

Microsemi Corporation

November 17, 2017

Product/Process Change Notification No: PCN17035A

Change Classification: Minor

Subject: BGA Devices with Halogenated Substrates Will Change to Halide-free Substrate Material (Addendum A)

Description of Change:

Devices in BGA packages that use halogenated substrates will use halide-free (green) substrates. Solder masks will also change.

Addendum A: Additional affected devices listed at end of Appendix A.

Reason for Change:

The substrate material supplier will discontinue production of halogenated (non-green) core and pre-preg materials by the end of 2017.

The replacement halide-free material is already qualified and has been running in volume production on other Microsemi SoC and FPGA BGA products for more than five years.

Table 1: Material Changes

	From	To
Core and Pre-preg	CCL-HL3832	CCL-HL832NX-A
	CCL-HL832HS	CCL-HL832NX-A
Solder mask	TAIYO AUS5, or AUS303	AUS308, or AUS320

Application Impact:

There is no impact on form, fit, function, or reliability of the device. The datasheet and package specifications remain the same.

Products Affected by this Change:

See Appendix A for the complete list of affected devices.

Production Shipment Schedule:

Microsemi may begin shipping the devices with the halide-free substrates beginning December 20, 2017.

After December 20, 2017, customers may receive a mix of halogenated substrates and halide-free substrates.

Qualification Data:

Halide-free substrate material has been used for all Microsemi SoC and FPGA BGA package device qualifications for at least five years. Qualification information is available upon request.

Contact Information:

If you have further questions about this subject, contact Microsemi's Technical Support at soc_tech@microsemi.com.

Regards,

Microsemi Corporation

Any projected dates in this PCN are based on the most current product information at the time this PCN is being issued, but they may change due to unforeseen circumstances. For the latest schedule and any other information, please contact your local Microsemi Sales Office, the factory contact shown above, or your local distributor.

