



MICROCHIP

QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: JAON-17ZAMW740

Date
April 26, 2016

**Qualification of EFTEC-64T lead-frame for selected
products in 8L VDFN (5x5x1.0mm) package at NSEB
assembly site.**

Distribution

Fernando C	Greg P
Arthur N	Vassilis D
Joe F	Wichai K
Surasit P	Somnuek T.
Mitch R	Simeon Iliev
Chaweng W	Gerry O
Chalermpon P	Arnel M
Maitree Y	Atthapong W
Sunisa K	Supakorn L
Irina K	Ponpitug Y
Jeffrey J	Marco Ho
Rhoderick O	Fannie Lin



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of EFTEC-64T lead-frame for selected products in 8L VDFN (5x5x1.0mm) package at NSEB assembly site.
CN	BC151719
QUAL ID	Q15124
MP CODE	630359RZXA00
Part No.	DN2625DK6-G
Bonding No.	BDM-000848 Rev.A
CCB No.	1709

Package

Type	8L VDFN
Package size	5x5x1.0 mm
Die thickness	11 mils
Die size	68.2 x 68.2 mils

Lead Frame

Paddle size	87 x 87 mils
Material	EFTEC-64T
Surface	Ag on lead only
Process	Etched
Lead Lock	Yes
Part Number	FR0329
Treatment	Roughened

Die attach material

Epoxy	8060T
Wire	Au wire
Mold Compound	EME-G770HCD
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
NSEB162000732.000	SPTX915482350.000	1533YDU
NSEB162000733.000	SPTX915482350.000	1533YDV
NSEB162000734.000	SPTX915482350.000	1533YDW

Result

☒ Pass ☐ Fail ☐ _____

8L VDFN (5x5x1.0 mm) assembled by UTL (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-020D standard.

Prepared By: Wittawat P. Date: April 26, 2016 (Reliability Engineer)

(Mr. Wittawat Premniwat)

Approved By: Somnuek Date: April 26, 2016 (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 3)	30 °C/ 60%RH Moisture Soak 192 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 3)</u>	Electrical Test :+25°C System: AMIDA	JESD22- A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			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: AMIDA			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 Electrical Test: + 25°C System: AMIDA Bond Strength: Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	JESD22-A104	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: AMIDA	JESD22-A118	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 42 Volts System: HAST 6000X Electrical Test: +25°C and System: AMIDA	JESD22-A110	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB Electrical Test :+25°C System: AMIDA	JESD22-A103	45(0)	45 0/45	Pass	45 units

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: ERS A 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: ERS A RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	M2011 JESD22-B116	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	

JAON-17ZAMW740 - CCB 1709 Final Notice: Qualification of EFTEC-64T lead-frame for selected products in 8L VDFN (5x5x1.0mm) package at NSEB assembly site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-17ZAMW740
CATALOG_PART_NBR
DN2625DK6-G