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PCN: PCN-PLP-42927-021-0

Product Change Notice

Issue Date: August 7, 2017

Change Type:

- Assembly site addition (Amkor China)

Parts Affected:

Device	Package Size	Package	Pin Count
B50220B0KFBG	13X13	FBGA	144
B50220SB0KFBG	13X13	FBGA	144
B50220SB0IFBG	13X13	FBGA	144
BCM54220SB0IFBG	13X13	FBGA	144
BCM54220SB0KFBG	13X13	FBGA	144
BCM54220SEB0IFBG	13X13	FBGA	144
BCM54220B0IFBG	13X13	FBGA	144
BCM54220B0KFBG	13X13	FBGA	144

Description and Extent of Change:

- Add Amkor China as an additional assembly supplier for the above devices.
- The extent of the change is minimal. Amkor China has internally qualified the package type is in volume production for the above package technology

Reasons for Change:

- Manufacturing flexibility

Effect of Change on Fit, Form, Function, Quality, or Reliability:

- No impact on form, fit and function

Effective Date of Change:

- Product shipments using this change will begin week of September 29, 2017

Qualification Data:

Pkg Qualification Reference# PQ03045
Fab Technology : 40nm LP
Package Type : FBGA
Package Size : 10mm x 10mm
Lead Count : 196
Bond Wire : COPPER: 99.95% Cu/Pd-plated (3N, NMC)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		260 units	0 failures	0 / 260
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	77 units	0 failures	0 / 77
Thermal Shock	-55°C / 125°C JEDEC Std. 22-A106 Cond C	300 cycles	77 units	0 failures	0 / 77
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	77 units	0 failures	0 / 77
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	77 units	0 failures	0 / 77

Pkg Qualification Reference# PQ01843
Fab Technology : 65nm LP
Package Type : FBGA
Package Size : 17mm x 17mm
Lead Count : 400
Bond Wire : COPPER: 99.95% Cu/Pd-plated (3N, NMC)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		260 units	0 failures	0 / 260
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	76 units	0 failures	0 / 76
Thermal Shock	-55°C / 125°C JEDEC Std. 22-A106 Cond C	500 cycles	76 units	0 failures	0 / 76
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	76 units	0 failures	0 / 76
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	76 units	0 failures	0 / 76

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Pkg Qualification Reference# PQ01925
Fab Technology : 65nm LP
Package Type : FBGA
Package Size : 8mm x 8mm
Lead Count : 81
Bond Wire : COPPER: 99.95% Cu/Pd-plated (3N, NMC)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		260 units	0 failures	0 / 260
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	76 units	0 failures	0 / 76
Thermal Shock	-55°C / 125°C JEDEC Std. 22-A106 Cond C	500 cycles	76 units	0 failures	0 / 76
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	76 units	0 failures	0 / 76
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	76 units	0 failures	0 / 76

Pkg Qualification Reference# PQ01745
Fab Technology : 65nm LP
Package Type : FBGA
Package Size : 12mm x 12mm
Lead Count : 213
Bond Wire : COPPER: 99.95% Cu/Pd-plated (3N, NMC)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		260 units	0 failures	0 / 260
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	76 units	0 failures	0 / 76
Thermal Shock	-55°C / 125°C JEDEC Std. 22-A106 Cond C	500 cycles	76 units	0 failures	0 / 76
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	76 units	0 failures	0 / 76
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	76 units	0 failures	0 / 76

Pkg Qualification Reference# PQ01588
Fab Technology : 65nm LP
Package Type : FBGA
Package Size : 14mm x 14mm
Lead Count : 169
Bond Wire : COPPER: 99.95% Cu/Pd-plated (3N, NMC)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		240 units	0 failures	0 / 240
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	76 units	0 failures	0 / 76
Thermal Shock	-55°C / 125°C JEDEC Std. 22-A106 Cond C	500 cycles	76 units	0 failures	0 / 76
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	76 units	0 failures	0 / 76
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	76 units	0 failures	0 / 76

Pkg Qualification Reference# PQ03397
Fab Technology : 28nm HPM
Package Type : FBGA
Package Size : 21mm x 21mm
Lead Count : 400
Bond Wire : COPPER: 99.95% Cu/Pd-plated (3N, NMC)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		260 units	0 failures	0 / 260
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	77 units	0 failures	0 / 77
Thermal Shock	-55°C / 125°C JEDEC Std. 22-A106 Cond C	300 cycles	77 units	0 failures	0 / 77
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	77 units	0 failures	0 / 77
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	77 units	0 failures	0 / 77

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Pkg Qualification Reference# PQ00896
Fab Technology : 130nm G
Package Type : FBGA
Package Size : 14mm x 14mm
Lead Count : 256
Bond Wire : GOLD: 99.99% Au (4N)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		228 units	0 failures	0 / 228
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	76 units	0 failures	0 / 76
Thermal Shock	-55°C / 125°C JEDEC Std. 22-A106 Cond C	500 cycles	76 units	0 failures	0 / 76
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	76 units	0 failures	0 / 76
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	76 units	0 failures	0 / 76

Pkg Qualification Reference# PQ01437
Fab Technology : 65nm LP
Package Type : FBGA
Package Size : 21mm x 21mm
Lead Count : 400
Bond Wire : GOLD: 99.99% Au (4N)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		152 units	0 failures	0 / 152
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	76 units	0 failures	0 / 76
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	76 units	0 failures	0 / 76
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	76 units	0 failures	0 / 76

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Pkg Qualification Reference# PQ02194

Fab Technology : 65nm LP
Package Type : FBGA
Package Size : 17mm x 17mm
Lead Count : 318
Bond Wire : GOLD: 99% Au/1% Pd (2N)

Stress Test	Condition	Read points Cycles / Hrs.	Sample Size	Requirements	Results (# fail/ss)
Precondition	MSL3 JESD22-A113E		260 units	0 failures	0 / 260
Temp Cycle	-55°C / 125°C JEDEC Std. 22-A104-C Cond. B	1000 cycles	76 units	0 failures	0 / 76
Thermal Shock	-55°C / 125°C JEDEC Std. 22-A106 Cond C	500 cycles	76 units	0 failures	0 / 76
uHast	130° C/85%RH/ JEDEC Std. 22-A102-C	96hrs	76 units	0 failures	0 / 76
HTSL	TA=150° C JEDEC Std. 22-A103-C	1000hrs	76 units	0 failures	0 / 76

Please contact your Broadcom Limited field sales engineer or Contact Center for any questions or support requirements. Please return any response as soon as possible, but not to exceed 30 days.