



PCN# : P5A9AAB
 Issue Date : Jul. 20, 2016

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 :Oct. 18, 2016

Expected First Date Code of Changed Product :1643

Description of Change (From) :

- 1) Wire bonding with 1.0mils PCC and 1.3mils Au.
- 2) Assembly in Fairchild Semiconductor Cebu and sub-contractor Philippines

Package	Assembly Site	BOM					
		Leadframe	Die & Clip Attach Material	Clip Material	Wire	Mold Compound	Terminal Finish
DRMOS PQFN6x6	Fairchild Cebu, Philippines	C194 Cu leadframe with Ag spot plating	Indium Corp. NC-SMQ75	C194 Cu Clip	1.0 mils PCC wire 1.3 mils Au wire	Hitachi CEL9240HF10LS	Sn
DRMOS PQFN6x6	Sub-contractor in Philippines	C194 Cu leadframe with Ag spot plating	Indium Corp. NC-SMQ75	C194 Cu Clip	1.0 mils PCC wire	Hitachi CEL9220HF10	Sn

Description of Change (To) :

- 1) Standardize wire bonding to 1.0mils PCC only.
- 2) Added alternate assembly location in sub-contractor Philippines and Malaysia. No changes to current marketing outline specification.

Package	Assembly Site	BOM					
		Leadframe	Die Attach Material	Clip Material	Wire	Mold Compound	Terminal Finish
DRMOS PQFN6x6	Fairchild Cebu, Philippines	C194 Cu leadframe with Ag spot plating	Indium Corp. NC-SMQ75	C194 Cu Clip	1.0 mils PCC wire	Hitachi CEL9240HF10LS	Sn
DRMOS PQFN6x6	Sub-contractor in Malaysia	C194 Cu leadframe with Ag spot plating	Indium Corp. NC-SMQ75	C194 Cu Clip	1.0 mils PCC wire	Hitachi CEL9240HF10LS	Sn
DRMOS PQFN6x6	Sub-contractor in Philippines	C194 Cu leadframe with Ag spot plating	Indium Corp. NC-SMQ75	C194 Cu Clip	1.0 mils PCC wire	Hitachi CEL9220HF10	Sn

Reason for Change:

- Improved supply flexibility.
- Better quality and yields through equipment and facility upgrades.
- Increased automation in handling and inspection in assembly.
- Fairchild partnerships with foundries and assembly subcontractors.
- Best manufacturing practices- access to many customer methods and practices.
- Advanced technology for fast ramp of future new products and technologies.

Affected Product(s):

FDMF6705B	FDMF6705V	FDMF6706B
FDMF6706C	FDMF6707B	FDMF6707B_SN00244
FDMF6707C	FDMF6707V	FDMF6820A
FDMF6820A_F065	FDMF6820B	FDMF6820B_F065
FDMF6820C	FDMF6820C_SN00295	FDMF6821A
FDMF6821B	FDMF6821C	FDMF6823A
FDMF6823A_F065	FDMF6823B	FDMF6823C
FDMF6823C_SN00248	FDMF6824A	FDMF6824B
FDMF6824B_SN00323	FDMF6824C	FDMF6833C
FDMF6840C	ZSPM9000A11R	ZSPM9010ZA1R
ZSPM9060ZA1R		

QUALIFICATION DATA REPORT

P5A9AAB - DrMOS PCN

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20140167	FDMF6820B	PQBFN	AMKOR	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MSL 1	Peak Temp (260°C)	JESD22-A113		45, 77	15	0/1059
Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C, Bias	JESD22-A110	96 hrs	45	3	0/135
High Temperature Operating Life	Preconditioning, 125C, Bias	JESD22-A108	1000 hrs	77	3	0/231
Unbiased Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C	JESD22-A118	96 hrs 192 hrs	77	3	0/231
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	50 cycles 250 cycles 500 cycles 1000 cycles	77	3	0/231
High Temperature Storage Life	Preconditioning, 150C	JESD22- A103	168 hrs 500 hrs 1000 hrs	77	3	0/231
Power Cycle	Preconditioning, Delta100CC, 2 min cycle	MILSTD-750-1036	5000 cycles 10000 cycles	77	4	0/308
Destructive Physical Analysis (after 500cyc TMCL)	NA	AEC-Q101-004 Section 4	After TMCL	3	3	0/9

