

**iMX6SL 13x13 0.5mm wirebond mapbga / SCS Qual Plan**

**GROUP A - ACCELERATED ENVIRONMENTAL STRESS TESTS**

Stress Test	Reference	Test Conditions	End Point Requirements	Minimum Sample Size	# of Lots	Total Units	Results Lot ID- (#Rej/SS)
PC	JESD22-A113 J-STD-020	<b>Preconditioning (PC) :</b> PC required for SMDs only. MSL 3 @ 260°C, +5/-0°C	TEST @ RH				All surface mount devices prior to THB, HAST, AC, UHST, TC, PC+PTC and as required per test conditions. SAM SS=11 units for each stress test for each lot when required.
THB	JESD22-A101 A110	<b>Temperature-Humidity-Bias (THB):</b> PC before THB (for SMDs only): Required THB = 85°C/85%RH for 1008 hrs. Bias = must minimize power to below < 200mW recommended by JEDEC. <i>Timed RO of 48hrs. MAX</i>	TEST @ RH	80	3	240	
TC	JESD22-A104	<b>Temperature Cycle (TC):</b> PC before TC (for SMDs only): Required TC = -55°C to 125°C for 700 cycles.	TEST @ H	80	3	240	

**TEST GROUP B - ACCELERATED LIFETIME SIMULATION TESTS**

Stress Test	Reference	Test Conditions	End Point Requirements	Minimum Sample Size	# of Lots	Total Units	Results Lot ID- (#Rej/SS)
ELFR	JESD74	<b>Early Life Failure Rate ELFR):</b> Stress: Tj = 130°C, Bias = 1.4v for 95 hrs Use: Tj = 105°C, Bias = 1.15v for 1yr/50% duty cycle. <i>Electrical test must be performed within 48hrs after stress.</i>	TEST @ RHC	309	1	309	

**TEST GROUP C - PACKAGE ASSEMBLY INTEGRITY TESTS**

Stress Test	Reference	Test Conditions	End Point Requirements	Minimum Sample Size	# of Lots	Total Units	Results Lot ID- (#Rej/SS)
WBS	JESD22-B116	<b>Wire Bond shear (WBS)</b>	Cpk = or > 1.67	30 bonds from minimum 5 units	1	5	
WBP	JESD22-B116	<b>Wire Bond Pull (WBP):</b>	Cpk = or > 1.67	30 bonds from minimum 5 units	1	5	
SBS	JESD22-B117	<b>Solder Ball Shear (SBS):</b> Performed on all solder ball mounted packages e.g. PBGA, Chip Scale, Micro Lead Frame (but <u>NOT</u> Flip Chip). Two 220°C reflow cycles before shear.	Cpk = or >1.67	10 (30 balls from a min. of 5 devices)	1	10	
SD	JESD22-B102	<b>Solderability (SD):</b> 8hr.(1 hr. for Au-plated leads) Steam age prior to test. If production burn-in is done, samples must also undergo burn-in prior to SD.	>95% lead coverage of critical areas	15	1	15	