



Final Product/Process Change Notification

Document #:FPCN25066X

Issue Date:12 Oct 2023

Title of Change:	D2PAK Assembly and Test Qualification to Suzhou Goodark Co. Ltd., China for Capacity Expansion		
Proposed First Ship date:	29 Jan 2024 or earlier if approved by customer		
Contact Information:	Contact your local onsemi Sales Office or MohdHezri.AbuBakar@onsemi.com		
PCN Samples Contact:	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.		
Additional Reliability Data:	Contact your local onsemi Sales Office or ffxg4t@onsemi.com		
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. onsemi 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		
Marking of Parts/ Traceability of Change:	Changed material can be identified by assembly plant code in part marking, or by using lot number		
Change Category:	Assembly Change, Test Change		
Change Sub-Category(s):	Manufacturing Site Addition		
Sites Affected:			
onsemi Sites		External Foundry/Subcon Sites	
None		Good-Ark, China	
Description and Purpose:			
This Final Notification announces to customers the qualification of new assembly and test site of D2PAK packaged products to Good-Ark, China for capacity expansion.			
	Before Change	After Change	
Assembly Site	onsemi Seremban, Malaysia	onsemi Seremban, Malaysia	Good-Ark, China
Die Attach	Pb95Sn5	Pb95Sn5	Pb92.5Sn5Ag2.5
Mold compound	G700HF	G700HF	G700HF Type C

Reliability Data Summary:

DEVICE NAME: FDB082N15A

PACKAGE: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta= 175°C, 80% max rated V	1008 hrs	0/231
HTGB	JESD22-A108	Ta= 175°C, 100% max rated Vgss	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 175°C	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, H3TRB		0/924
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 3.5 min	8572 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/231
H3TRB	JESD22-A101	Ta= 85°C, RH = 85%, bias = 100V max	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 5 sec		0/45

QV DEVICE NAME: NJVMJB41CT4G

PACKAGE: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta= 150°C, 100% max rated V	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, H3TRB		0/924
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 3.5 min	8572 cyc	0/231
TC	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/231
H3TRB	JESD22-A101	Ta= 85°C, RH = 85%, bias = 80% of rated V	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 5 sec		0/45

QV DEVICE NAME: NJVMJB45H11T4G

PACKAGE: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta= 150°C, 100% max rated V	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, H3TRB		0/924
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 3.5 min	8572 cyc	0/231
TC	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/231
H3TRB	JESD22-A101	Ta= 85°C, RH = 85%, bias = 80% of rated V	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 5 sec		0/45



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QV DEVICE NAME: SBRB20200CTT4G

PACKAGE: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta= 90°C, 100% max rated V	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 175°C	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, H3TRB		0/924
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 3.5 min	8572 cyc	0/231
TC	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/231
H3TRB	JESD22-A101	Ta= 85°C, RH = 85%, bias = 100V max	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 5 sec		0/45

QV DEVICE NAME: NTSB40200CTT4G

PACKAGE: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta= 75°C, 100% max rated V	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, H3TRB		0/924
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 3.5 min	8572 cyc	0/231
TC	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/231
H3TRB	JESD22-A101	Ta= 85°C, RH = 85%, bias = 100V max	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 5 sec		0/45

Electrical Characteristics Summary:

Electrical characteristics are not impacted.

List of Affected Parts:

Note: Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the **PCN Customized Portal**.

Part Number	Qualification Vehicle
MBRB2515LT4G	SBRB20200CTT4G
MBRB2545CTT4G	SBRB20200CTT4G
MBRB4030T4G	SBRB20200CTT4G
MBRB20100CTT4G	SBRB20200CTT4G
MBRB20200CTT4G	SBRB20200CTT4G
MBRB40250TT4G	SBRB20200CTT4G
NTSB30100CTT4G	NTSB40200CTT4G



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NTSB40200CTT4G	NTSB40200CTT4G
MBRB20H100CTT4G	SBRB20200CTT4G
MBRB8H100T4G	SBRB20200CTT4G
FDB088N08	FDB082N15A
FDB120N10	FDB082N15A
FDB5800	FDB082N15A
FDB2532	FDB082N15A
FDB390N15A	FDB082N15A
FDB3502	FDB082N15A
FDB150N10	FDB082N15A
FDB86102LZ	FDB082N15A
FDB110N15A	FDB082N15A
FDB082N15A	FDB082N15A
MJB44H11T4G	NJVMJB41CT4G
MJB42CT4G	NJVMJB45H11T4G
MJB5742T4G	NJVMJB41CT4G
MJB45H11T4G	NJVMJB45H11T4G
MJB45H11G	NJVMJB45H11T4G
MJB44H11G	NJVMJB41CT4G
MJB41CT4G	NJVMJB41CT4G
MJB41CG	NJVMJB41CT4G
BUB323ZT4G	NJVMJB41CT4G
MBRB1545CTT4G	SBRB20200CTT4G

Appendix A: Changed Products

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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
FDB088N08		FDB082N15A	NA	
FDB5800		FDB082N15A	NA	
FDB2532		FDB082N15A	NA	
FDB390N15A		FDB082N15A	NA	
FDB3502		FDB082N15A	NA	
FDB150N10		FDB082N15A	NA	
FDB86102LZ		FDB082N15A	NA	
FDB110N15A		FDB082N15A	NA	
FDB082N15A		FDB082N15A	NA	
MJB44H11T4G		NJVMJB41CT4G	NA	
MJB42CT4G		NJVMJB45H11T4G	NA	
MJB5742T4G		NJVMJB41CT4G	NA	
MJB45H11T4G		NJVMJB45H11T4G	NA	
MJB45H11G		NJVMJB45H11T4G	NA	
MJB44H11G		NJVMJB41CT4G	NA	
MJB41CT4G		NJVMJB41CT4G	NA	
MJB41CG		NJVMJB41CT4G	NA	
BUB323ZT4G		NJVMJB41CT4G	NA	
MBRB8H100T4G		SBRB20200CTT4G	NA	
MBRB20H100CTT4G		SBRB20200CTT4G	NA	
NTSB40200CTT4G		NTSB40200CTT4G	NA	
NTSB30100CTT4G		NTSB40200CTT4G	NA	
MBRB20200CTT4G		SBRB20200CTT4G	NA	
MBRB20100CTT4G		SBRB20200CTT4G	NA	
MBRB4030T4G		SBRB20200CTT4G	NA	
MBRB2545CTT4G		SBRB20200CTT4G	NA	
MBRB2515LT4G		SBRB20200CTT4G	NA	
MBRB1545CTT4G		SBRB20200CTT4G	NA	
FDB120N10		FDB082N15A	NA	