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Appendix A

A2F500M3G-1FG484	A2F500M3G-1FG484I	A2F500M3G-1FG484M	A2F500M3G-1FGG484	A2F500M3G-1FGG484I
A2F500M3G-1FGG484M	A2F500M3G-FG484	A2F500M3G-FG484I	A2F500M3G-FG484M	A2F500M3G-FGG484
A2F500M3G-FGG484I	A2F500M3G-FGG484M	A3PE1500-1FG676	A3PE1500-1FG676I	A3PE1500-1FGG676
A3PE1500-1FGG676I	A3PE1500-2FG676	A3PE1500-2FG676I	A3PE1500-2FGG676	A3PE1500-2FGG676I
A3PE1500-FG676	A3PE1500-FG676I	A3PE1500-FGG676	A3PE1500-FGG676I	AFS1500-1FG484
AFS1500-1FG484I	AFS1500-1FG484K	AFS1500-1FG676	AFS1500-1FG676I	AFS1500-1FGG484
AFS1500-1FGG484I	AFS1500-1FGG484K	AFS1500-1FGG676	AFS1500-1FGG676I	AFS1500-2FG484
AFS1500-2FG484I	AFS1500-2FG676	AFS1500-2FG676I	AFS1500-2FGG484	AFS1500-2FGG484I
AFS1500-2FGG676	AFS1500-2FGG676I	AFS1500-FG484	AFS1500-FG484I	AFS1500-FG484K
AFS1500-FG676	AFS1500-FG676I	AFS1500-FGG484	AFS1500-FGG484I	AFS1500-FGG484K
AFS1500-FGG676	AFS1500-FGG676I	AFS250-1FG256	AFS250-1FG256I	AFS250-1FGG256
AFS250-1FGG256I	AFS250-2FG256	AFS250-2FG256I	AFS250-2FGG256	AFS250-2FGG256I
AFS250-FG256	AFS600-1FG484	AFS600-1FG484I	AFS600-1FG484K	AFS600-1FGG484
AFS600-1FGG484K	AFS600-2FG484	AFS600-2FG484I	AFS600-2FGG484	AFS600-2FGG484I
AFS600-FG484I	AFS600-FG484K	AGL1000V2-CS281	AGL1000V5-CS281	AGL600V2-CS281
AGL600V5-CS281	AGLN250V2-ZCSG81	AGLN250V2-ZCSG81I	AGLN250V5-ZCSG81	AGLN250V5-ZCSG81I
AGLP125V2-CS281	AGLP125V2-CSG281	AGLP125V5-CS281	APA1000-BG456	APA1000-BG456I
APA1000-BG456M	APA1000-BGG456	APA1000-BGG456I	APA1000-BGG456M	APA450-BG456
APA450-BG456I	APA450-BGG456	APA450-BGG456I	APA600-BG456	APA600-BG456I
APA600-BG456M	APA600-BGG456	APA600-BGG456I	APA600-BGG456M	APA600-FG676
APA600-FG676I	APA600-FGG676	APA600-FGG676I	APA750-BG456	APA750-BG456I
APA750-BGG456	APA750-BGG456I	AX1000-1FG484	AX1000-1FG484I	AX1000-1FG484M
AX1000-1FGG484	AX1000-1FGG484I	AX1000-1FGG484M	AX1000-2FG484	AX1000-2FG484I
AX1000-2FGG484	AX1000-2FGG484I	AX1000-FG484	AX1000-FG484I	AX1000-FG484M
AX1000-FGG484	AX1000-FGG484I	AX1000-FGG484M	AX125-FG324	AX125-FG324
AX500-1FG484	AX500-1FG484I	AX500-1FG484M	AX500-1FG676	AX500-1FG676I
AX500-1FG676M	AX500-1FGG484	AX500-1FGG484I	AX500-1FGG484M	AX500-2FG484
AX500-2FG676	AX500-2FG676I	AX500-2FGG484	AX500-2FGG484I	AX500-FG484I
AX500-FG484M	AX500-FG676	AX500-FG676I	AX500-FG676M	AX500-FGG484
AX500-FGG484M	M1A3PE1500-1FG676	M1A3PE1500-1FG676I	M1A3PE1500-1FGG676	M1A3PE1500-1FGG676I
M1A3PE1500-2FG676	M1A3PE1500-2FG676I	M1A3PE1500-2FGG676	M1A3PE1500-2FGG676I	M1A3PE1500-FG676
M1A3PE1500-FG676I	M1A3PE1500-FGG676	M1A3PE1500-FGG676I	M1AFS1500-1FG484	M1AFS1500-1FG484I
M1AFS1500-1FG484K	M1AFS1500-1FG676	M1AFS1500-1FG676I	M1AFS1500-1FGG484	M1AFS1500-1FGG484I
M1AFS1500-1FGG484K	M1AFS1500-1FGG676	M1AFS1500-1FGG676I	M1AFS1500-2FG484	M1AFS1500-2FG484I
M1AFS1500-2FG676	M1AFS1500-2FG676I	M1AFS1500-2FGG484	M1AFS1500-2FGG484I	M1AFS1500-2FGG676
M1AFS1500-2FGG676I	M1AFS1500-FG484	M1AFS1500-FG484I	M1AFS1500-FG484K	M1AFS1500-FG676
M1AFS1500-FG676I	M1AFS1500-FGG484	M1AFS1500-FGG484I	M1AFS1500-FGG484K	M1AFS1500-FGG676
M1AFS1500-FGG676I	M1AFS250-1FG256	M1AFS250-1FG256I	M1AFS250-1FGG256	M1AFS250-1FGG256I
M1AFS250-2FG256	M1AFS250-2FG256I	M1AFS250-2FGG256	M1AFS250-2FGG256I	M1AFS250-FG256
M1AFS250-FG256I	M1AFS250-FGG256	M1AFS250-FGG256I	M1AFS600-1FG484	M1AFS600-1FG484I
M1AFS600-1FG484K	M1AFS600-1FGG484	M1AFS600-1FGG484I	M1AFS600-1FGG484K	M1AFS600-2FG484
M1AFS600-2FG484I	M1AFS600-2FGG484	M1AFS600-FG484	M1AFS600-FG484I	M1AFS600-FG484K
M1AFS600-FGG484	M1AFS600-FGG484I	M1AFS600-FGG484K	M1AGL1000V2-CS281	M1AGL1000V2-CS281I

