Final Product/Process Change Notification



Document# : P783AAB Issue Date : Sep. 27, 2017

Title of Change:	Capacity Expansion of Assembly and Test operations	of former Fairchild SOT23 package to ON Semiconductor Leshan, China		
Proposed first ship date:	Dec. 26, 2017			
Contact information:	Contact your local ON Semiconductor Sales Office or	r < jenett.damuag@onsemi.com >		
Samples:	Contact your local ON Semiconductor Sales Office			
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or	r < changkit.mok@onsemi.com >		
Type of notification:	implementation of the change.ON Semiconductor will	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change.ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <pcn.support@onsemi.com>.</pcn.support@onsemi.com>		
Change Part Identification:		ctor Leshan, China from month of Nov 2017 onwards once FPCN expire. identified through product marking which follow ON Semiconductor		
Change category:	Wafer Fab Change Assembly Change	Test Change Other		
Change Sub-Category(s):				
Manufacturing Site Change/Addition	Manufacturing Process Change Mater	rial Change		
Product specific change	Datasheet/Product Doc change Shipp	ping/Packaging/Marking		
Other				
Sites Affected:				
All site(s)	Not applicable ON Semiconductor site(s)	External Foundry/Subcon site(s)		
	Select site:	Select site:		
	CN1 - LESHAN	AUKDALIAN;JCET		
Description and Purpose:				
The Final Notification announces to customers of its plans to expand Assembly and Test operations sites of former Fairchild SOT23 package from existing external manufacturing facility to include internal manufacturing site ON Semiconductor Leshan, China.				
	sistors and MOSFETs will be converted from Gold wire teshan, China (as per table in List of affected parts).	to Copper Wire or Pd Coated Copper wire as part of the process		
The Leshan internal facility is certified with ISO/TS 16949:2009 and is currently running production for SOT23 package.				
These products will continue being Pb-free, Halide free and RoHS compliant. Qualification tests are designed to show that the reliability of the transferred devices will continue to meet or exceed ON Semiconductor standards.				
Reliability Data Summary:				
Device Name: BSR57 Reference: L39705 Package: SOT23-3L (Au Wire)				



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Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 32V (80% max rated BV)	1008 hours	0/154
HTGB	JESD22-A108	Ta=150°C, 40V (100% rated VGS)	1008 hours	0/154
HTSL	JESD22-A103	Ta= 150°C	1008 hours	0/50
PC	J-STD-020 JESD-A113	MSL 1@260 °C	3-1	0/200
IOL+PC	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Ti=100°C On/off = 2 min	15,000 cycles	0/50
TC+PC	JESD22-A104	Ta= -65°C to +150°C	1000 cycles	0/50
H3TRB + PC	JESD22-A101	Ta=85°C, 85% / 32V bias	1000 hours	0/50
uHAST + PC	JESD22-A118	130°C, 85% RH, 33.3psia, unbiased	96 hours	0/50
RSH	JESD22- B106	Ta = 260C, 10 sec	1 7 2	0/60

Device Name:MMBFJ271 Reference: L40260, SZ330 Package: SOT23-3L (Au Wire)

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 24V (80% max rated BV)	1008 hours	0/154
HTGB	JESD22-A108	Ta=150°C, 30V (100% rated VGS)	1008 hours	0/154
HTSL	JESD22-A103	Ta= 150°C	1008 hours	0/50
PC	J-STD-020 JESD-A113	MSL 1@260 °C	-	0/200
IOL+PC	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15,000 cycles	0/50
TC+PC	JESD22-A104	Ta= -65°C to +150°C	1000 cycles	0/50
H3TRB + PC	JESD22-A101	Ta=85°C, 85% / 24V bias	1000 hours	0/50
uHAST + PC	JESD22-A118	130°C, 85% RH, 33.3psia, unbiased	96 hours	0/50
RSH	JESD22- B106	Ta = 260C, 10 sec	-	0/60

Device Name:BCV26 Reference: S39692 Package: SOT23-3L (Au Wire)

