



Final Product/Process Change Notification

Document #:FPCN24765X

Issue Date:08 Jan 2024

Title of Change:	Qualification of alternate mold compound GR710F at onsemi Suzhou, China for D2PAK devices						
Proposed First Ship date:	15 Apr 2024 or earlier if approved by customer						
Contact Information:	Contact your local onsemi Sales Office or Yun.Cui@onsemi.com , HuaBin.Cui@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 Jutta.Xu@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:	Keep same marking. Changed material will be identified by lot code.						
Change Category:	Assembly Change						
Change Sub-Category(s):	Material Change						
Sites Affected:							
onsemi Sites	External Foundry/Subcon Sites						
onsemi Suzhou, China	None						
Description and Purpose:							
This FPCN is to inform customers that onsemi is qualifying new green mold compound GR710F from China local supplier Hysol, as alternative source on selected D2PAK Discrete products in onsemi Suzhou, China. This will help improve supply chain flexibility.							
	<table><thead><tr><th></th><th>Before Change Description</th><th>After Change Description</th></tr></thead><tbody><tr><td>Mold Compound</td><td>CEL8240HF10 CEL8240HF10FC KTMCS5900GM F01 EME 6600CS</td><td>CEL8240HF10 CEL8240HF10FC KTMCS5900GM F01 EME 6600CS GR710F</td></tr></tbody></table>		Before Change Description	After Change Description	Mold Compound	CEL8240HF10 CEL8240HF10FC KTMCS5900GM F01 EME 6600CS	CEL8240HF10 CEL8240HF10FC KTMCS5900GM F01 EME 6600CS GR710F
	Before Change Description	After Change Description					
Mold Compound	CEL8240HF10 CEL8240HF10FC KTMCS5900GM F01 EME 6600CS	CEL8240HF10 CEL8240HF10FC KTMCS5900GM F01 EME 6600CS GR710F					
All other aspects of the impacted products (form, fit, function) will remain unchanged. There is no product marking change because of this change. There are no changes in product electrical specifications.							

Reliability Data Summary:

QV DEVICE NAME: SMJB5603T4G

PACKAGE: D2PAK

RMS: U86653/U91797

Test	Specification	Condition	Interval	Results
HTSL	JESD22-A103	Ta= 150°C	1008hrs	0/77
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 245 °C, Pre IOL, TC, uHAST, H3TRB for surface mount pkgs only		0/271
TC+PC	JESD22-A104	Ta= -55°C to +150°C	1000cyccs	0/77
H3TRB+PC	JESD22-A101	85°C, 85% RH, bias	1008hrs	0/77
UHAST+PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96hrs	0/77
IOL+PC	MIL STD750, M 1037	Ta=+25°C, delta Tj=100°C max, 3.5 min= Ton=Toff	8572cyccs	0/40
SD	JSTD002	Ta = 245°C, 5 sec		0/15

QV DEVICE NAME: FDB2552-SB82178

PACKAGE: D2PAK

RMS: U86662

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Tj=175°C, 80% max rated V	1008hrs	0/231
HTGB	JESD22-A108	Tj=175°C, 100% max rated Vgss	1008hrs	0/231
HTSL	JESD22-A103	Ta= 175°C	1008hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only		0/924
TC+PC	JESD22-A104	Ta= -55°C to +150°C	1000cyccs	0/231
HAST+PC	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96hrs	0/231
UHAST+PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96hrs	0/231
IOL+PC	MIL STD750, M 1037	Ta=+25°C, delta Tj=100°C max, Ton=Toff=3.5min	8572cyccs	0/231
SD	JSTD002	Ta = 245°C, 5 sec		0/45

QV DEVICE NAME: NVB082N65S3F

PACKAGE: D2PAK

RMS: U86433

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Tj=150°C, 100% max rated V	1008hrs	0/231
HTGB	JESD22-A108	Tj=150°C, 100% max rated Vgss	1008hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only		0/924
TC+PC	JESD22-A104	Ta= -55°C to +150°C	1000cyccs	0/231
HAST+PC	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96hrs	0/231
UHAST+PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96hrs	0/231
IOL+PC	MIL STD750, M 1037	Ta=+25°C, delta Tj=100°C max, Ton=Toff=3.5min	8572cyccs	0/231
SD	JSTD002	Ta = 245°C, 5 sec		0/45



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QV DEVICE NAME: NVBGS4D1N15MC

PACKAGE: D2PAK

RMS: U86472/U89720

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Tj=175°C, 100% max rated V	1008hrs	0/231
HTGB	JESD22-A108	Tj=175°C, 100% max rated Vgss	1008hrs	0/231
HTSL	JESD22-A103	Ta= 175°C	1008hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, H3TRB for surface mount pkgs only		0/924
TC+PC	JESD22-A104	Ta= -55°C to +150°C	1000cyccs	0/231
H3TRB+PC	JESD22-A101	85°C, 85% RH, bias	1008hrs	0/231
UHAST+PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96hrs	0/231
IOL+PC	MIL STD750, M 1037	Ta=+25°C, delta Tj=100°C max, Ton=Toff=2 min	15000cyccs	0/231
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
NTB5D0N15MC	NVBGS4D1N15MC
NTBGS6D5N15MC	NVBGS4D1N15MC
NTBGS4D1N15MC	NVBGS4D1N15MC
FDB1D7N10CL7	NVBGS4D1N15MC
FCB290N80	NVB082N65S3F
FCB260N65S3	NVB082N65S3F
FCB20N60TM	NVB082N65S3F
FCB20N60FTM	NVB082N65S3F
FCB199N65S3	NVB082N65S3F
FCB125N65S3	NVB082N65S3F
FCB11N60TM	NVB082N65S3F
FCB110N65F	NVB082N65S3F
FCB099N65S3	NVB082N65S3F
FCB070N65S3	NVB082N65S3F



