

**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 <i>JESD22-A110</i>	3 x 77	Pass
Temperature Cycle (TC)*	JEDEC <i>JESD22-A104</i>	3 x 77	Pass
Autoclave (AC)*	JEDEC <i>JESD22-A102</i>	3 x 77	Pass
Solder Heat Resistance (SHR)*	JEDEC/IPC <i>J-STD-020</i>	3 x 11	Pass
High Temperature Storage Life (HTSL)	JEDEC <i>JESD22-A103</i>	1 x 77	Pass
Electrostatic Discharge <i>Field-Induced Charged Device Model</i>	JEDEC <i>JESD22-C101</i>	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 125°C; 2. Soak – unbiased soak for 168 hours at 85°C, 85%RH; 3. Reflow – three passes through a reflow oven with a peak temperature of 260°C. TC samples were subjected to wire-pull test after 500 cycles with results within specification limits.