

Product Change Notification / ASER-06FDTY754

Date:

11-Mar-2022

Product Category:

AC/DC - Offline Linear Regulators, General Purpose LED Drivers, Linear Regulator ICs, Power Management - System Supervisors/Voltage Detectors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4882 Final Notice: Qualification of CEL-8240 GS new molding compound for selected LR8Nxxx, LR645Nxxx, LR745Nxxx, LR12Nxxx, HV992xxx and TC32Mxxx device families available in 3L TO-92 package at CRTK assembly site.

Affected CPNs:

ASER-06FDTY754_Affected_CPN_03112022.pdf ASER-06FDTY754_Affected_CPN_03112022.csv

Notification Text:

PCN Status: Final 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 new molding compound for selected LR8Nxxx, LR645Nxxx, LR745Nxxx, LR12Nxxx, HV992xxx and TC32Mxxx device families available in 3L TO-92 package.

Pre and Post Change Summary:

			Pre Cl	nange	Post Change		
Assembly Site		GREATEK I IN (G ⁻	-	Cirtek Electronics Corporation (CRTK)	Cirtek Electronics Corporation (CRTK)		
Wire Material		A	u	Au	Au		
Die Attach Material Molding Compound Material		CRM10	76DJ-G	84-1LMISR4	84-1LMISR4		
		G6	DOF	EME-G600	CEL-8240 GS		
Material*		CDA	194	A194	A194		
Lead-Frame	Paddle size	105x86 105x88 mil mil		105x100 mil	105x87 mil		
	Design	S	ee Pre and P	ost Change Summary fo	r Comparison.		

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

Impacts to Data Sheet:None

Change ImpactNone

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

Change Implementation Status: In Progress

Estimated First Ship Date: April 20, 2022 (date code: 2217)

Note: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	Nov	/emb	er 20)21			Ma	rch 2	022			April	2022	2
Workweek	45	46	4 7	4 8	\rightarrow	1 0	1 1	1 2	1 3	1 4	1 5	1 6	1 7	1 8
Initial PCN Issue Date				x										
Qual Report Availability							x							
Final PCN Issue Date							x							

Date	Estimated Implementation Date													x	
------	-------------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	---	--

Method to Identify Change: Traceability code

Qualification Report: Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History: November 2, 2021: Issued initial notification.

March 11, 2022: Issued final notification. Stated CEL-8240 GS molding compound in the notification subject and description of change. Added lead frame paddle size in Pre and Post Change table and summary. Attached the qualification report. Provided estimated first ship date to be on April 20, 2022.

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

Attachments:

PCN_ASER-06FDTY754_Qual_Report.pdf PCN_ASER-06FDTY754_Pre_and Post Change Summary.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

Terms and Conditions:

If you wish to <u>receive Microchip PCNs via email</u> 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.

If you wish to <u>change your PCN profile</u>, <u>including opt out</u>, please go to the <u>PCN home page</u> select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections. ASER-06FDTY754 - CCB 4882 Final Notice: Qualification of CEL-8240 GS new molding compound for selected LR8Nxxx, LR645Nxxx, LR745Nxxx, LR12Nxxx, HV992xxx and TC32Mxxx device families available in 3L TO-92 package at CRTK assembly site.

Affected Catalog Part Numbers (CPN)

LR8N3-G LR8N3-G-P003 LR645N3-G-P003 LR645N3-G-P003 LR745N3-G-P013 LR745N3-G-P003 LR745N3-G-P013 LR745N3-G-P013 LR12N3-G HV9921N3-G HV9921N3-G HV9923N3-G TC32MCZB TC32MCZB