M1AGL1000V2-CSG281	M1AGL1000V5-CS281	M1AGL1000V5-CS281I	M1AGL1000V5-CSG281	M1AGL1000V5-CSG281I
M1AGL600V2-CS281	M1AGL600V2-CS281I	M1AGL600V2-CSG281	M1AGL600V2-CSG281I	M1AGL600V5-CS281
M1AGL600V5-CS281I	M1AGL600V5-CSG281	M1AGL600V5-CSG281I	M7AFS600-1FG484	M7AFS600-1FG484I
M7AFS600-1FGG484	M7AFS600-1FGG484I	M7AFS600-2FG484	M7AFS600-2FG484I	M7AFS600-2FGG484
M7AFS600-2FGG484I	M7AFS600-FG484	M7AFS600-FG484I	M7AFS600-FGG484	M7AFS600-FGG484I
P1AFS1500-2FG484	P1AFS1500-2FG484I	P1AFS1500-2FGG484	P1AFS1500-2FGG484I	P1AFS600-2FG484
P1AFS600-2FGG484	P1AFS600-2FGG484I	U1AFS250-FG256	U1AFS250-FG256I	U1AFS250-FGG256
U1AFS250-FGG256I				

Addendum A: Additions to Affected Devices List

A2F200M3F-1FGG484	A2F200M3F-FG484I	A2F200M3F-FGG484	A2F200M3F-FGG484I	A3P600-1FG484I
A3P600-2FG484I	A3P600-2FGG484	A3P600-2FGG484I	A3P600-FG484	A3P600-FG484I
A3P600-FGG484	A3P600-FGG484I	A3P600L-1FGG484	A3P600L-FG484I	A3P600L-FGG484I
A3PE1500-1FG484	A3PE1500-1FG484I	A3PE1500-1FGG484	A3PE1500-1FGG484I	A3PE1500-2FG484I
A3PE1500-2FGG484I	A3PE1500-FG484	A3PE1500-FG484I	A3PE1500-FGG484	A3PE1500-FGG484I
A3PE3000-1FG324I	A3PE3000-1FG484	A3PE3000-1FG484I	A3PE3000-1FGG324	A3PE3000-1FGG484
A3PE3000-1FGG484I	A3PE3000-2FG324I	A3PE3000-2FG484I	A3PE3000-2FGG324I	A3PE3000-2FGG484
A3PE3000-2FGG484I	A3PE3000-FG324	A3PE3000-FG324I	A3PE3000-FG484	A3PE3000-FG484I
A3PE3000-FGG324	A3PE3000-FGG484	A3PE3000-FGG484I	A3PE3000L-1FG484	A3PE3000L-1FG484I
A3PE3000L-1FG484M	A3PE3000L-1FGG324I	A3PE3000L-1FGG484	A3PE3000L-1FGG484I	A3PE3000L-1FGG484M
A3PE3000L-FG324	A3PE3000L-FG324I	A3PE3000L-FG484	A3PE3000L-FG484I	A3PE3000L-FG484M
A3PE3000L-FGG324I	A3PE3000L-FGG484	A3PE3000L-FGG484I	A3PE3000L-FGG484M	A3PE600-2FG484I
A3PE600-2FGG484I	A3PE600-FG484	A3PE600-FG484I	A3PE600-FGG484	A3PE600-FGG484I
A3PE600L-1FG484M	A3PE600L-FG484M	A3PE600L-FGG484M	A42MX36-2BG272I	A42MX36-BG272M
A42MX36-BGG272I	A54SX32-2BG329	A54SX32A-2BG329I	A54SX32A-BG329	A54SX32A-BG329I
A54SX32A-BGG329	A54SX32A-FG256I	A54SX32A-FGG256I	A54SX32-BG329	A54SX72A-1FGG256I
