Material Set Change:

Package Material Set		Carsem	Amkor
MSOP	Die Attach	Ablestik 84-1LMISR4 LOCTITE QMI519	Ablestik 8290
	Mold Compound	Sumitomo 6600 Sumitomo G600 Hitachi CEL 8240HF10LX	Sumitomo G700LS

Automotive Grade 1 Qualification Results Summary of 8- and 10-Lead MSOP Package at Amkor Philippines (ATP)

QUALIFICATION RESULTS

TEST	SPECIFICATION	SAMPLE SIZE	RESULTS
Highly Accelerated Stress Test (HAST)*	JEDEC *JESD22-A110*	**3 x 77**	**Pass**
Temperature Cycle (TC)*	JEDEC *JESD22-A104*	**3 x 77**	**Pass**
Autoclave (AC)*	JEDEC *JESD22-A102*	**3 x 77**	**Pass**
Solder Heat Resistance (SHR)*	JEDEC/IPC *J-STD-020*	**3 x 11**	**Pass**
High Temperature Storage Life (HTSL)	JEDEC *JESD22-A103*	**1 x 77**	**Pass**
Electrostatic Discharge *Field-Induced Charged Device Model*	JEDEC *JESD22-C101*	**3/voltage**	**Pass** **Class IV @ +/-1.250kV**

* These samples were subjected to preconditioning (per J-STD-020 Level 1) prior to the start of the stress test. Level 3 preconditioning consists of the following: 1. Bake – 24 hours at 125ºC; 2. Soak – unbiased soak for 168 hours at 85ºC, 85%RH; 3. Reflow – three passes through a reflow oven with a peak temperature of 260ºC. TC samples were subjected to wire-pull test after 500 cycles with results within specification limits.

Qualification Results Summary of 8- and 10-Lead MSOP Package at Amkor Philippines (ATP)

QUALIFICATION RESULTS			
TEST	**SPECIFICATION**	**SAMPLE SIZE**	**RESULTS**
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Solder Heat Resistance (SHR)*	JEDEC/IPC *J-STD-020*	**3 x 11**	**Pass**
High Temperature Storage Life (HTSL)	JEDEC *JESD22-A103*	**1 x 77**	**Pass**
Electrostatic Discharge *Field-Induced Charged Device Model*	JEDEC *JESD22-C101*	**3/voltage**	**Pass** **Class IV @ +/-1.250kV**

*Preconditioned per JEDEC/IPC J-STD-020