



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN#20250303001.0
MSL Update for Select Devices
Change Notification**

Date: March 04, 2025

To: MOUSER PCN

Dear Customer:

This is an announcement of a change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments requires acknowledgement of receipt of this notification within **60** days of the date of this notice. Lack of acknowledgement of this notice within 60 days constitutes acceptance and approval of this change. If additional data are required, requests must be received within **60 days** of this notification.

The changes discussed within this PCN will not take effect any earlier than the PCN date on Page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice or to provide acknowledgement of this PCN, you may contact your local Field Sales Representative or the change management team.

For sample requests or sample related questions, contact your local Field Sales Representative.

Sincerely,

Change Management Team
SC Business Services

20250303001.0
Change Notification / 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
OPA170AQDBVRQ1	NULL
OPA314AQDBVTQ1	OPA314AQDBVTQ1
OPA314AQDBVRQ1	NULL
OPA316QDBVRQ1	NULL
OPA316QDBVTQ1	NULL

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

PCN Number:	PCN#20250303001.0			PCN Date:	March 04, 2025								
Title:	MSL Update for select devices												
Customer Contact:	Change Management Team	Dept:	Quality Services										
<input type="checkbox"/> Assembly Site	<input type="checkbox"/> Design	<input type="checkbox"/> Wafer Bump Material											
<input type="checkbox"/> Assembly Process	<input type="checkbox"/> Data Sheet	<input type="checkbox"/> Wafer Bump Process											
<input type="checkbox"/> Assembly Materials	<input type="checkbox"/> Part number change	<input type="checkbox"/> Wafer Fab Site											
<input type="checkbox"/> Mechanical Specification	<input type="checkbox"/> Test Site	<input type="checkbox"/> Wafer Fab Material											
<input checked="" type="checkbox"/> Packing/Shipping/Labeling	<input type="checkbox"/> Test Process	<input type="checkbox"/> Wafer Fab Process											
PCN Details													
Description of Change:													
<p>This Notification is to inform of a change to the MSL ratings for the devices listed below as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>What</th> <th>Current</th> <th>New</th> </tr> </thead> <tbody> <tr> <td>MSL</td> <td>2 or 3</td> <td>1</td> </tr> </tbody> </table>						What	Current	New	MSL	2 or 3	1		
What	Current	New											
MSL	2 or 3	1											
Reason for Change:													
Supply Continuity													
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):													
None													
Impact on Environmental Ratings													
<p>Checked boxes indicate the status of environmental ratings following implementation of this change. If below boxes are checked, there are no changes to the associated environmental ratings.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>RoHS</th> <th>REACH</th> <th>Green Status</th> <th>IEC 62474</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> No Change</td> </tr> </tbody> </table>						RoHS	REACH	Green Status	IEC 62474	<input checked="" type="checkbox"/> No Change			
RoHS	REACH	Green Status	IEC 62474										
<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change	<input checked="" type="checkbox"/> No Change										
Changes to product identification resulting from this PCN:													
None													
Product Affected:													
OPA170AQDBVRQ1	OPA314AQDBVTQ1	OPA316QDBVRQ1	OPA316QDBVTQ1										
OPA314AQDBVRQ1													

**Automotive New Product Qualification Summary
(As per AEC-Q100 and JEDEC Guidelines)**
TPS3840PH30DBVRQ1 (Q100, Grade 1, -40 to 125C)
Approved 02-Jun-2022
Product Attributes

Attributes		Qual Device: <u>TMS3840PH30DBVRQ1</u>
Automotive Grade Level		Grade 1
Operating Temp Range		-40 to +125 C
Product Function		Power Management
Wafer Fab Supplier		RFAB
Die Revision		A
Assembly Site		CDAT
Package Type		SOT-23
Package Designator		DBV
Ball/Lead Count		5

- QBS: Qual By Similarity

- Qual Device 3840PH30DBVRQ1 is qualified at LEVEL1-260CG

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>3840PH30DBVRQ1</u>
Test Group A – Accelerated Environment Stress Tests							
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 1-260C	No Fails
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	3/231/0
UHAST	A3	JEDEC JESD22-A102	3	77	Unbiased HAST 130C/85%RH	96 Hours	3/231/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	3/231/0
TC-WBP	A4	MIL-STD883 Method 2011	1	60	Post Temp Cycle Bond Pull	Wires	3/108/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 150C	1000 Hours	3/231/0
Test Group B – Accelerated Lifetime Simulation Tests							
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	3/231/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A
Test Group C – Package Assembly Integrity Tests							
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear, Cpk>1.67	Wires	3/90/0
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull, Cpk>1.67	Wires	3/90/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free Solder	3/45/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Solder	3/45/0
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk>1.67	3/30/0
LI	C6	JEDEC JESD22-B105	1	50	Lead Fatigue	Leads	3/66/0
LI	C6	JEDEC JESD22-B105	1	50	Lead Pull to Destruction	Leads	3/66/0
Test Group D – Die Fabrication Reliability Tests							
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements
TDDB	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements

	Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: J840PH30DBVRQ1
	HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements
	NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements
	SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements
Test Group E – Electrical Verification Tests								
	ED	E5	AEC Q100-009	3	30	Auto Electrical Distributions	Cpk>1.67 Room, hot, and cold test	3/90/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C

Grade 1 (or Q): -40°C to +125°C

Grade 2 (or T): -40°C to +105°C

Grade 3 (or I): -40°C to +85°C

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

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

TI Qualification ID: 20201126-137339

ZVEI Id: SEM-PS-02

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

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