Final Product/Process Change Notification

Document #:FPCN26234X
Issue Date:13 Jun 2024

Title of Change:	Qualification of alternate mold compound GR710F at onsemi Suzhou, China to avoid supply disruption of Sumitomo EME 6600CS.
Proposed First Ship date:	20 Sep 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:	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 Discrete products in onsemi Suzhou, China, to avoid supply disruption risk of Sumitomo non-green mold compound EME 6600CS.

	Before Change Description	**After Change Description**
Mold Compound	EME 6600CS	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: 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	1000cycs	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	8572cycs	0/231
SD	JSTD002	Ta = 245°C, 5 sec		0/45

QV DEVICE NAME: HGT1S10N120BNST
PACKAGE: D2PAK
RMS: U86613/U91801

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Tj=150°C, 80% max rated V	1008hrs	0/77
HTGB	JESD22-A108	Tj=150°C, 100% max rated Vge	1008hrs	0/77
HTSL	JESD22-A103	Ta= 150°C	1008hrs	0/77
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 245 °C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only		0/271
TC+PC	JESD22-A104	Ta= -55°C to +150°C	1000cycs	0/77
HAST+PC	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96hrs	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, Ton=Toff=3.5min	8572cycs	0/40
SD	JSTD002	Ta = 245°C, 5 sec		0/15

QV DEVICE NAME: RFD16N05SM9A
PACKAGE: DPAK
RMS: U87209/U91931

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Tj=175°C, 80% max rated V	1008hrs	0/77
HTGB	JESD22-A108	Tj=175°C, 100% max rated Vgss	1008hrs	0/77
HTSL	JESD22-A103	Ta= 175°C	1008hrs	0/77
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only		0/271
TC+PC	JESD22-A104	Ta= -55°C to +150°C	1000cycs	0/77
HAST+PC	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96hrs	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, Ton=Toff=2 min	15000cycs	0/40
SD	JSTD002	Ta = 245°C, 5 sec		0/15

QV DEVICE NAME: FQD6N40CTM-NBEA002
PACKAGE: DPAK
RMS: U87358

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Tj=150°C, 80% 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 @ 260 °C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only		0/924
TC+PC	JESD22-A104	Ta= -55°C to +150°C	1000cycs	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=2min	15000cycs	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
FDB28N30TM	FDB2552-SB82178
FDB33N25TM	FDB2552-SB82178
FDB44N25TM	FDB2552-SB82178
FDB52N20TM	FDB2552-SB82178
FDB088N08	FDB2552-SB82178
FDB120N10	FDB2552-SB82178
FDB150N10	FDB2552-SB82178
FQB19N20TM	FDB2552-SB82178
FQB22P10TM	FDB2552-SB82178
FQB27P06TM	FDB2552-SB82178
FQB34N20LTM	FDB2552-SB82178
FQB44N10TM	FDB2552-SB82178

FQB47P06TM-AM002	FDB2552-SB82178
FQD2P40TM	FQD6N40CTM-NBEA002
FQD5P20TM	FQD6N40CTM-NBEA002
FQD6N40CTM	FQD6N40CTM-NBEA002
FQD7N20LTM	FQD6N40CTM-NBEA002
FQD8P10TM	FQD6N40CTM-NBEA002
FQD11P06TM	FQD6N40CTM-NBEA002
FQD13N06LTM	FQD6N40CTM-NBEA002
FQD13N10LTM	FQD6N40CTM-NBEA002
FQD13N10TM	FQD6N40CTM-NBEA002
FQD17P06TM	FQD6N40CTM-NBEA002
FQD18N20V2TM	FQD6N40CTM-NBEA002
RFD3055LESM9A	RFD16N05SM9A
RFD16N05LSM9A	RFD16N05SM9A
HUFA75645S3S	FDB2552-SB82178
HUF76407D3ST	RFD16N05SM9A
HUF75545S3ST	FDB2552-SB82178
HGT1S10N120BNST	HGT1S10N120BNST
FQD30N06TM	FQD6N40CTM-NBEA002
FQD19N10LTM	FQD6N40CTM-NBEA002