JEDEC STANDARD

Test Methods and Acceptance Procedures for the Evaluation of Polymeric Materials

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Test Methods and Acceptance Procedures for the Evaluation of Polymeric Materials

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TEST METHODS AND ACCEPTANCE PROCEDURES FOR THE EVALUATION OF POLYMERIC MATERIALS

(From Board Ballot JCB-18-04, formulated under the cognizance of the JC-13.5 Subcommittee on Hybrid, RF/Microwave, and MCM Technology.)

1 Scope

This Test Method covers the minimum requirements that should be in effect for the evaluation and acceptance of polymeric materials for use in industrial, military, space, and other special-condition products which may require capabilities beyond standard commercial microelectronics applications. It is not the intent of this Publication to specify a material, but to evaluate the material to assure that the quality and reliability of the microelectronic devices are not compromised. These materials shall be classified in two types as follows:

1) Type I being electrically conductive.
2) Type II being electrically insulative.

The user may elect to use test data from routine tests or evaluations for all or part of the user certification.

The test methods included as a part of this Publication are those which best address those physical, chemical, mechanical, and electrical properties of materials which can impact the reliability of these microelectronic devices. This Publication is not designed to be exhaustive of all techniques available as newer and more nearly absolute techniques are constantly being developed.

2 Applicable documents

The Standards and Publications listed, of current issue, form a part of this Test Method to the extent specified herein.

MIL-STD-883, *Test Methods and Procedures for Microelectronics*

MIL-PRF-38534, *General Specification Hybrid Microcircuits*

MIL-PRF-38535, *General Specification for Integrated Circuits (Microcircuits) Manufacturing*

FED-STD-406, *Federal Test Method Standard for Test of Adhesives*

ANSI/NCSL Z540-1, *General Requirements for Calibration Laboratories, Measuring and Test Equipment*

ASTM C177, *Steady State Heat Flux Measurement and Thermal Transmission Properties by Means of the Guarded Hot Plate Apparatus*

ASTM C518, *Steady State Heat Flux Measurement and Thermal Transmission Properties by Means of the Heat Flowmeter Apparatus*

ASTM D150, *AC Loss Characteristics and Dielectric Constant of Solid Electrical Insulating Materials*