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, -24V (80% max rated BV)	1008 hours	0/77
HTSL	JESD22-A103	Ta= 150°C	1008 hours	0/77
PC	J-STD-020 JESD-A113	MSL 1@260 °C	-	0/100
IOL+PC	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Ţj=100°C On/off = 2 min	15,000 cycles	0/25
TC+PC	JESD22-A104	Ta= -65°C to +150°C	1000 cycles	0/25
H3TRB + PC	JESD22-A101	Ta=85°C, 85% / -24V bias	1000 hours	0/25
uHAST	JESD22-A118	130°C, 85% RH, 33.3psia, unbiased	96 hours	0/25
RSH	JESD22- B106	Ta = 260C, 10 sec		0/30

Device Name:FJV92MTF Reference: S39707 Package: SOT23-3L (Au Wire)

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, -300V (80% max rated BV)	1008 hours	0/77
HTSL	JESD22-A103	Ta= 150°C	1008 hours	0/77
PC	J-STD-020 JESD-A113	MSL 1@260 °C	-	0/100
IOL+PC	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta <u>Tj</u> =100°C On/off = 2 min	15,000 cycles	0/25
TC+PC	JESD22-A104	Ta=-65°C to +150°C	1000 cycles	0/25
H3TRB + PC	JESD22-A101	Ta=85°C, 85% / -100V bias	1000 hours	0/25
uHAST + PC	JESD22-A118	130°C, 85% RH, 33.3psia, unbiased	96 hours	0/25
RSH	JESD22- B106	Ta = 260C, 10 sec	-,	0/30

Device Name:FJV42MTF Reference:L40873 Package: SOT23-3L (Au Wire)



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Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 300V (80% max rated BV)	1008 hours	0/77
HTSL	JESD22-A103	Ta= 150°C	1008 hours	0/25
PC	J-STD-020 JESD-A113	MSL 1@260 °C	-	0/100
IOL+PC	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Ţj=100°C On/off = 2 min	15,000 cycles	0/25
TC+PC	JESD22-A104	Ta= -65°C to +150°C	1000 cycles	0/25
H3TRB + PC	JESD22-A101	Ta=85°C, 85% / 100V bias	1000 hours	0/25
uHAST + PC	JESD22-A118	130°C, 85% RH, 33.3psia, unbiased	96 hours	0/25
RSH	JESD22- B106	Ta = 260C, 10 sec		0/30

Device Name:BAV23S Reference:SZ344, L39725 L40873 Package: SOT23-3L (Cu Wire)

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 200V (80% max rated BV)	1008 hours	0/77
HTSL	JESD22-A103	Ta= 150°C	1008 hours	0/77
PC	J-STD-020 JESD-A113	MSL 1@260 °C		0/100
IOL+PC	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Ţj=100°C On/off = 2 min	15,000 cycles	0/25
TC+PC	JESD22-A104	Ta= -65°C to +150°C	1000 cycles	0/25
H3TRB + PC	JESD22-A101	Ta=85°C, 85% / 100V bias	1000 hours	0/25
uHAST + PC	JESD22-A118	130°C, 85% RH, 33.3psia, unbiased	96 hours	0/25
RSH	JESD22- B106	Ta = 260C, 10 sec	124	0/30

Note: Please refer to reliability report for the other qualification vehicle.

Electrical Characteristic Summary:

The temperature characterization and ESD performance meet datasheet specification. Detail of Electrical characterization result is available upon request.

Qualification Plan:

Refer to Rel Data Summary.



