

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 : Jan. 20, 2014

Expected First Date Code of Changed Product :1352

Description of Change (From) :

- 1) Non-green mold compound (Non-Halogen Free), AMC-2P from Panasonic
- 2) 10 products assembled with 2 mils Gold (Au) wirebond listed below:

FDFS2P106A
FDS3890
FDS5690_NBBM009A
FDS6680A_NBBI005A
FDS8690
NDS9952A
SI4532DY
FDS9431A
FDS4935BZ_SBME002
SI4542DY

Description of Change (To) :

- 1) Green mold compound (Halogen Free), GR828FC from Henkel
- 2) 10 products will be fabricated with 2 mils Copper (Cu) wirebond

Reason for Change:

1) BOM improvement for package robustness

- GR828FC green compound (halogen free) from Henkel has lower moisture absorption level and better thermal and mechanical properties compared to AMC-2P non-green compound (non-halogen free) from Panasonic.

2) Electrical performance improvement

- Copper (Cu) wire has better thermal and electrical performance compared to Gold (Au) wire.

Affected Product(s):

FAN3121CMX	FAN3121TMX	FAN3122CMX
FAN3122TMX	FAN3182AMX	FAN3182MX
FAN3183MX	FAN3213TMX	FAN3214TMX
FAN3216TMX	FAN3217TMX	FAN3223CMX
FAN3223TMX	FAN3224CMX	FAN3224TMX
FAN3225CMX	FAN3225TMX	FAN3226CMX
FAN3226TMX	FAN3227CMX	FAN3227TMX
FAN3229CMX	FAN3229TMX	FAN3268TMX
FAN3278TMX	FAN7527BMX	FAN7602BMX
FAN7602CMX	FAN7602MX	FAN7930BMX
FAN7930CMX	FAN7930MX	FDFS2P106A
FDFS2P753Z	FDFS6N548	FDFS6N754
FDS2670	FDS2672	FDS2734
FDS3512	FDS3572	FDS3580
FDS3590	FDS3890	FDS3992
FDS4141	FDS4410A	FDS4435A
FDS4435BZ	FDS4465	FDS4465_SN00187
FDS4470	FDS4480	FDS4480_SN00028
FDS4488	FDS4501H	FDS4559
FDS4672A	FDS4675	FDS4685
FDS4685_NF074	FDS4897AC	FDS4897C
FDS4935A	FDS4935BZ	FDS4935BZ_SBME002
FDS5351	FDS5670	FDS5672
FDS5672_F095	FDS5680	FDS5690
FDS5690_NBBM009A	FDS6294	FDS6298
FDS6375	FDS6570A	FDS6574A
FDS6575	FDS6576	FDS6612A
FDS6612A_NB5E029A	FDS6630A	FDS6670A
FDS6670AS	FDS6673BZ	FDS6675
FDS6675BZ	FDS6676AS	FDS6679
FDS6679AZ	FDS6680A	FDS6680AS
FDS6680A_NBBI005A	FDS6681Z	FDS6682
FDS6685_NBCM003A	FDS6690A	FDS6690AS
FDS6690AS_NBNU001	FDS6690A_NBBM015A	FDS6690A_NBNP006
FDS6692A	FDS6699S	FDS6875
FDS6890A	FDS6892A	FDS6898A
FDS6898AZ	FDS6900AS	FDS6910
FDS6911	FDS6912	FDS6912A
FDS6912A_F095	FDS6930A	FDS6930B
FDS6961A	FDS6975	FDS6982AS

Affected Product(s):

FDS6982AS_F095	FDS6984AS	FDS6986AS
FDS6986AS_F095	FDS6986AS_SN00192	FDS6990A
FDS6990AS	FDS6994S	FDS8433A
FDS8447	FDS8449	FDS8690
FDS8813NZ	FDS8817NZ	FDS8858CZ
FDS8870	FDS8876	FDS8876_F40
FDS8878	FDS8878_F123	FDS8880
FDS8880_SN00134	FDS8884	FDS8896
FDS8896_SBSW008	FDS8928A	FDS8949
FDS8949_SN00247	FDS8958A	FDS8958B
FDS8960C	FDS8978	FDS8978_F40
FDS8984	FDS8984_F123	FDS8984_F40
FDS9400A	FDS9431A	FDS9435A
FDS9435A_NBAD008	FDS9926A	FDS9933A
FDS9934C	FDS9945	FDS9953A
FDS9958	FL7930BMX	FL7930CMX
FMS6143ACSX	FMS6143CSX	FMS6143CSX_NA3M248
FMS6143CSX_NS5C002	FMS6363ACSX	FMS6363CSX
FMS6404CSX	FMS6406CSX	FMS6410BCSX
FPF2300MX	FPF2302MX	FPF2303MX
KA2807DTF	KA3883CDTF	LMV358AM8X
NDS8425	NDS8434	NDS9407
NDS9945	NDS9948	NDS9952A
SG6846LSZ	SI4435DY	SI4532DY
SI4542DY	UC3843ADX	

Qualification Plan	Device	Package	Process	No. of Lots
Q20070260	NDS9407	SOIC 8L	PT1 P	1

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/308
MSL1	260C, 3 cycles	J-STD_020		0/11
Highly Accelerated Stress Test	110C, 85%RH	JESD22-A110	264 hrs	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/77
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/77
High Temperature Gate Bias	150C	JESD22-A108	1000 hrs	0/77
High Temperature Reverse Bias	150C	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 Cycles	0/77
Gate leakage positive	155C, 400V	AEC-Q100-006		0/3
Gate leakage negative	155C, - 400V	AEC-Q100-006		0/3

