TLP Tester **Transmission Line Pulse Tester**

HED-T5000-HC

- Powerful support to gathering data and analysis
- Get the operating parameter of high-voltage ESD protection device

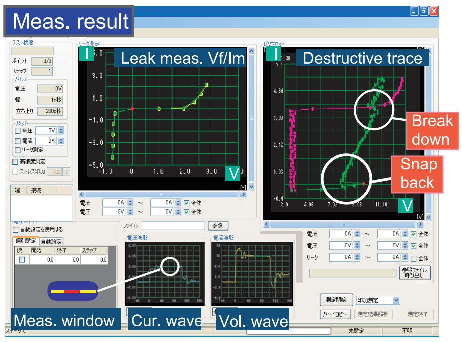
HANWA Hanwa Electronic Ind. Co., Ltd.

Standard specification

TLP (Transmission Line Pulse) Tester is for measuring the characteristics of ESD protection device in the integrated circuit. The performance of ESD protection device had been judged by destructive or non-destructive after pulse zapping. However this device can measure the characteristics quantitatively by non-destructive. Therefore, it provides you to make good design efficiently and save development process time and its cost. Correspond with SOA test.

Tester model	HED-T5000-HC
TLP test model	TDR(Time Domain Reflection) TDT(Time Domain Transmission) ※Option
Pulse voltage	Open terminal volt.：+/-2000V(0.2V/step), 50Ωload：+/-1000V(0.1V/step)
Pulse current	Short：Max.40A, 50Ω load：Max.20A ※Option Short:Max. 60A
Pulse width	100ns ※Option200ns
Pulse rise time	300ps/2ns/10ns/20ns
Oscilloscope	Tektronix TDS3052 (500MHz)
Current probe	Tektronix CT-1 (1GHz)
Leak measurement	Meas. vol. +/-40V (0.1V/step), Meas cur. Max. 100mA
Size/Weight	1170mm(W)×750mm(D)×1120mm(H) ※included PC/Approx 80kg
Communication pro.	RS232C/GPIB
OS/Power	Windows/AC100-220V/5A,50/60Hz

Powerful support to gathering data and analysis



- It is possible to set pulse polarity, pulse width and step voltage from PC. Step voltage can change in the middle of test.
- For the protection of device, voltage/ current limiter is equipped in the tester.
- Ability of leak measurement by Vf/Im is equipped. Setting measurement points are maximum 20 points.
- The destructive evaluation for device can implement with leak measurement ability. The destructive level depends on setting threshold.
- Oscilloscope and monitor can display the incident wave and reflective wave of voltage/current with total for TLP pulse.
- The width and position of measurement window can adjust on the trace by using cursor.
- For checking the difference of snapback characteristic by the changing process technology, the TLP tester make multiple snapback characteristics display on the same monitor.
- The relation between the measuring point of snapback characteristic and the destructive judgment trace is one-to-one correspondence. It allows comparing and verifying the destructive point of device and snapback characteristic.
- Leak measurement Vf/Im allows to confirm the leak current for each TLP pulse.

Features

High current mode

Possible to have the high-current test of short circuit 40A with Zap pulse width 100ns/200ns. Therefore, it is effective to verification of ESD protection device or hight-voltage devices such as TVS diode.

Powerful monitor to support analysis

An oscilloscope included in TLP tester allows to be confirmed an incident wave to device and a reflective wave from device. After the incident and reflective wave automatically saved, display on the exclusive monitor. The exclusive monitor displays the incident and reflective wave with total, in addition, snapback characteristics and leak measurement value from Vf/Im measurement with trace.

Difference display for characteristics data

The data saved from oscilloscope allows arithmetic process with hight flexibility. Those can display ON voltage of transistor in difference process or maximum current value in the protect circuit as multiple trace on the same time. It is possible to confirm the difference value of each trace.

Connection to Wafer ESD tester

TLP tester can achieve automatic measurement with connection to Wafer ESD tester. Automatic measurement and automatic shift to next zap pin and next chip on a wafer are leading to increased test efficiency.

If you have any questions, please contact us.

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