A54SX72A-2FG256I	A54SX72A-2FG484I	A54SX72A-FG256	A54SX72A-FG256I	A54SX72A-FG256M
A54SX72A-FG484	A54SX72A-FG484I	A54SX72A-FGG256I	AFS1500-1FG256I	AFS1500-2FG256I
AFS1500-FG256I	AFS1500-FG256K	AFS1500-FGG256	AFS1500-FGG256I	AFS250-FG256I
AFS250-FGG256	AFS250-FGG256I	AFS600-1FG256K	AFS600-FG256	AFS600-FGG256I
AFS600-FG256K	AFS600-FGG484I	AFS600-FGG256	AFS600-FGG256I	AFS600-FGG256K
AFS600-FGG484	AFS600-FGG484I	AFS600-FGG484K	AGL030V2-CSG81	AGL030V2-CSG81I
AGL030V5-CSG81	AGL030V5-CSG81I	AGL1000V2-CS281I	AGL1000V2-CSG281	AGL1000V2-CSG281I
AGL1000V5-CSG281	AGL1000V5-CSG281I	AGL250V2-CS196	AGL250V2-CS196I	AGL250V2-CSG196
AGL250V2-CSG196I	AGL250V5-CS196	AGL250V5-CSG196	AGL250V5-CSG196I	AGL400V2-CSG196
AGL400V2-CSG196I	AGL400V5-CS196I	AGL400V5-CSG196	AGL400V5-CSG196I	AGL600V2-CS281I
AGL600V2-CSG281I	AGL600V5-CS281I	AGL600V5-CSG281	AGL600V5-CSG281I	AGLE3000V2-FG484I
AGLE3000V5-FG484I	AGLE3000V5-FGG484	AGLN020V2-CSG81	AGLN020V2-CSG81I	AGLN020V5-CSG81
AGLN020V5-CSG81I	AGLN250V2-CSG81	AGLN250V2-CSG81I	AGLN250V5-CSG81	AGLN250V5-CSG81I
AGLP060V2-CSG289	AGLP060V5-CSG289I	AGLP125V2-CS281I	AGLP125V2-CS289I	AGLP125V2-CSG281I
AGLP125V2-CSG289	AGLP125V2-CSG289I	AGLP125V5-CS281I	AGLP125V5-CS289I	AGLP125V5-CSG281
AGLP125V5-CSG281I	AGLP125V5-CSG289	AGLP125V5-CSG289I	APA300-BG456	APA300-BG456I
APA300-BG456M	APA450-FG484I	APA600-FG484I	AX1000-1FG676M	AX1000-1FGG676I
AX1000-2FG676I	AX250-1FG256I	AX250-1FG484I	AX250-1FGG256M	AX250-2FG256I
AX250-2FGG256I	AX250-FG256I	AX250-FG256M	AX250-FG484I	AX250-FGG256I
AX250-FGG484	AX500-2FG484I	AX500-FG484	M1A3P600L-FGG484	M1A3PE1500-2FG484I
M1A3PE1500-2FGG484	M1A3PE3000-2FG484I	M1A3PE3000-2FGG484I	M1A3PE3000L-1FG484M	M1A3PE3000L-FGG484I
M1AFS1500-2FG256I	M1AFS1500-FGG256	M1AGL1000V2-CSG281I	P1AFS1500-2FG256	P1AFS600-2FG256I
P1AFS600-2FG484I	P1AFS600-2FGG256I			

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Page 4 of 5



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