

VS1000B Qualification Report Summary

1.1 Package qualification

Package type: LQFP 48 RoHS

Dimensions: 7 x 7 x 1.4 (mm)

LQFP48 RoHS (Green) package has passed qualification tests, MSL3 at 260°C.

1.2 Device qualification

The qualification was done for devices fabricated with the production masks and encapsulated with the qualified production package. Each device has also passed pre-test by using the production test program (+25°C), that is also called as "Final Test". The qualification tests are summarized below

Test	Sample size	Conditions	Result Failed/passed
Electrical temperature characterization, Lot ID: 7121040, nominal wafers.	3	-40, +25, +85 °C in 6 different voltage set-up.	0 / 3*
Electrical temperature characterization, Lot ID: 7121030, corner processed wafers.	11	-40, +25, +85 °C in 6 different voltage set-up.	0 / 11*
Latch-up immunity: I-Test AVDD = IOVDD = 3.6 V, CVDD = 2.8 V, Vhigh = 5.25 V Lot ID: 7121040	6	+ / - 200 mA JEDEC JESD78	0 / 6
Latch-up immunity: Voltage test. Vmax, Lot ID: N6M6678	6	1.5*Vmax trigger pulses JEDEC JESD78	0 / 6
ESD susceptibility, Human Body Model. MIL-STD-883 3015 Lot ID: 7121040, nominal wafer.	3	1000 V	0 / 3
	3	1500 V	0 / 3
	3	2000 V	0 / 3
	3	4000 V	3 / 0

10. January 2008

Test	Sample size	Conditions	Result Failed/passed
Life-test, Lot ID: 7121040, nominal wafer	34	125 °C, 1000h, V _{high} = 5.5 V MIL-STD-883 1005	0 / 34

*) All devices passed with relaxed limits.

1.3 Conclusion

VS1000B device passed the qualification tests with the following considerations:

Electrical temperature characterization, device is functional in extreme temperatures, however the performance may degrade. There are marginal USB test failures. Memory test will pass when $CVDD \leq 2.65$ V.