



MICROCHIP

**QUALIFICATION REPORT
RELIABILITY LABORATORY**

PCN #: JAON-01OMGE290

**Date:
May 14, 2015**

**Qualification of GTK assembly site as an additional site for
selected products in 8L SOIC package.**

Distribution

Somnuek T.
V.Danginis
Wichai K.
Chalermpon P.

Rangsun K.
A. Navarro
J. Fernandez

Microchip Technology (Thailand) Co., Ltd.
14 Moo 1 T.Wangtakien A. Muangchacherngsao,
Chacherngsao, Thailand, 24000
Tel. (+66 38) 857119-45, 857311-19 ext. 1231
Fax (+66 38) 857149-50



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose	Qualification of GTK assembly site as an additional site for selected products in 8L SOIC package.
CN	BC150549
QUAL ID	Q15034
MP CODE	DEDX24C2XA00
Part No.	24LC512-E/SN
Bonding No.	BDM-000730 Rev. A
CCB No.	1565
<u>Package</u>	
Type	8L SOIC
Package size	150 mils
Die thickness	15 mils
Die size	78.70 x 111.00 mils
<u>Lead Frame</u>	
Paddle size	95 x 130 mils
Material	CDA194
Surface	Ag spot
Process	Stamp
Lead Lock	No
Part Number	11-0208N-030
Treatment	None
<u>Die attach material</u>	
Epoxy	CRM-1076DJ-G
Wire	Au wire
Mold Compound	G600
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
GTK-155200007.000	GRSM415272009.120	1513V8K
GTK-155200008.000	GRSM415272009.120	1513V8P
GTK-155200009.000	GRSM415272009.120	1513V8R

Result Pass Fail _____

8L SOIC (.150") assembled by GTK pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

Prepared By:  **Date:** May 14, 2015 (Sr. Reliability Engineer)

(Mr. Udom Suksansakul)

Approved By:  **Date:** May 14, 2015 (Reliability Manager)

(Mr. Somnuek Thongprasert)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC C J-STD- 020D	135	0/135	Pass	

<u>Precondition Prior Perform Reliability Tests (At MSL Level 1)</u>	Electrical Test :+25°C,85°C and 125°C System: NEXTEST_PT	JESD22- A113	693(0)	693	Pass	Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test :+25°C and 85°C (With 1 lot 125°C on GTK-155200007.000) System: NEXTEST_PT			0/693		

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 77 units / lot
	Electrical Test: + 85°C (With 1 lot 125°C on GTK-155200007.000) System: NEXTEST_PT		231(0)	0/231	Pass	
	Bond Strength: Wire Pull (> 3.0 grams)		15 (0)	0/15	Pass	
	Bond Shear (>20.00 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 77 units / lot
	Electrical Test: +25°C System: NEXTEST_PT		231(0)	0/231	Pass	
	Decap Inspection (Information Only) (With 1 lot decap on GTK-155200007.000)		5(0) Units	0/5	Pass	
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X	JESD22- A110		231		Parts had been pre-conditioned at 260°C 77 units / lot
	Electrical Test: +25°C and 85°C (With 1 lot 125°C on GTK-155200007.000) System: NEXTEST_PT		231(0)	0/231	Pass	
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22- A103		45		45 units
	Electrical Test : +25°C,85°C and 125°C System: NEXTEST_PT		45(0)	0/45	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
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	JESD22B-102E	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	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Bond Strength Data Assembly	Wire Pull (> 3.0 grams) Bond Shear (>20.00 grams)	M2011 JESD22-B116	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	