



Product Change Notification / GBNG-19TOBI439

Date:

04-Nov-2021

Product Category:

Analog Temperature Sensors, Depletion Mode MOSFETs, Linear Regulator ICs, Linear Regulators, Voltage References

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4885 Initial Notice: Qualification of CEL-8240 GS as a new mold compound material for selected Supertex CL2xx, CL52xx, LND150, MCP15xx, MCP170x and MCP970xx device families available in 3L TO-92 package assembled at CRTK assembly site.

Affected CPNs:

[GBNG-19TOBI439_Affected_CPN_11042021.pdf](#)
[GBNG-19TOBI439_Affected_CPN_11042021.csv](#)

Notification Text:

PCN Status:Initial Notification

PCN Type:Manufacturing Change

Microchip Parts Affected:Please open one of the files found in the Affected CPNs section.

Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

Description of Change:Qualification of CEL-8240 GS as a new mold compound material for selected Supertex CL2xx, CL52xx, LND150, MCP15xx, MCP170x and MCP970xx device families available in 3L TO-92 package assembled at CRTK assembly site.

Pre and Post Change Summary:

		Pre Change		Post Change
Assembly Site		Greatek Electronic Inc. (GTK)	Cirtek Electronics Corporation (CRTK)	Cirtek Electronics Corporation (CRTK)
Wire Material		Au	Au	Au
Die Attach Material		CRM1076DJ-G	84-1LMISR4	84-1LMISR4
Molding Compound Material		G600F	EME-G600	CEL-8240 GS
Lead frame	Material	CDA194	A194	A194
	Lead lock	No	No	No
	Design	See attached Pre and Post change comparison		
Package Lay-out		See attached Pre and Post change comparison		

*Note: C194, A194 or CDA194 Lead frame material are the same, it is just a MCHP internal labelling difference.

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve productivity and on-time delivery performance by qualifying CEL-8240 GS as a new mold compound material at CRTK assembly site.

Change Implementation Status:In Progress

Estimated Qualification Completion Date:February 2022

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

	November 2021					>	February 2022				
Workweek	4 5	4 6	4 7	4 8	4 9		6	7	8	9	1 0
Initial PCN Issue Date	x										
Qual Report							x				

Availability											
Final PCN Issue Date							x				

Method to Identify Change:Traceability code

Qualification Plan:Please open the attachments included with this PCN labeled as PCN_#_Qual_Plan.

Revision History:November 04, 2021: Issued initial notification.

The change described in this PCN does not alter Microchip’s current regulatory compliance regarding the material content of the applicable products.

Attachments:

- [PCN_GBNG-19TOBI439_Qual_Plan.pdf](#)
- [PCN_GBNG-19TOBI439_Pre_and_Post Change_Summary.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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If you wish to [receive Microchip PCNs via email](#) please register for our PCN email service at our [PCN home page](#) select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the [PCN FAQ](#) section.

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CCB 4885
Pre and Post Change Summary
PCN #: GBNG-19TOBI439