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20140340	FDMF6820B	PQBFN	AMKOR	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MSL 1	Peak Temp (260°C)	JESD22-A113		45, 77	15	0/366
Highly Accelerated Stress Test	Preconditioning, 85%RH, 110C, Bias	JESD22-A110	300 hrs	45	3	0/135
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	100 cycles	77	3	0/231

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20140306	FDMF6840C	PQBFN	AMKOR	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MSL 1	Peak Temp (260°C)	JESD22-A113		45, 77	12	0/828
Highly Accelerated Stress Test	Preconditioning, 85%RH, 110C, Bias	JESD22-A110	132 hrs 300 hrs	77	3	0/231
Unbiased Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C	JESD22-A118	96 hrs 192 hrs	77	3	0/231
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	100 cycles 500 cycles 1000 cycles	77	3	0/231
High Temperature Storage Life	Preconditioning, 150C	JESD22-A103	168 hrs 500 hrs 1000 hrs	77	3	0/231
Destructive Physical Analysis (after 500cyc TMCL)	NA	AEC-Q101-004 Section 4	After TMCL	2	3	0/6

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20150476A	FDMF6820B	PQBFN	ASE-M	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MSL 1	Peak Temp (260°C)	JESD22-A113		45, 77	15	0/828
Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C, Bias	JESD22-A110	96 hrs	45	3	0/135
Unbiased Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C	JESD22-A118	96 hrs 192 hrs	77	3	0/231
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	100 cycles 500 cycles 1000 cycles	77	3	0/231
High Temperature Storage Life	Preconditioning, 150C	JESD22-A103	168 hrs 500 hrs 1000 hrs	77	3	0/231
Destructive Physical Analysis (after 1000cyc TMCL)	NA	AEC-Q101-004 Section 4	After TMCL	3	3	0/9

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20150495	FDMF6840C	PQBFN	ASE-M	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MSL 1	Peak Temp (260°C)	JESD22-A113		45, 77	6	0/366
Highly Accelerated Stress Test	Preconditioning, 85%RH, 110C, Bias	JESD22-A110	300 hrs	45	3	0/135
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	100 cycles	77	3	0/231

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20160052A	FDMF6821B	PQBFN	Cebu	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MSL 1	Peak Temp (260°C)	JESD22-A113		77	3	0/231
Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C, Bias	JESD22-A110	96hrs 192 hrs	77	1	0/77
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	100 cycles 500 cycles 1000 cycles	77	1	0/77
High Temperature Storage Life	Preconditioning, 150C	JESD22-A103	168 hrs 500 hrs 1000 hrs	77	1	0/77
Destructive Physical Analysis (after 500cyc TMCL)	NA	AEC-Q101-004 Section 4	After TMCL	2	1	0/2



Title : Qualification Report for PCN : P5A9AAB

Date : Jul. 20, 2016

Affected devices :

C

Product	Customer Part Number	BBB	Drawing
FDMF6705B		Y	N
FDMF6820A		Y	N
FDMF6823A		Y	N
FDMF6823B		Y	N
FDMF6823C		Y	N
FDMF6824B		Y	N

C

Product	Customer Part Number	BBB	Drawing
FDMF6706B		Y	N
FDMF6707C		Y	N
FDMF6824A		Y	N
FDMF6824C		Y	N
FDMF6840C		Y	N

Qualification Test Summary :

