

PCN# : P57UAA

Issue Date : Oct. 06, 2015

# **DESIGN/PROCESS CHANGE NOTIFICATION**

This is to inform you that a change is being made to the products listed below.

Unless otherwise indicated in the details of this notification, the identified change will have no impact on product quality, reliability, electrical, visual or mechanical performance and affected products will remain fully compliant to all published specifications. Products incorporating this change may be shipped interchangeably with existing unchanged products.

This change is planned to take effect in 90 calendar days from the date of this notification. Please work with your local Fairchild Sales Representative to manage your inventory of unchanged product if your evaluation of this change will require more than 90 calendar days.

Please contact your local Customer Quality Engineer within 30 days of receipt of this notification if you require any additional data or samples.

## **Implementation of change:**

Expected First Shipment Date for Changed Product : Jan. 04, 2016

Expected First Date Code of Changed Product :1602

### Description of Change (From):

Front-end Wafer Fabrication site Fairchild Bucheon 5-in wafers Existing assembly/test source located at Weihai China, Shantou China, Suzhou, China

## Description of Change (To):

Front-end Wafer Fabrication Site Hangzhou Silan Foundry 5-inch wafers for HP BJT Adding Back-end assembly/test source located at Shanwei China

### Reason for Change:

Improve supply flexibility.

Better quality and yields through equipment and facility upgrades.

- Increased automation in handling and inspection in assembly.

Fairchild partners with foundries and assembly subcontractors.

- Best manufacturing practices, access to many customers methods and practices.
- Advanced technology for fast ramp of future new products and technologies.

Affected Product(s): Please refer to the list of affected products in the addendum attached in the PCN email you received. This list is based on an analysis of your companys procurement history.

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20150058A	FJL6920TU	TO264	HP BJT	3

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
Highly Accelerated Stress Test	85%RH, 130C, 80% BV	JESD22-A110	96 hrs	11/13/2015
High Temperature Reverse Bias	150C, 80% BV	JESD22-A108	1000 hrs	12/18/2015
Test				
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	12/18/2015
Power Cycle	Delta 100C, 5 Min cycle	MIL-STD-750-1036	6000 cyc	12/18/2015
Temperature Cycle	-55C, 150C	JESD22-A104	1000 cyc	9/28/2015

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20150058A	TIP42CTU_F129	TO220	HP BJT	3

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
Highly Accelerated Stress Test	85%RH, 130C, 80% BV	JESD22-A110	96 hrs	0/231
High Temperature Reverse Bias Test	150C, 80% BV	JESD22-A108	1000 hrs	9/21/2015
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	9/21/2015
Power Cycle	Delta 100C, 5 Min cycle	MIL-STD-750-1036	6000 cyc	9/22/2015
Temperature Cycle	-55C, 150C	JESD22-A104	1000 cyc	0/231

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20150058A	BD13916STU	TO126	HP BJT	2

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
Highly Accelerated Stress Test	85%RH, 130C, 80% BV	JESD22-A110	96 hrs	9/25/2015
Temperature Cycle	-55C, 150C	JESD22-A104	1000 cyc	0/154

<b>Qualification Plan</b>	Device	<b>Package</b>	<b>Process</b>	No. of Lots
Q20150269	FJP2160DTU	TO220	HP BJT	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
Highly Accelerated Stress Test	85%RH, 130C, 80% BV	JESD22-A110	96 hrs	0/154
Temperature Cycle	-55C, 150C	JESD22-A104	1000 cyc	10/5/2015

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20150269	FJD3305H1TM	TT252	HP BJT	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/77
Highly Accelerated Stress Test	85%RH, 130C, 80% BV	JESD22-A110	96 hrs	9/25/2015
Temperature Cycle	-55C, 150C	JESD22-A104	1000 cyc	10/13/2015

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20140407	KA7805AETU	TO220	BHB2A	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
High Humidity, High Temp, Rev. Bias	85C, 85%RH, Vin=20V	JESD22-A101B	1000 hrs	0/77
High Temperature Op Life	125C,Vin=30V	NA	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Solder Dip (Resistance to Solder Heat)	270C	JESD22-B106	15 sec	0/30
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20140407	KSA940TU	TO220	HP BJT	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
High Humidity, High Temp, Rev.	85C, 85%RH, Vin=80% of rated	JESD22-A101B	1000 hrs	0/77
Bias	BV, max 100V			
High Temperature Reverse Bias	150C, 80% ratedBV	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Medium Size Pkg's (TO-220, D2)	Delta 100C, 3.5 Min On/Off	MIL-STD-750	8572 cyc	0/77
(Power Cycle)		M1037		
Solder Dip (Resistance to Solder	270C	JESD22-B106	15 sec	0/30
Heat)				
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77