List of Affected Part(s):

Part Number	Qualification Vehicle	
017000	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
2N7002	FDV302P	
2N/7002I/	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
2N7002K	FDV302P	
2N7002L	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
	FDV302P	
BAR43	BAV23S, MMBD1404A	
BAR43C	BAV23S, MMBD1404A	
BAR43S	BAV23S, MMBD1404A	
BAS29	BAV23S, MMBD1404A	
BAV23S	BAV23S, MMBD1404A	
BAW74	BAV23S, MMBD1404A	
BC846CMTF	BCV26	
BC856CMTF	BCV26	
BCV26	BCV26	
BCV27	BCV26	
BCV71	BCV26	
BCV72	BCV26	
BCW71	BCV26	
BCW89	BCV26	
BCX70J	BCV26	
BCX70K	BCV26	
BSR57	BSR57, MMBFJ271	
BSR58	BSR57, MMBFJ271	
	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
BSS123	FDV302P	
200,400	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
BSS123L	FDV302P	
D00400	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
BSS138	FDV302P	
BSS138K	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
D33 130K	FDV302P	
BSS138L	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
D33 130E	FDV302P	
FDV301N	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
1 5 7 00 117	FDV302P	
FDV302P	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
1 5 7 0021	FDV302P	
FDV303N	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
	FDV302P	
FDV304P	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K,	
	FDV302P	
FJV1845FMTF	FJV42MTF, FJV92MTF	
FJV1845PMTF	FJV42MTF, FJV92MTF	
FJV42MTF	FJV42MTF, FJV92MTF	
FJV92MTF	FJV92MTF, FJV42MTF	
FLLD261	BAV23S, MMBD1404A BCV26	
KSA1298YMTF		

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KSC1623LMTF	BCV26
KSC1623YMTF	BCV26
KSC2223YMTF	BCV26, , FJV42MTF, FJV92MFT
KSC3265YMTF	BCV26



List of Affected Part(s):

Part Number	Qualification Vehicle
KST05MTF	BCV26
KST10MTF	BCV26, FJV42MTF, FJV92MFT
MMBD1201	BAV23S, MMBD1404A
MMBD1203	BAV23S, MMBD1404A
	MMBD1404A, , MMBD1404A
	BAV23S, MMBD1404A
MMBD1403	BAV23S, MMBD1404A
MMBD1403A	BAV23S, MMBD1404A
MMBD1404	BAV23S, MMBD1404A
MMBD1404A	BAV23S, MMBD1404A
MMBD1501A	BAV23S, MMBD1404A
MMBD1503A	BAV23S, MMBD1404A
MMBD1504A	MMBD1404A, MMBD1404A
MMBD1505A	BAV23S, MMBD1404A
MMBD1703A	BAV23S, MMBD1404A
MMBD1705A	BAV23S, MMBD1404A
MMBD4148	BAV23S, MMBD1404A
MMBD4148CA	BAV23S, MMBD1404A
MMBD4148CC	BAV23S, MMBD1404A
MMBD4148SE	BAV23S, MMBD1404A
IN/IN/IRE 1 / ()	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K, FDV302P
	BSR57, MMBFJ271
MMBF5460	BSR57, MMBFJ271
	BSR57, MMBFJ271
MMBF5485	BSR57, MMBFJ271
MMBF5486	BSR57, MMBFJ271
MMBFJ111	BSR57, MMBFJ271
MMBFJ112	BSR57, MMBFJ271
MMBFJ175	BSR57, MMBFJ271
MMBFJ176	BSR57, MMBFJ271
MMBFJ177	BSR57, MMBFJ271
HAIDE 1999	BSR57, MMBFJ271
MMBFJ202	DONOT, IVIIVIDI 021 I
	BSR57, MMBFJ271



List of Affected Part(s):

Part Number	Qualification Vehicle
MMBFJ271	BSR57, MMBFJ271
MMBFJ309	BSR57, MMBFJ271
MMBFJ310	BSR57, MMBFJ271
MMBT100	BCV26
MMBT5179	BCV26, , FJV42MTF, FJV92MFT
MMBT5771	BCV26
MMBT5962	BCV26, , FJV42MTF, FJV92MFT
MMBTH81	BCV26, , FJV42MTF, FJV92MFT
NDS0610	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K, FDV302P
INI 15 /110124	2N7002, NDS0610, BSS123L, 2N7002L, 2N7002K, FDV302P