



PCN# : P53LAAB
Issue Date : Jul. 20, 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. Alternatively, you may send an email request for data, samples or other information to PCNSupport@fairchildsemi.com.

Implementation of change:

Expected First Shipment Date for Changed Product : Oct. 18, 2015

Expected First Date Code of Changed Product :1541

Description of Change (From) :

Package SOT23 Assembly site: Fairchild In-house Manufacturing site in Cebu, Philippines

Description of Change (To) :

Package SOT23 Assembly Site: Subcontractor assembly manufacturing sites in China, Fairchild In-house Manufacturing site in Cebu, Philippines

Item	Change from	Change to		
SOT23 Assembly site	Inhouse Manufacturing Site in Cebu Philippines	Inhouse Manufacturing Site in Cebu Philippines	Subcontractor in Dalian, China	Subcontractor in Chuzhou, China
Molding Compound	CK5000A	CK5000A	KTMC-1050GR	ELER-8-100HFE

Reason for Change:

- To increase its manufacturing capacity

- To meet additional demand for SOT-23 products by having additional flexibility in manufacturing locations.

These changes will have no impact on product quality, reliability, electrical, visual or mechanical performance and affected products will be fully compliant to all published data sheet specifications. Quality and reliability will remain at the highest standards already demonstrated with Fairchild's existing products.

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 company's procurement history.

Qualification Plan	Device	Package	Process	No. of Lots
Q20150078	MMBTA92	SOT23-3L	Bipolar	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)	NA	JESD22-A113	5 cyc, 24 hrs	0/231
High Temperature Reverse Bias	150C, 80% rated BV	JESD22-A108	1000 hrs	0/77
Highly Accelerated Stress Test	110C, 85%RH, 80% rated BV,MAX=42V	JESD22-A110	264 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20150078	KST5551MTF	SOT23-3L	SSTR	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)	NA	JESD22-A113	5 cyc, 24 hrs	0/231
Highly Accelerated Stress Test	110C, 85%RH, 80% rated BV,MAX=42V	JESD22-A110	264 hrs	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20150078	BAT54S	SOT23-3L	Schottky Diode	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)	NA	JESD22-A113	5 cyc, 24 hrs	0/231
High Temperature Reverse Bias	150C, 80% rated BV	JESD22-A108	1000 hrs	0/77
Highly Accelerated Stress Test	110C, 85%RH, 80% rated BV,MAX=42V	JESD22-A110	264 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20150078	MMBD1404A	SOT23-3L	Switching Diode	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)	NA	JESD22-A113	5 cyc, 24 hrs	0/231
High Temperature Reverse Bias	150C, 80% rated BV	JESD22-A108	1000 hrs	0/77
Highly Accelerated Stress Test	110C, 85%RH, 80% rated BV,MAX=42V	JESD22-A110	264 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20130064	MMBTA92	SOT23	Bipolars	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/231
Temperature Humidity Bias Test	85%RH, 85C, 80% BV	JESD22-A101B	1000 hrs	0/77
High Temperature Reverse Bias Test	150C, 80% BV	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-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20130064	FDV301N	SOT23	LV Mosfet	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/231
Temperature Humidity Bias Test	85%RH, 85C, 80% BV	JESD22-A101B	1000 hrs	0/77
High Temperature Reverse Bias Test	150C, 80% BV	JESD22-A108	1000 hrs	0/77
High Temperature Gate Bias Test	150C, 80% of BV	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-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20130064	FDV304P	SOT23	LV Mosfet	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/231
Temperature Humidity Bias Test	85%RH, 85C, 80% BV	JESD22-A101B	1000 hrs	0/77
High Temperature Reverse Bias Test	150C, 80% BV	JESD22-A108	1000 hrs	0/77
High Temperature Gate Bias Test	150C, 80% of BV	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-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20130064	LM431SACM32X	SOT23	Std Linear	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/231
Temperature Humidity Bias Test	85%RH, 85C, 80% BV	JESD22-A101B	1000 hrs	0/77
High Temperature Op Life	125C, Vbias= 35V	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 cyc	0/77



Title : Qualification Report for PCN : P53LAAB

Date : Jul. 20, 2015

Affected devices :

Customer Name : DIGI-KEY CORPORATION

Product	Customer Part Number	BBB	Drawing
BAT54S_D87Z		Y	N
BAT54_D87Z		Y	N
BCV71		Y	N
BCV72		Y	N
BCW68G		Y	N
BCW71		Y	N
BCW89		Y	N
BCX19		Y	N
BCX70J		Y	N
BCX70K		Y	N
BCX71K		Y	N
BSR17A		Y	N
BSR56		Y	N
BSR57		Y	N
BSR58		Y	N
BSS63		Y	N
BSS64		Y	N
BSV52		Y	N
MMBD1401		Y	N
MMBD1504A		Y	N
MMBD4148_D87Z		Y	N
MMBF4117		Y	N
MMBF4119		Y	N
MMBF4391		Y	N
MMBF4392		Y	N
MMBF4393		Y	N
MMBF4416		Y	N
MMBF4416A		Y	N
MMBF5103		Y	N
MMBF5457		Y	N
MMBF5458		Y	N
MMBF5460		Y	N
MMBF5461		Y	N
MMBF5462		Y	N