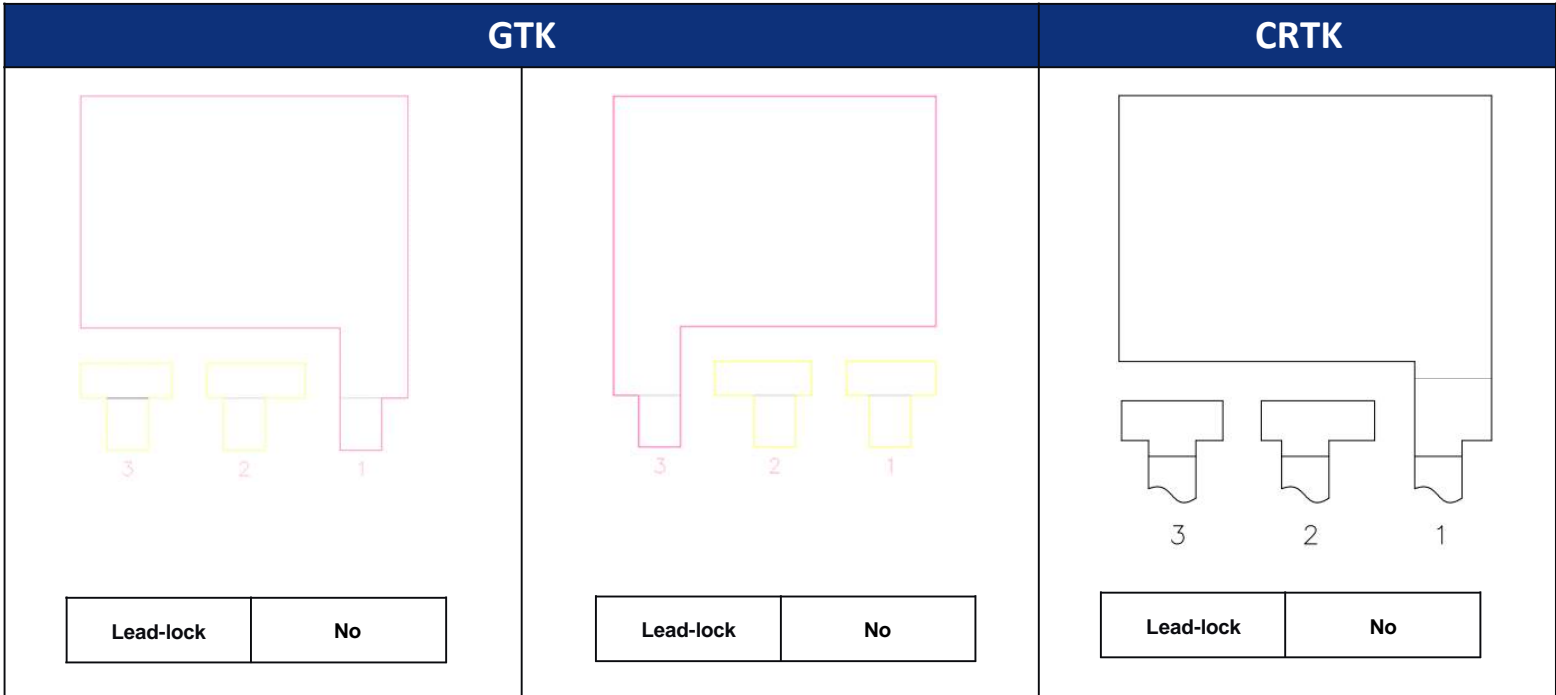


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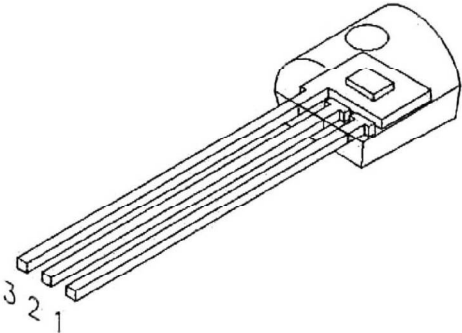
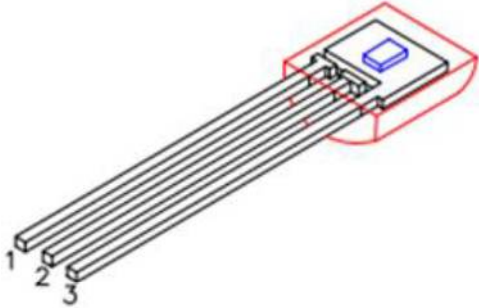
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Lead Frame Comparison



Note: Mold compound material fills the leadlock hole, which provides improved protection against moisture penetration along the edge of the leads (pins) of the package.

Package Lay-out

GTK	CRTK
 <p>A 3D perspective diagram of a GTK package. It features a rectangular body with a semi-circular top edge. A small square die is mounted on the top surface. Three long, thin leads extend from the bottom of the package, labeled with the numbers 3, 2, and 1 from left to right.</p>	 <p>A 3D perspective diagram of a CRTK package. It features a rectangular body with a flat top surface. A small square die is mounted on the top surface. Three long, thin leads extend from the bottom of the package, labeled with the numbers 1, 2, and 3 from left to right. A red rectangular box highlights the top surface of the package, indicating the die's position.</p> <p data-bbox="1047 1276 1274 1312">Die sit on flat side</p>



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QUALIFICATION PLAN SUMMARY

PCN #: GBNG-19TOBI439

**Date:
October 14, 2021**

Qualification of CEL-8240 GS as a new mold compound material for selected Supertex CL2xx, CL52xx, LND150, MCP15xx, MCP170x and MCP970xx device families available in 3L TO-92 package assembled at CRTK assembly site.

