

ITC55WLMD SERIES

wafer level multi-die test system



Overview

The ITC55WLMD series of test systems has been developed by ITC to be stand-alone UIL test systems configured specifically to test on wafer. The systems include an ITC55series UIL tester and inductor box, a current limiter module and a system controller.

Each system is constructed to meet the customer's specific testing needs. Systems are available for 50A, 100A, 200A and 400A testing with configuration options to allow multiple die to be serially tested in a single touch-down of the probe card to improve throughput.

Within each system provision is made to have one current limiter per probe. These current limiters are factory set to limit the current flow in each probe to a maximum of 5A. Within the current limiter module there is a parallel energy path (remote crowbar) that will fire in the event of an overcurrent condition removing the current from the DUT and probe card. In the event of an avalanche fail the crowbar within the ITC55 series tester will fire.

The system controller provides the user interface for downloading the test programs and test mode to the ITC55 series tester and also provides GPIB control of the wafer probe system. Results from the test can be data-logged by die and wafer mapping.



Background

Power semiconductor ruggedness or UIL testing has traditionally been a test performed on MOSFET's, IGBT's and Diodes during final testing of the packaged parts.

Shipments of wafers and unpackaged die plus the requirement to improve final test yield have created the need for the UIL test to be performed at the devices full current capability during wafer probe testing.

Implementation of the test at wafer probe requires special techniques that ITC has developed to protect the die being tested, the wafer and the probe card.

data sheet

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ITC55WLMD2001	200A single die system Includes: ITC55WLMD200BASE ITC55CLM200 – 40 current limiters no multiplexing
ITC55WLMD0504	4 x 50A per die system Includes: ITC55WLMD200BASE ITC55CLM0504 – 40 current limiters multiplexed 10 per die.
ITC55WLMD1004	4 x 100A per die system Includes: ITC55WLMD200BASE ITC55CLM1004 – 80 current limiters multiplexed 20 per die.
ITC55WLMD1008	8 x 100A per die system Includes: ITC55WLMD1004 Plus one additional ITC55CLM1004.
ITC55WLMD2004	4 x 200A per die system Includes: ITC55WLMD200BASE ITC55CLM2004 – 160 current limiters multiplexed 40 per die
ITC55WLMD2008	8 x 200A per die system Includes: ITC55WLMD2004 Plus one additional ITC55CLM2004
ITC55WLMD4001	400A single die system Includes: ITC55WLMD400BASE ITC55CLM400 – 80 current limiters no multiplexing
ITC55WLMD4002	2 x 400A per die system Includes: ITC55WLMD4001 Plus one additional ITC55CLM400

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