Qualification Plan	Device	Package	Process	No. of Lots
Q20070260	FDS8978	SOIC 8L	PT4 N	1

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/308
MSL1	260C, 3 cycles	J-STD_020		0/11
Highly Accelerated Stress Test	110C, 85%RH	JESD22-A110	264 hrs	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/77
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/77
High Temperature Gate Bias	150C	JESD22-A108	1000 hrs	0/77
High Temperature Reverse Bias	150C	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 Cycles	0/77
Gate leakage positive	155C, 400V	AEC-Q100-006		0/3
Gate leakage negative	155C, - 400V	AEC-Q100-006		0/3

Qualification Plan	Device	Package	Process	No. of Lots
Q20070260	FDS4465	SOIC 8L	PT2 P	1

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/308
MSL1	260C, 3 cycles	J-STD_020		0/11
Highly Accelerated Stress Test	110C, 85%RH	JESD22-A110	264 hrs	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/77
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/77
High Temperature Gate Bias	150C	JESD22-A108	1000 hrs	0/77
High Temperature Reverse Bias	150C	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 Cycles	0/77
Gate leakage positive	155C, 400V	AEC-Q100-006		0/3
Gate leakage negative	155C, - 400V	AEC-Q100-006		0/3

Qualification Plan	Device	Package	Process	No. of Lots
Q20070260	FMS6406CS	SOIC 8L	FS50BC5SD	1

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/353
MSL1	260C, 3 cycles	J-STD_020		0/11
Highly Accelerated Stress Test	110C, 85%RH	JESD22-A110	264 hrs	0/45
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/77
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Static Op Life	150C, 0V	JESD22-A108	1000 hrs	0/77
Gate leakage positive	155C, 400V	AEC-Q100-006		0/3
Gate leakage negative	155C, - 400V	AEC-Q100-006		0/3

Qualification Plan	Device	Package	Process	No. of Lots
Q20070261	FDS8870	SOIC 8L	PT4 N	1

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/308
MSL1	260C, 3 cycles	J-STD_020		0/11
Highly Accelerated Stress Test	110C, 85%RH	JESD22-A110	264 hrs	0/77
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/77
Autoclave	121C, 100%RH	JESD22-A102	96 hrs	0/77
High Temperature Gate Bias	150C	JESD22-A108	1000 hrs	0/77
High Temperature Reverse Bias	150C	JESD22-A108	1000 hrs	0/77
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/77
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 Cycles	0/77

Qualification Plan	Device	Package	Process	No. of Lots
Q20080509	FDS6679AZ	SOIC 8L	ST3 P	2

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/316
MSL1	260C, 3 cycles	J-STD_020		0/44
Highly Accelerated Stress Test	110C, 85%RH	JESD22-A110	264 hrs	0/158
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/158
High Temperature Gate Bias	150C	JESD22-A108	1000 hrs	0/79
High Temperature Reverse Bias	150C	JESD22-A108	1000 hrs	0/158
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/158
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 Cycles	0/79
Bond Shear	15g	AEC-Q100-001		0/10
Bond Pull	3.0g	JESD22-C100		0/10

Qualification Plan	Device	Package	Process	No. of Lots
Q20080509	FDS6681Z	SOIC 8L	ST3 P	3

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/316
MSL1	260C, 3 cycles	J-STD_020		0/66
Highly Accelerated Stress Test	110C, 85%RH	JESD22-A110	264 hrs	0/79
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/237
High Temperature Gate Bias	150C	JESD22-A108	1000 hrs	0/79
High Temperature Reverse Bias	150C	JESD22-A108	1000 hrs	0/79
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/237
Power Cycle	Delta 100CC, 2 Min cycle	MIL-STD-750-1036	10000 Cycles	0/79
Bond Shear	15g	AEC-Q100-001		0/15
Bond Pull	3.0g	JESD22-C100		0/15

Qualification Plan	Device	Package	Process	No. of Lots
Q20080509	FDS4435BZ	SOIC 8L	ST3 P	1

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/79
MSL1	260C, 3 cycles	J-STD_020		0/22
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/79
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/79
Bond Shear	15g	AEC-Q100-001		0/5
Bond Pull	3.0g	JESD22-C100		0/5

Qualification Plan	Device	Package	Process	No. of Lots
Q20080509	FDS4935BZ	SOIC 8L	ST3 P	3

Test Description:	Condition:	Standard :	Duration:	Results:
MSL1 Precondition	260C, 3 cycles	JESD22-A113		0/316
MSL1	260C, 3 cycles	J-STD_020		0/66
Highly Accelerated Stress Test	110C, 85%RH	JESD22-A110	264 hrs	0/79
Temperature Cycle	-65C, 150C	JESD22-A104	500 cycles	0/237
High Temperature Reverse Bias	150C	JESD22-A108	1000 hrs	0/79
High Temperature Storage Life	150C	JESD22-A103	1000 hrs	0/237
Bond Shear	15g	AEC-Q100-001		0/15
Bond Pull	3.0g	JESD22-C100		0/15

Comment:

All test mention in Q20070260, Q20070261 and Q20080509 completed without any valid failure, hence qualification for FSPM SO8 Green Compound (GR828FC). ST3 P Channel Option 9 single DAPS and option 6 dual DAP with 2 mil Cu Wire is well qualified.