Purpose: Qualification of CEL-8240 GS as a new mold compound material for selected Supertex CL2xx, CL52xx, LND150, MCP15xx, MCP170x and MCP970xx device families available in 3L TO-92 package assembled at CRTK assembly site.

CCB No.: 4885

<u>Misc.</u>	Assembly site	CRTK
	MP Code (MPC)	ABBA14A2XA33
	Part Number (CPN)	MCP1700-3302E/TO
	Assembly Shipping Media (T/R, Tube/Tray)	Bag
	Base Quantity Multiple (BQM)	1000
<u>Lead-Frame</u>	Paddle size	140x100
	Material	A194
	DAP Surface Prep	Ag
	Process	Stamping
	Lead-lock	No
	Part Number	TO03NH2101
	Lead Plating	Matte Sn
	Strip Size	254.05+/-0.15 mm
	Strip Density	50
<u>Bond Wire</u>	Material	Au
<u>Die Attach</u>	Part Number	84-1LMISR4
	Conductive	Yes
<u>MC</u>	Part Number	CEL-8240GS
<u>PKG</u>	PKG Type	TO-92
	Pin/Ball Count	3

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Pkg. Type	Special Instructions
Standard Pb-free Solderability	J-STD-002D: Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5	MTAI	MTAI	TO-92	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Standard SnPb Solderability	J-STD-002D; Perform 8 hour steam aging prior to testing. Standard SnPb: SnPb finish, SnPb solder, wetting temp 215°C for SMD & 245°C for through hole packages.	22	5	1	27	> 95% lead coverage	5	MTAI	MTAI	TO-92	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	MTAI	MTAI	TO-92	10 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5		5	MTAI	MTAI	TO-92	10 bonds from a min. 5 devices.
Wire Sweep								MTAI	MTAI	TO-92	Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30		5	MTAI	MTAI	TO-92	
Lead Integrity	JESD22 B105	5	0	1	5	0 (No lead breakage or cracks)	5	MTAI	MTAI	TO-92	3 leads from each of 5 parts. Not required for SMD, only required for through-hole.
External Visual	Mil. Std. 883-2009/2010							MTAI	MTAI	TO-92	
HAST	+130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C and +125°C	77	5	3	246	0	10	MTAI	MTAI	TO-92	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	+130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C and +125°C	77	5	3	246	0	10	MTAI	MTAI	TO-92	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at +25°C and +125°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	MTAI	TO-92	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

GBNG-19T(CL52xx LND150 MCP15xx MCP170x and MCP970xx device families available in 3L T

Affected Catalog Part Numbers(CPN)

CL25N3-G
CL2N3-G
CL2N3-G-D591
CL2N3-G-D602
CL2N3-G-P002
CL520N3-G
CL525N3-G
LND150N3-G
LND150N3-G-P002
LND150N3-G-P003
LND150N3-G-P013
LND150N3-G-P014
MCP1525-I/TO
MCP1541-I/TO
MCP1700-1202E/TO
MCP1700-1302E/TO
MCP1700-1502E/TO
MCP1700-1802E/TO
MCP1700-2102E/TO
MCP1700-2302E/TO
MCP1700-2502E/TO
MCP1700-2702E/TO
MCP1700-2802E/TO
MCP1700-3002E/TO
MCP1700-3102E/TO
MCP1700-3302E/TO
MCP1700-4002E/TO
MCP1700-5002E/TO
MCP1700-3001E/TO
MCP9700-E/TO
MCP9700A-E/TO
MCP9701-E/TO
MCP9701A-E/TO
MCP1702-1202E/TO
MCP1702-1502E/TO
MCP1702-1802E/TO
MCP1702-2502E/TO
MCP1702-2802E/TO
MCP1702-3002E/TO
MCP1702-3302E/TO
MCP1702-3602E/TO
MCP1702-4002E/TO

MCP1702-5002E/TO