Product Change Notification / JAON-27QLDJ535

Date:

18-Feb-2021

Product Category:

Ultrasound Transmitter Pulser ICs

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4222 Final Notice: Qualification of NSEB as a new assembly site for STEX HV7355K6-G catalog part number (CPN) available in 56L VQFN (8x8x1.0mm) package.

Affected CPNs:

JAON-27QLDJ535_Affected_CPN_02182021.pdf
JAON-27QLDJ535_Affected_CPN_02182021.csv

Notification Text:

PCN Status: Final notification

PCN Type: Manufacturing Change

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

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

Description of Change: Qualification of NSEB as a new assembly site for STEX HV7355K6-G catalog part number (CPN) available in 56L VQFN (8x8x1.0mm) package.

Pre Change:
Assembled at CARC using QMI519 die attach, and G770HCD lead frame material

Post Change: Assembled at NSEB using 8600 die attach, and G700LTD lead frame material

Pre and Post Change Summary:

	Pre Change	**Post Change**
Assembly Site	Carsem Suzhou (CARC)	UTAC Thai Limited (UTL-1) LTD. (NSEB)
Bond Wire material	Gold (Au)	Gold (Au)
Die attach material	QMI519	8600
Molding compound material	G770HCD	G700LTD
Lead frame material	A194	A194

Impacts to Data Sheet: No

Change Impact: None

Reason for Change: To improve on-time delivery performance by qualifying NSEB as a new assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date:
March 15, 2021 (date code: 2112)

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

Time Table Summary:

	April 2020					**-->**	**February 2021**				**March 2021**				
Workweek	14	15	16	17	18		6	7	8	9	10	11	12	13	14
Initial PCN Issue Date					X										
Qual Report Availability									X						
Final PCN Issue Date									X						
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:
April 30, 2020: Issued initial notification.
February 18, 2021: Issued final notification. Attached the qualification report. Provided the estimated first ship date to be on March 15, 2021.

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

Attachments:

PCN_JAON-27QLDJ535 Qual Report.pdf

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

Terms and Conditions:

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.

If you wish to change your PCN profile, including opt out, please go to the PCN home page select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

HV7355K6-G

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: JAON-27QLDJ535

Date:
February 11, 2021

Qualification of NSEB as a new assembly site for STEX HV7355K6-G catalog part number (CPN) available in 56L VQFN (8x8x1.0mm) package.

Purpose	Qualification of NSEB as a new assembly site for STEX HV7355K6-G catalog part number (CPN) available in 56L VQFN (8x8x1.0mm) package.
CCB No	4222
CN	ES349900
QUAL ID	R2000846 Rev. A
MP CODE	V7JA144FXA00
Part No.	HV7355K6-G
Bonding No.	BDM-002730 Rev. A

Package

Type	56L VQFN
Package size	8x8x1.0 mm

Lead Frame

Paddle size	254 x 254 mils
Material	A194
Surface	Ag ring
Process	Etched
Lead Lock	Yes
Part Number	FR1612

Material

Epoxy	8600
Wire	Au wire
Mold Compound	G700LTD
Plating Composition	Matte Tin

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
NSEB212600884.000	VS01920338362.400	20408HQ
NSEB212600885.000	VS01920338362.400	20408HR
NSEB212700196.000	VS01920338362.400	20408HV

Result ☒ Pass ☐ Fail ☐ ____________________

56L VQFN (8x8x1.0 mm) assembled by NSEB pass reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 3 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Reliability Tests (At MSL Level 3)	**Electrical Test:** +25°C System: TMT_QMVI	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		693		
	30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C System: TMT_QMVI			0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 25°C System: TMT_QMVI		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 5.00 grams)		15 (0)	0/15	Pass	
	Bond Shear (>25.00 grams)		15 (0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 25°C System: TMT_QMVI		231(0)	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test: + 25°C System: TMT_QMVI		45(0)	0/45	Pass	
Solderability **Temp 215°C**	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63, Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	
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	
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
Physical Dimensions	Physical Dimension, 10 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 6.00 grams)	Mil.Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (> 20.00 grams)	CDF-AEC-Q100-001	30 (0) bonds	0/30	Pass	