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NTBS2D7N06M7	FDB2552-SB82178
NTB004N10G	FDB2552-SB82178
NDB5060L	FDB2552-SB82178
HUF75345S3ST	FDB2552-SB82178
FQB55N10TM	FDB2552-SB82178
FQB19N20LTM	FDB2552-SB82178
FDB86135	FDB2552-SB82178
FDB3682	FDB2552-SB82178
FDB3652	FDB2552-SB82178
FDB3632	FDB2552-SB82178
FDB2710	FDB2552-SB82178
FDB2614	FDB2552-SB82178
FDB2572	FDB2552-SB82178
FDB2552	FDB2552-SB82178
FDB16AN08A0	FDB2552-SB82178
FDB13AN06A0	FDB2552-SB82178
FDB075N15A	FDB2552-SB82178
FDB070AN06A0	FDB2552-SB82178
FDB060AN08A0	FDB2552-SB82178
FDB050AN06A0	FDB2552-SB82178
FDB045AN08A0	FDB2552-SB82178
FDB035N10A	FDB2552-SB82178
FDB0260N1007L	FDB2552-SB82178
FDB0300N1007L	FDB2552-SB82178
FDB0630N1507L	FDB2552-SB82178
FDB0690N1507L	FDB2552-SB82178
NTBGS004N10G	FDB2552-SB82178
FDB035AN06A0	FDB2552-SB82178
NTB011N15MC	NVBGS4D1N15MC
KSB834WYTM	SMJB5603T4G
FJB5555TM	SMJB5603T4G
FJB102TM	SMJB5603T4G
NTBS9D0N10MC	NVBGS4D1N15MC
NTB7D3N15MC	NVBGS4D1N15MC



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FDB0250N807L	FDB2552-SB82178
FDB024N08BL7	FDB2552-SB82178
FDB0190N807L	FDB2552-SB82178
FDB0170N607L	FDB2552-SB82178
FDB0165N807L	FDB2552-SB82178

Appendix A: Changed Products

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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NTB5D0N15MC		NVBGS4D1N15MC	#NONE	
NTBGS6D5N15MC		NVBGS4D1N15MC	#NONE	
NTBGS4D1N15MC		NVBGS4D1N15MC	#NONE	
FCB290N80		NVB082N65S3F	#NONE	
FCB260N65S3		NVB082N65S3F	#NONE	
FCB20N60TM		NVB082N65S3F	#NONE	
FCB20N60FTM		NVB082N65S3F	#NONE	
FCB199N65S3		NVB082N65S3F	#NONE	
FCB125N65S3		NVB082N65S3F	#NONE	
FCB11N60TM		NVB082N65S3F	#NONE	
FCB110N65F		NVB082N65S3F	#NONE	
FCB099N65S3		NVB082N65S3F	#NONE	
FCB070N65S3		NVB082N65S3F	#NONE	
NTBS2D7N06M7		FDB2552-SB82178	#NONE	
NTB004N10G		FDB2552-SB82178	#NONE	
NDB5060L		FDB2552-SB82178	#NONE	
HUF75345S3ST		FDB2552-SB82178	#NONE	
FQB55N10TM		FDB2552-SB82178	#NONE	
FQB19N20LTM		FDB2552-SB82178	#NONE	
FDB86135		FDB2552-SB82178	#NONE	
FDB3682		FDB2552-SB82178	#NONE	
FDB3652		FDB2552-SB82178	#NONE	
FDB3632		FDB2552-SB82178	#NONE	
FDB2710		FDB2552-SB82178	#NONE	
FDB2614		FDB2552-SB82178	#NONE	
FDB2572		FDB2552-SB82178	#NONE	
FDB2552		FDB2552-SB82178	#NONE	
FDB16AN08A0		FDB2552-SB82178	#NONE	
FDB13AN06A0		FDB2552-SB82178	#NONE	
FDB075N15A		FDB2552-SB82178	#NONE	
FDB070AN06A0		FDB2552-SB82178	#NONE	
FDB060AN08A0		FDB2552-SB82178	#NONE	
FDB050AN06A0		FDB2552-SB82178	#NONE	
FDB045AN08A0		FDB2552-SB82178	#NONE	
FDB035N10A		FDB2552-SB82178	#NONE	
FDB0260N1007L		FDB2552-SB82178	#NONE	
FDB0300N1007L		FDB2552-SB82178	#NONE	
FDB0630N1507L		FDB2552-SB82178	#NONE	
FDB1D7N10CL7		NVBGS4D1N15MC	#NONE	
FDB0690N1507L		FDB2552-SB82178	#NONE	
NTBGS004N10G		FDB2552-SB82178	#NONE	
FDB035AN06A0		FDB2552-SB82178	#NONE	
NTB011N15MC		NVBGS4D1N15MC	#NONE	
FJB102TM		SMJB5603T4G	#NONE	
KSB834WYTM		SMJB5603T4G	#NONE	
NTB7D3N15MC		NVBGS4D1N15MC	#NONE	
NTBS9D0N10MC		NVBGS4D1N15MC	#NONE	
FDB0250N807L		FDB2552-SB82178	#NONE	
FDB0190N807L		FDB2552-SB82178	#NONE	
FDB024N08BL7		FDB2552-SB82178	#NONE	
FDB0165N807L		FDB2552-SB82178	#NONE	
FDB0170N607L		FDB2552-SB82178	#NONE	