Additional Tests									

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

- Room/Hot/Cold : HTOL, ED
- Room/Hot : THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU
- Room : AC/uHAST

Quality and Environmental data is available at TI's external Web site: <http://www.ti.com/>

TI Qualification ID: R-CHG-2501-081

ZVEI ID: SEM-DE-01, SEM-DE-02, SEM-PA-13, SEM-DS-01

In performing change qualifications, Texas Instruments follows integrated circuit industry standards in performing defect mechanism analysis and failure mechanism-based accelerated environmental testing to ensure wafer fab process, assembly process and product quality and reliability. As encouraged by these standards, TI uses both product-specific and generic (family) data in qualifying its changes. For devices to be categorized as a 'product qualification family' for generic data purposes, they must share similar product, wafer fab process and assembly process elements. The applicability of generic data (also known at TI as Qualification by Similarity (QBS)) is determined by the Reliability Engineering function following these industry standards. Generic data is shown in the qualification report in columns titled "QBS Process" (for wafer fab process), "QBS Package" (for assembly process) and "QBS Product" (for product family).

For questions regarding this notice, e-mails can be sent to the Change Management team or your local Field Sales Representative.

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