



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:

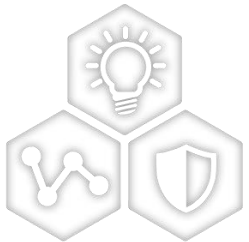
Affected Catalog Part Numbers (CPN)

LR8N3-G
LR8N3-G-P003
LR645N3-G
LR645N3-G-P003
LR645N3-G-P013
LR745N3-G
LR745N3-G-P003
LR745N3-G-P013
LR12N3-G
HV9921N3-G
HV9922N3-G
HV9923N3-G
TC32MCZB
TC32MEZB

CCB 4882
Pre and Post Change Summary
PCN #: ASER-06FDTY754

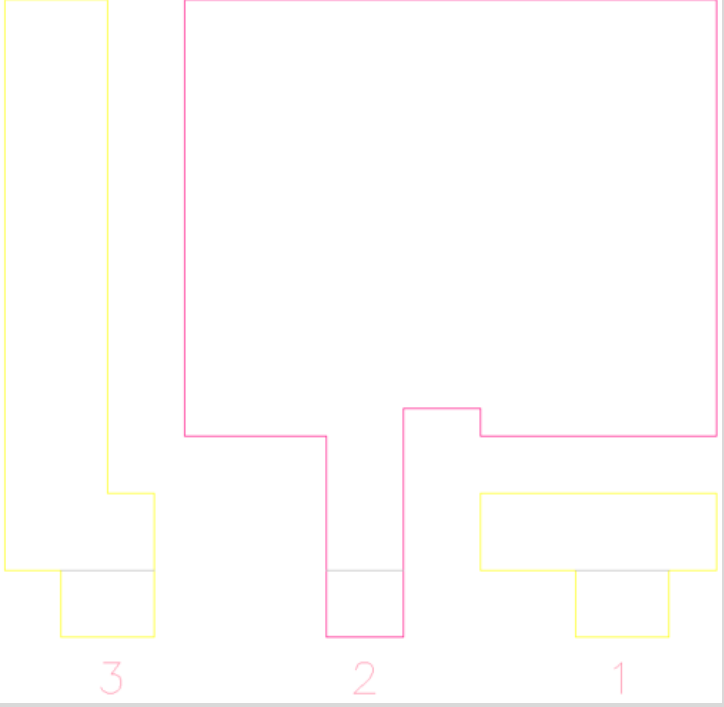
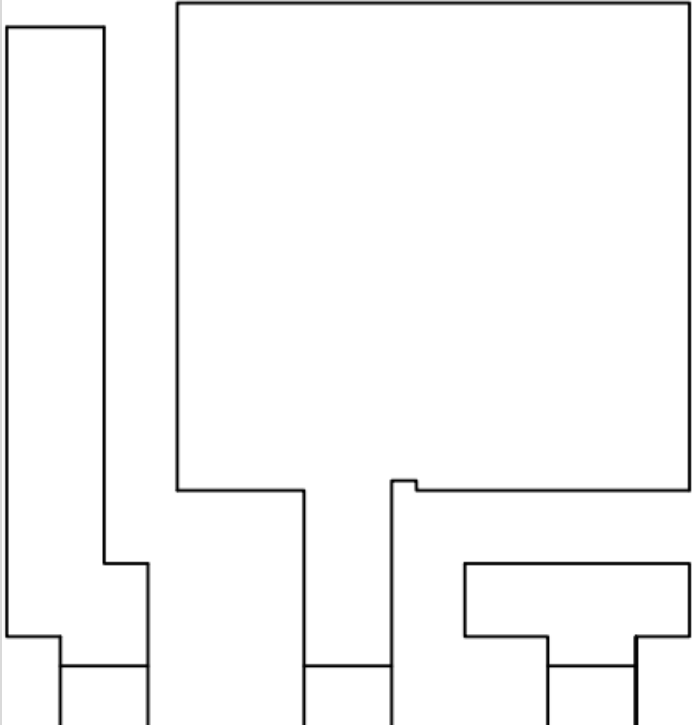


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Lead Frame Comparison

GTK		CRTK		
 <p>The diagram shows three lead frame profiles for the GTK package. Profile 1 (yellow) is a simple rectangular lead. Profile 2 (pink) has a wider top section and a narrower bottom section. Profile 3 (yellow) has a very narrow top section and a wider bottom section. The profiles are labeled 1, 2, and 3 from right to left.</p>		 <p>The diagram shows three lead frame profiles for the CRTK package. Profile 1 (black) is a simple rectangular lead. Profile 2 (black) has a wider top section and a narrower bottom section. Profile 3 (black) has a very narrow top section and a wider bottom section.</p>		
Lead-Frame Material	CDA194	Lead-Frame Material	Pre-Change A194	Post Change A194
Lead-Frame Paddle size	105x86 mil or 105x88 mil	Lead-Frame Paddle Size	105x100 mil	105x87 mil

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.



MICROCHIP

PACKAGE QUALIFICATION REPORT

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

Type 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

Epoxy 84-1 LMIS R4

Wire Au wire

Mold Compound CEL-8240 GS

Plating Composition Matte Sn



MICROCHIP PACKAGE QUALIFICATION REPORT

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

Pass

Fail

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

PACKAGE QUALIFICATION REPORT

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
Temp Cycle	Stress Condition: -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification Electrical Test: +25°C System: TTS Bond Strength: Wire Pull (>4.00 grams) Bond Shear (>18.00 grams)	JESD22- A104	231(0)	231 0/231	Pass	77 units / lot
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: TTS	JESD22- A118	231(0)	231 0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

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