<b>Qualification Plan</b>	Device	Package	Process	No. of Lots
Q20140407	FCP36N60N	TO220	SUPREMOS	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
High Humidity, High Temp, Rev.	85C, 85%RH, Vin=80% of rated	JESD22-A101B	1000 hrs	0/77
Bias	BV, max 100V			
High Temperature Gate Bias	150C, 100% Rated VGSV	JESD22-A108	1000 hrs	0/77
High Temperature Reverse Bias	150C, 80% ratedBV	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Medium Size Pkg's (TO-220, D2)	Delta 100C, 3.5 Min On/Off	MIL-STD-750	8572 cyc	0/77
(Power Cycle)		M1037		
Solder Dip (Resistance to Solder	270C	JESD22-B106	15 sec	0/30
Heat)				
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20140407	TIP42CTU	TO220	HP BJT	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
High Humidity, High Temp, Rev.	85C, 85%RH, Vin=80% of rated	JESD22-A101B	1000 hrs	0/77
Bias	BV, max 100V			
High Temperature Reverse Bias	150C, 80% ratedBV	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Medium Size Pkg's (TO-220, D2)	Delta 100C, 3.5 Min On/Off	MIL-STD-750	8572 cyc	0/77
(Power Cycle)		M1037	-	
Solder Dip (Resistance to Solder	270C	JESD22-B106	15 sec	0/30
Heat)				
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20140407	FQP4N90C	TO220	C-FET	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
High Humidity, High Temp, Rev.	85C, 85%RH, Vin=80% of rated	JESD22-A101B	1000 hrs	0/77
Bias	BV, max 100V			
High Temperature Gate Bias	150C, 100% Rated VGSV	JESD22-A108	1000 hrs	0/77
High Temperature Reverse Bias	150C, 80% ratedBV	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Medium Size Pkg's (TO-220, D2)	Delta 100C, 3.5 Min On/Off	MIL-STD-750	8572 cyc	0/77
(Power Cycle)		M1037		
Solder Dip (Resistance to Solder	270C	JESD22-B106	15 sec	0/30
Heat)				
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20140409A	FQD17N08LTM	DIPAK	Q-FET	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small),	PeakTemp(260c),	JESD22-A113	24 hrs	0/154
(Precondition),Before TMCL/H3TRB	Cycles(3)		168hrs	
test				
High Humidity, High Temp, Rev. Bias	85C, 85%RH, Vin=80%	JESD22-A101B	1000 hrs	0/77
	of rated BV, max 100V			
High Temperature Reverse Bias	150C, 80% ratedBV	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Power Cycle	Delta 100C, 2 Min cycle	MIL-STD-750-	10000 cyc	0/77
		1036		
Solder Dip (Resistance to Solder Heat)	270C	JESD22-B106	15 sec	0/30
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20140409A	MJD47TF	DIPAK	HP BJT	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
MSL(1), PKG(Small),	PeakTemp(260c),	JESD22-A113	24 hrs	0/154
(Precondition),Before TMCL/H3TRB	Cycles(3)		168hrs	
test				
High Humidity, High Temp, Rev. Bias	85C, 85%RH, Vin=80% of	JESD22-A101B	1000 hrs	0/77
	rated BV, max 100V			
High Temperature Reverse Bias	150C, 80% ratedBV	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Power Cycle	Delta 100C, 2 Min cycle	MIL-STD-750-	10000 cyc	0/77
•		1036		
Solder Dip (Resistance to Solder	270C,	JESD22-B106	15 sec	0/30
Heat)				
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77

<b>Qualification Plan</b>	Device	<b>Package</b>	<b>Process</b>	No. of Lots
Q20140409A	LM317MDTX	DIPAK	BSP1	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
MSL(1), PKG(Small), (Precondition), Before	PeakTemp(260c),	JESD22-A113	24 hrs	0/154
TMCL/THBT test	Cycles(3)		168hrs	
High Humidity, High Temp, Rev. Bias	85C, 85%RH,	JESD22-A101B	1000 hrs	0/77
	Vin=13V			
High Temperature Op Life	Vin=19V Ta=125C	NA	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Solder Dip (Resistance to Solder Heat)	270C,	JESD22-B106	15 sec	0/30
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77

<b>Qualification Plan</b>	Device	Package	<b>Process</b>	No. of Lots
Q20140409A	FQU13N10LTU	DIPAK	Q-FET	1

Test Description:	Condition:	Standard:	<b>Duration:</b>	Results:
High Humidity, High Temp, Rev. Bias	85C, 85%RH, Vin=80%	JESD22-A101B	1000 hrs	0/77
	of rated BV, max 100V			
High Temperature Reverse Bias	150C, 80% ratedBV	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Power Cycle	Delta 100C, 2 Min cycle	MIL-STD-750-	10000 cyc	0/77
		1036		
Solder Dip = 260C, 10 sec (Resistance	270C,	JESD22-B106	15 sec	0/30
to Solder Heat)				
-65C, 150C (Temperature Cycle)	-65C, 150C	JESD22-A104	500 cyc	0/77