JEDEC STANDARD

Thermal Shock

JESD22-A106B.01

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JEDEC SOLID STATE TECHNOLOGY ASSOCIATION

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TEST METHOD A106B.01

THERMAL SHOCK

(From JEDEC Board Ballot JCB-04-57, and JCB-16-50, formulated under the cognizance of the JC-14.1 Subcommittee on Reliability Test Methods for Packaged Devices.)

1 Scope

This test is conducted to determine the resistance of a part to sudden exposure to extreme changes in temperature and to the effect of alternate exposures to these extremes.

2 Terms and definitions

dwell time: The total time the load is immersed in the bath.

load: The specimens under test and the fixtures holding those specimens during test.

NOTE The maximum load is the maximum mass of specimens and fixtures that can be placed in the working zone of the bath while maintaining specified temperature and times.

maximum load: The largest load for which the worst-case load temperature meets the timing requirements (see 4.1).

monitoring sensor: The temperature sensor located and calibrated to indicate the same temperature as at the worst-case indicator specimen location.

NOTE The worst-case indicator specimen location is identified during the periodic characterization of the worst-case load temperature.

specimen: The device or individual piece being tested.

transfer time: The elapsed time measured from the complete removal of the load from one bath until the full insertion in the other bath.

worst-case load temperature: The temperature of a specific specimen as indicated by a thermocouple imbedded or attached to the body of the load and located at/near the center of the load.