MMBF5484		Y	N
MMBF5485		Y	N
MMBF5486		Y	N
MMBFJ111		Y	N
MMBFJ112		Y	N
MMBFJ113		Y	N
MMBFJ175		Y	N
MMBFJ176		Y	N
MMBFJ177		Y	N
MMBFJ201		Y	N
MMBFJ202		Y	N
MMBFJ211		Y	N
MMBFJ270		Y	N
MMBFJ271		Y	N
MMBFJ309		Y	N
MMBFJ310		Y	N
MMBT200		Y	N
MMBT3640		Y	N
MMBT3646		Y	N
MMBT4400		Y	N
MMBT5087		Y	N
MMBT5210		Y	N
MMBT5771		Y	N
MMBT5962		Y	N
MMBTA63		Y	N
MMBTH10RG		Y	N
MMBTH11		Y	N
MMBZ5V6B		Y	N

Customer Name : DIGI-KEY

Product	Customer Part Number	BBB	Drawing
BAS16_D87Z		Y	N
BAS31_D87Z		Y	N
BAV99_D87Z		Y	N
BCX70G		Y	N
BCX70H		Y	N
BCX71J		Y	N
BSR15		Y	N
BSR56		Y	N
MMBD1202		Y	N
MMBD1401		Y	N
MMBD1503A_D87Z		Y	N
MMBF4092		Y	N
MMBF4118		Y	N
MMBFJ211		Y	N
MMBT2907_D87Z		Y	N
MMBTH24		Y	N
MMBZ5221B		Y	N

Qualification Test Summary :

Qualification Plan	Device	Package	Process	No. of Lots
Q20150078	MMBTA92	SOT23-3L	Bipolar	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)	NA	JESD22-A113	5 cyc, 24 hrs	0/231
High Temperature Reverse Bias	150C, 80% rated BV	JESD22-A108	1000 hrs	0/77
Highly Accelerated Stress Test	110C, 85%RH, 80% rated BV, MAX=42V	JESD22-A110	264 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20150078	KST5551MTF	SOT23-3L	SSTR	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)	NA	JESD22-A113	5 cyc, 24 hrs	0/231
Highly Accelerated Stress Test	110C, 85%RH, 80% rated BV, MAX=42V	JESD22-A110	264 hrs	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20150078	BAT54S	SOT23-3L	Schottky Diode	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)	NA	JESD22-A113	5 cyc, 24 hrs	0/231
High Temperature Reverse Bias	150C, 80% rated BV	JESD22-A108	1000 hrs	0/77
Highly Accelerated Stress Test	110C, 85%RH, 80% rated BV, MAX=42V	JESD22-A110	264 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20150078	MMBD1404A	SOT23-3L	Switching Diode	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL(1), PKG(Small), PeakTemp(260c), Cycles(3) (Precondition)	NA	JESD22-A113	5 cyc, 24 hrs	0/231
High Temperature Reverse Bias	150C, 80% rated BV	JESD22-A108	1000 hrs	0/77
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Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 cyc	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	1000 cyc	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20130064	MMBTA92	SOT23	Bipolars	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/231
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High Temperature Reverse Bias Test	150C, 80% BV	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-750-1036	10000 <u>cyc</u>	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 <u>cyc</u>	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20130064	FDV301N	SOT23	LV Mosfet	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/231
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High Temperature Gate Bias Test	150C, 80% of BV	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-750-1036	10000 <u>cyc</u>	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 <u>cyc</u>	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20130064	FDV304P	SOT23	LV Mosfet	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/231
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High Temperature Reverse Bias Test	150C, 80% BV	JESD22-A108	1000 hrs	0/77
High Temperature Gate Bias Test	150C, 80% of BV	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-750-1036	10000 <u>cyc</u>	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 <u>cyc</u>	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20130064	LM431SACM32X	SOT23	Std Linear	1

Test Description:	Condition:	Standard:	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/231
Temperature Humidity Bias Test	85%RH, 85C, 80% BV	JESD22-A101B	1000 hrs	0/77
High Temperature Op Life	125C, <u>Vbias</u> = 35V	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 <u>cyc</u>	0/77

The selection methodology of qualification vehicles is aligned with JESD47 and if automotive devices are impacted by the PCN the selection of qualification vehicles is also align with the requirements in AEC-Q100 or AEC-Q101

Please contact your local Customer Quality Engineer if you have any questions concerning this data.