



April 14, 2011

PCN Number: 1102

PCN Change Level: Major

Subject: Change in Mold Compound and Die Attach Material for Standard TQ and VQ Packages Assembled in Amkor Korea

Dear Customer,

This notice is to inform you that Microsemi is replacing the mold compound of TQ and VQ packages with Sumitomo EME G700L and replacing the die attach material with Ablestik 3230 in Amkor Korea, starting February 2011. The previous mold compound, Sumitomo EME 7320C Type R, has been discontinued. Table 1 and Table 2 show the summary of packaging materials for both standard and lead-free packages:

Table 1: Current Set of Materials

	Standard	Lead-free
Leadframe	Cu Alloy	Cu Alloy
Wire Bond	Gold	Gold
Mold Comp	EME 7320C R	EME G700L
Die Attach	Ablestik 84-1 LMIS	Ablestik 3230
Plating	SnPb	Sn

Table 2: New Set of Materials

	Standard	Lead-free
Leadframe	Cu Alloy	Cu Alloy
Wire Bond	Gold	Gold
Mold Comp	EME G700L	EME G700L
Die Attach	Ablestik 3230	Ablestik 3230
Plating	SnPb	Sn



There are no reliability concerns in using Sumitomo EME G700L and Ablestik 3230. There is no change in the customer's SMT reflow profile (rated at 260°C peak temperature). These materials were previously qualified in Amkor Korea for both lead-free and standard material packages.

- Since Q1 of 2002, all lead-free TQ and VQ packages assembled in Amkor Korea have been using EME G700L and Ablestik 3230.
- Since Q2 of 2005, Microsemi flash products in TQ and VQ lead-free and standard material packages have been using EME G700L and Ablestik 3230 (that is, APA075, A3P030, A3P060, A3P125, and A3P250).
- Greater than seventy percent of Microsemi TQ and VQ shipments are lead-free.

The affected devices are listed in Table 3. Affected part numbers are listed in Table 4. Shipments of devices with the new material set could begin as early as April 2011.

Table 3: Affected Devices

A42MX24-TQ176	A54SX08A-TQ144	A42MX16-VQ100
A42MX16-TQ176	A54SX32A-TQ100	A42MX09-VQ100
A54SX32-TQ176	A54SX16A-TQ100	APA150-TQ100
A54SX16-TQ176	A54SX08A-TQ100	A1010B-VQ80
A54SX32A-TQ176	eX256-TQ100	A1020B-VQ80
A54SX32A-TQ144	eX128-TQ100	A40MX02-VQ80
A54SX16A-TQ144	eX64-TQ100	A40MX04-VQ80

Table 4: Affected Part Numbers

ACT 1		
A1010B-VQ80C	A1010B-2VQ80I	A1020B-VQ80I
A1010B-1VQ80C	A10V10B-VQ80C	A1020B-1VQ80I
A1010B-2VQ80C	A1020B-VQ80C	A1020B-2VQ80I
A1010B-VQ80I	A1020B-1VQ80C	A10V20B-VQ80C
A1010B-1VQ80I	A1020B-2VQ80C	
MX		
A40MX02-VQ80	A42MX09-VQ100	A42MX16-TQ176
A40MX02-FVQ80	A42MX09-FVQ100	A42MX16-FTQ176



