



MICROCHIP

QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: JAON-13ZVEL987

Date:
March 22, 2016

**Qualification of palladium coated copper with gold flash
(CuPdAu) bond wire in selected products of the 0.25um
TSMC wafer technology available in 40L PDIP package at
MMT assembly site.**

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MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 0.25um TSMC wafer technology available in 40L PDIP package at MMT assembly site.
CN	BC160134
QUAL ID	Q16045
MP CODE	YGAE17S2XAXF
Part No.	PIC18F45J10-I/P
Bonding No.	BDM-000983 Rev. A
CCB No.	1837
<u>Package</u>	
Type	40L PDIP
Package size	600 mils
Die thickness	15 mils
Die size	94.7 x 99.0 mils
<u>Lead Frame</u>	
Paddle size	200 x 200 mils
Material	CDA194
Surface	Ag spot
Process	Stamped
Lead Lock	No
Part Number	10104001
Treatment	None
<u>Die attach material</u>	
Epoxy	CRM-1064L
Wire	CuPdAu wire
Mold Compound	GE800
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-164300512.000	TC11916300699.600	1603QSC
MMT-164300747.000	TC11916300699.600	1603T4D
MMT-164400002.000	TC11916300699.600	1604T60

Result ☒ Pass ☐ Fail ☐ _____

40L PDIP (.600") assembled by MMT (ALPH) pass reliability test per QCI-39000.

Prepared By: Thinnapol **Date:** March 22, 2016 (Sr.Reliability Engineer)

(Mr.Thinnapol Nakkasun)

Approved By: Som **Date:** March 22, 2016 (Reliability Manager)

(Mr. Somnuek Thongprasert)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Electrical Test	Electrical Test: +25 °C and 85 °C System: J750	JESD22-A113	693(0)	693		Good Devices
Temp Cycle	Stress Condition: (Standard) 65 °C to +150 °C, 500 Cycles System : TABAI ESPEC TSA-70H Electrical Test: + 85 °C System: J750 Bond Strength: Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	JESD22-A104		231		77 units / lot
			231(0)	0/231	Pass	
			15 (0)	0/15	Pass	
			15 (0)	0/15	Pass	
UNBIASED-HAST	Stress Condition: (Standard) +130 °C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		77 units / lot
	Electrical Test: +25 °C System: J750		231(0)	0/231	Pass	

PACKAGE QUALIFICATION REPORT						
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
HAST	Stress Condition: (Standard) +130 °C/85%RH, 96 hrs. Bias Volt: 3.6 Volts System: HAST 6000X	JESD22-A110		231		
	Electrical Test: +25 °C and 85 °C System: J750		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175 °C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test: + 25 °C and 85 °C System: J750		45(0)	0/45	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.5 grams)	JESD22-B116	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)		30 (0) bonds	0/30	Pass	

JAON-13ZVEL987 - CCB 1837 Final Notice: Qualification of CuPdAu bond wire in selected products of the 0.25um TSMC wafer technology available in 40L PDIP package at MMT assembly site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-13ZVEL987
CATALOG_PART_NBR
PIC18F44J10-I/P
PIC18F45J10-I/P
PIC18F46J11-I/PAQL
PIC18F46J50-I/PAQL
PIC18LF44J10-I/P
PIC18LF45J10-I/P
PIC18LF46J50-I/PAQQ