CCB 4882

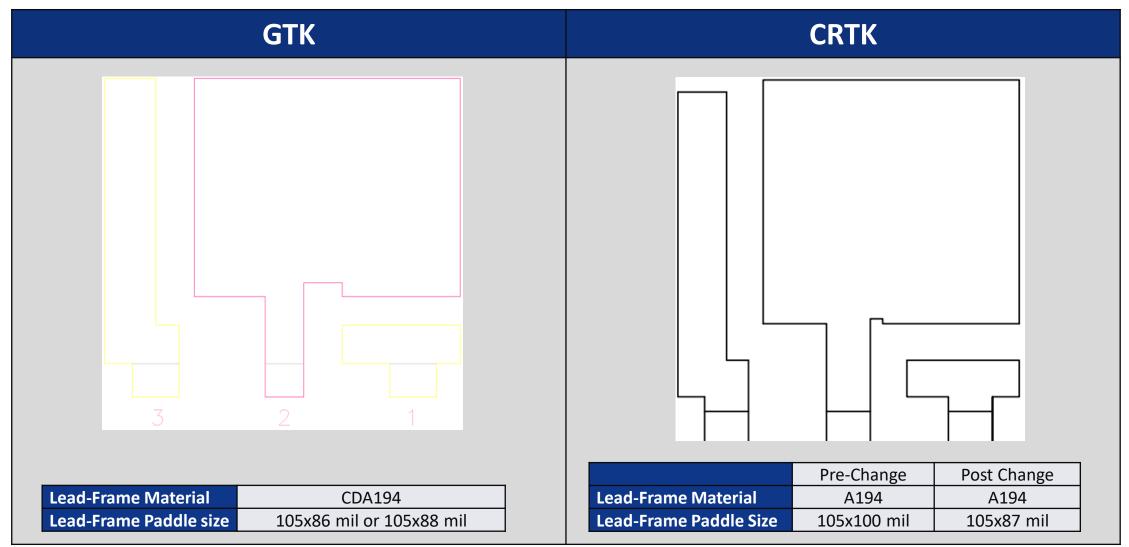
Pre and Post Change Summary PCN #: ASER-06FDTY754



A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



Lead Frame Comparison



Note: C194, A194 or CDA194 Lead frame material are the same material, these are simply a MCHP internal labelling difference.





QUALIFICATION REPORT SUMMARY RELIABILITY LABORATORY

PCN #: ASER-06FDTY754

Date March 2, 2022

Qualification of CEL-8240 GS new molding compound for selected LR8Nxxx, LR645Nxxx, LR745Nxxx, LR12Nxxx, HV992xxx and TC32Mxxx device families available in 3L TO-92 package at CRTK assembly site.



Purpose Qualification of CEL-8240 GS new molding compound for selected LR8Nxxx, LR645Nxxx, LR745Nxxx, LR12Nxxx, HV992xxx and TC32Mxxx device families available in 3L TO-92 package at CRTK assembly site. CCB No. 4882 CN E000073350 QUAL ID R2101129 Rev. A MP CODE Y20201A2XA00 Part No. TC32MCZB Bonding No. S195-TO-003-OE Package Туре 3L TO-92

Lead Frame	
Paddle size	105 x 87 mils
Material	A194
Surface	Ag
Process	Stamped
Lead Lock	No
Part Number	TO03NH2102
Die attach material	
Ероху	84-1 LMIS R4
Wire	Au wire
Mold Compound	CEL-8240 GS
Plating Composition	Matte Sn



Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
CRTK222900002.000	TMPE221475474.200	2141WRH
CRTK222900003.000	TMPE221475474.200	2141WSB
CRTK222900004.000	TMPE221475474.200	2141WSS

Result

X Pass

- Fail

3L TO-92 assembled by CRTK pass reliability test per QCI-39000.

	PACKAGE QUALIFIC	ATION	REP	ORT		
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Electrical Test	Electrical Test: +25°C System: TTS	JESD22- A113	693(0)	693		Good Devices
	Stress Condition: -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification	JESD22- A104		231		
Temp Cycle	Electrical Test: +25°C System: TTS		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>4.00 grams) Bond Shear (>18.00 grams)		15 (0) 15 (0)	0/15 0/15	Pass Pass	
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C	JESD22- A118	231(0)	231	Pass	77 units / lot
	System: TTS		201(0)	0,201	1 033	

	PACKAGE QUALIFIC	ATION	REPO	ORT		
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
HACT	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X	JESD22- A110		231		
HAST	Electrical Test: +25°C System: TTS		231(0)	0/231	Pass	77 units / lot
High Temperature	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22- A103		45		45 units
Storage Life	Electrical Test: +25°C System: TTS		45(0)	0/45	Pass	
Solderability	Steam Aging: Temp 93°C,8Hrs System: SAS-3000	J-STD-002	22 (0)	22		
Temp 245°C	Solder Dipping: Solder Temp.245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6			22		
	System: ERSA RA 2200D Visual Inspection: External Visual Inspection			0/22	Pass	
Lead Integrity	15 Leads from a minimum of 5 units, 1 lot. System: Strain	JESD22 B105	15(0)	0/15	Pass	
	Wire sweep Inspection 15 Wires / lot	-	45(0)	0/45	Pass	
Wire sweep			Wires			
Physical	Physical Dimension,	JESD22-	30(0)	0/30	Pass	
Dimensions	10 units per lot	B100/B108	Units			
Bond Strength	Wire Pull (>4.00 grams)	Mil. Std.	30 (0) Wires	0/30	Pass	
Data Assembly	Bond Shear (>13.00 grams)	883-2011	30 (0) bonds	0/30	Pass	