

ANSI/ESD SP5.2.1-2012

ESD Association Standard Practice

ANSI/ESD SP5.2.1-2012
Revision and re-designation of ANSI/ESD SP5.1.1-2006

*for Electrostatic Discharge
Sensitivity Testing*

*Machine Model (MM)
Alternative Test Method:
Supply Pin Ganging
Component Level*



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*An American National Standard
Approved September 30, 2013*

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for Electrostatic Discharge
Sensitivity Testing***

***Machine Model (MM)
Alternative Test Method:
Supply Pin Ganging
Component Level***

Approved September 7, 2011
ESD Association



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(This foreword is not part of ESD Association standard practice ANSI/ESD SP5.2.1-2012)

FOREWORD

This standard practice¹ defines an alternative test method to perform Machine Model (MM) component level electrostatic discharge (ESD) tests when the component or device pin count exceeds the number of ESD simulator tester channels. If an ESD simulator above 512 pins is not available, then this standard practice can be used as a guide to ESD stress components with greater than 512 pins or balls.

Since this document is a standard practice and not a standard test method, classifications of ESD sensitivity levels cannot be defined. This document references the ANSI/ESD STM5.2 (MM) test method. ANSI/ESD STM5.2 will supersede this standard practice if there are any conflicts in testing a component.

This standard practice does not claim to reproduce the same test results as would be achieved by an ESD simulator with greater than 512 pins. The test results will be similar but not identical, since many of the tester parasitic properties of a higher pin count simulator cannot be reproduced using a lower pin count ESD simulator. The authors of this document recommend that the user purchase and use the high-pin ESD simulator that fully meets the test requirements of ANSI/ESD STM5.2. If this is not possible, then this standard practice can be used to perform MM stress testing.

This standard practice applies to the MM test method because this alternative test method builds custom test fixture boards (TFBs) that can be used by this ESD test method. The use of these custom test fixture boards changes the pin combinations and modifies the discharge waveforms.

This document was originally designated ANSI/ESD SP5.1.1-2006 (a combined HBM/MM standard practice document for high pin count purposes) and approved on September 10, 2006. ANSI/ESD SP5.2.1-2012 is a revision, re-designation of ANSI/ESD SP5.1.1-2006 and was approved on September 7, 2011.

¹ **ESD Association Standard Practice (SP):** A procedure for performing one or more operations or functions that may or may not yield a test result. If a test result is obtained it may not be reproducible.

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