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20140167	FDMF6820B	PQBFN	AMKOR	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MBL 1	Peak Temp (260°C)	JESD22-A113		45, 77	15	0/1059
Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C, Bias	JESD22-A110	96 hrs	45	3	0/135
High Temperature Operating Life	Preconditioning, 125C, Bias	JESD22-A108	1000 hrs	77	3	0/231
Unbiased Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C	JESD22-A118	96 hrs 192 hrs	77	3	0/231
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	50 cycles 250 cycles 500 cycles 1000 cycles	77	3	0/231
High Temperature Storage Life	Preconditioning, 150C	JESD22-A103	168 hrs 500 hrs 1000 hrs	77	3	0/231
Power Cycle	Preconditioning, Delta 1000C, 2 min cycle	MILSTD-750-1036	5000 cycles 10000 cycles	77	4	0/308
Destructive Physical Analysis (after 300cyc TMCL)	NA	AEC-Q101-004 Section 4	After TMCL	3	3	0/9

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20140340	FDMF6820B	PQBFN	AMKOR	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MBL 1	Peak Temp (260°C)	JESD22-A113		45, 77	15	0/366
Highly Accelerated Stress Test	Preconditioning, 85%RH, 110C, Bias	JESD22-A110	300 hrs	45	3	0/135
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	100 cycles	77	3	0/231

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20140306	FDMF6840C	PQBFN	AMKOR	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MBL 1	Peak Temp (260°C)	JESD22-A113		45, 77	12	0/628
Highly Accelerated Stress Test	Preconditioning, 85%RH, 110C, Bias	JESD22-A110	132 hrs 300 hrs	77	3	0/231
Unbiased Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C	JESD22-A118	96 hrs 192 hrs	77	3	0/231
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	100 cycles 500 cycles 1000 cycles	77	3	0/231
High Temperature Storage Life	Preconditioning, 150C	JESD22-A103	168 hrs 500 hrs 1000 hrs	77	3	0/231
Destructive Physical Analysis (after 300cyc TMCL)	NA	AEC-Q101-004 Section 4	After TMCL	2	3	0/6

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20150476A	FDMF6820B	PQBFN	ASE-M	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MBL 1	Peak Temp (260°C)	JESD22-A113		45, 77	15	0/625
Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C, Bias	JESD22-A110	96 hrs	45	3	0/135
Unbiased Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C	JESD22-A118	96 hrs 192 hrs	77	3	0/231
Temperature Cycle	Preconditioning, -65C, 150C	JESD22-A104	100 cycles 500 cycles 1000 cycles	77	3	0/231
High Temperature Storage Life	Preconditioning, 150C	JESD22-A103	168 hrs 500 hrs 1000 hrs	77	3	0/231
Destructive Physical Analysis (after 1000cyc TMCL)	NA	AEC-Q101-004 Section 4	After TMCL	3	3	0/9

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20150495	FDMF6340C	PQBFN	ASE-M	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MBL 1	Peak Temp (260°C)	JESD22-A113		45, 77	6	0/366
Highly Accelerated Stress Test	Preconditioning, 85%RH, 110C, Bias	JESD22-A110	300 hrs	45	3	0/135
Temperature Cycle	Preconditioning, -55C, 150C	JESD22-A104	100 cycles	77	3	0/231

Qualification Plan	Device	Package	Package & Assembly Location	No. of Lots
Q20160052A	FDMF6321B	PQBFN	Cebu	3

Test Description	Condition	Standard	Duration	Sample size	No. of lots	Results
Preconditioning, MBL 1	Peak Temp (260°C)	JESD22-A113		77	3	0/231
Highly Accelerated Stress Test	Preconditioning, 85%RH, 130C, Bias	JESD22-A110	96hrs 192 hrs	77	1	0/77
Temperature Cycle	Preconditioning, -55C, 150C	JESD22-A104	100 cycles 500 cycles 1000 cycles	77	1	0/77
High Temperature Storage Life	Preconditioning, 150C	JESD22-A103	168 hrs 500 hrs 1000 hrs	77	1	0/77
Destructive Physical Analysis (after 500cyc TMCL)	NA	AEC-Q101-004 Section 4	After TMCL	2	1	0/2

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.