Table 4: Affected Part Numbers

A40MX02-1VQ80	A42MX09-1VQ100	A42MX16-1TQ176
A40MX02-2VQ80	A42MX09-2VQ100	A42MX16-2TQ176
A40MX02-3VQ80	A42MX09-3VQ100	A42MX16-3TQ176
A40MX02-VQ80I	A42MX09-VQ100I	A42MX16-TQ176I
A40MX02-1VQ80I	A42MX09-1VQ100I	A42MX16-1TQ176I
A40MX02-2VQ80I	A42MX09-2VQ100I	A42MX16-2TQ176I
A40MX02-3VQ80I	A42MX09-3VQ100I	A42MX16-3TQ176I
A40MX02-VQ80A	A42MX09-VQ100A	A42MX16-TQ176A
A40MX02-VQ80M	A42MX09-VQ100M	A42MX16-TQ176M
A40MX02-1VQ80M	A42MX09-1VQ100M	A42MX16-1TQ176M
A40MX04-VQ80	A42MX16-VQ100	A42MX24-TQ176
A40MX04-FVQ80	A42MX16-FVQ100	A42MX24-FTQ176
A40MX04-1VQ80	A42MX16-1VQ100	A42MX24-1TQ176
A40MX04-2VQ80	A42MX16-2VQ100	A42MX24-2TQ176
A40MX04-3VQ80	A42MX16-3VQ100	A42MX24-3TQ176
A40MX04-VQ80I	A42MX16-VQ100I	A42MX24-TQ176I
A40MX04-1VQ80I	A42MX16-1VQ100I	A42MX24-1TQ176I
A40MX04-2VQ80I	A42MX16-2VQ100I	A42MX24-2TQ176I
A40MX04-3VQ80I	A42MX16-3VQ100I	A42MX24-3TQ176I
A40MX04-VQ80A	A42MX16-VQ100A	A42MX24-TQ176A
A40MX04-VQ80M	A42MX16-VQ100M	A42MX24-TQ176M
A40MX04-1VQ80M	A42MX16-1VQ100M	A42MX24-1TQ176M
ProASIC^{PLUS}®		
APA150-TQ100	APA150-TQ100I	APA150-TQ100A
SX-A		
A54SX08A-TQ100	A54SX16A-2TQ100I	A54SX32A-TQ100M
A54SX08A-FTQ100	A54SX16A-TQ100A	A54SX32A-1TQ100M
A54SX08A-1TQ100	A54SX16A-TQ100M	A54SX32A-TQ144



Table 4: Affected Part Numbers

A54SX08A-2TQ100	A54SX16A-1TQ100M	A54SX32A-FTQ144
A54SX08A-TQ100I	A54SX16A-TQ144	A54SX32A-1TQ144
A54SX08A-1TQ100I	A54SX16A-FTQ144	A54SX32A-2TQ144
A54SX08A-2TQ100I	A54SX16A-1TQ144	A54SX32A-TQ144I
A54SX08A-TQ100A	A54SX16A-2TQ144	A54SX32A-1TQ144I
A54SX08A-TQ144	A54SX16A-TQ144I	A54SX32A-2TQ144I
A54SX08A-FTQ144	A54SX16A-1TQ144I	A54SX32A-TQ144A
A54SX08A-1TQ144	A54SX16A-2TQ144I	A54SX32A-TQ144M
A54SX08A-2TQ144	A54SX16A-TQ144A	A54SX32A-1TQ144M
A54SX08A-TQ144I	A54SX16A-TQ144M	A54SX32A-TQ176
A54SX08A-1TQ144I	A54SX16A-1TQ144M	A54SX32A-FTQ176
A54SX08A-2TQ144I	A54SX32A-TQ100	A54SX32A-1TQ176
A54SX08A-TQ144A	A54SX32A-FTQ100	A54SX32A-2TQ176
A54SX16A-TQ100	A54SX32A-1TQ100	A54SX32A-TQ176I
A54SX16A-FTQ100	A54SX32A-2TQ100	A54SX32A-1TQ176I
A54SX16A-1TQ100	A54SX32A-TQ100I	A54SX32A-2TQ176I
A54SX16A-2TQ100	A54SX32A-1TQ100I	A54SX32A-TQ176M
A54SX16A-TQ100I	A54SX32A-2TQ100I	A54SX32A-1TQ176M
A54SX16A-1TQ100I	A54SX32A-TQ100A	
SX		
A54SX16-TQ176	A54SX16-2TQ176I	A54SX32-3TQ176
A54SX16-1TQ176	A54SX16-3TQ176I	A54SX32-TQ176I
A54SX16-2TQ176	A54SX32-TQ176	A54SX32-1TQ176I
A54SX16-3TQ176	A54SX32-1TQ176	A54SX32-2TQ176I
A54SX16-TQ176I	A54SX32-2TQ176	A54SX32-3TQ176I
A54SX16-1TQ176I		



eX		
eX64-TQ100	eX128-TQ100	eX256-TQ100
eX64-FTQ100	eX128-FTQ100	eX256-FTQ100
eX64-PTQ100	eX128-PTQ100	eX256-PTQ100
eX64-TQ100I	eX128-TQ100I	eX256-TQ100I
eX64-PTQ100I	eX128-PTQ100I	eX256-PTQ100I
eX64-TQ100A	eX128-TQ100A	eX256-TQ100A

For questions and to request a qualification report on devices listed in Table 3, please contact the Microsemi SoC Products Group Technical Support hotline at soc_tech@microsemi.com.

Regards,

Microsemi Corporation