TLP-1000A Transmission Line Pulse Generator

1. Description

The model TLP-1000A series transmission line pulse generator is our latest (2022) design for standalone TLP pulses that can generate and inject direct TLP pulses, E field, and H field to the device under test (DUT). This generator is designed to apply high-quality rectangular pulses up to 5kV (50 Ohm load). Voltage polarity, amplitude, and pulse rate could be easily controlled by the 5-inch color IPS touch screen and USB port remotely. The customizable Pulse width and rise time with variable measurement accessories make the generator functionality extendable.

2. Features

- Highly configurable TLP Pulse Generator
- 5-inch Touch Screen
- High quality TLP pulses
- Expandable with ESD injection fixtures, Standard TLP, VF-TLP, etc.
- USB Connection
- USB Firmware Upgrade
- Customization is available

3. Applications

- ESD current injection with diode and capacitive injection probes
- E & H field injection with field probes or TEM Cell

ESDEMC Technology LLC, 2001 Forum Drive, Rolla, MO, 65401, USA
www.esdemc.com Tel: (+1)-573-202-6411 Fax: (+1) 877-641-9358 Email: info@esdemc.com

- General TLP for wafer, PCB, System level ESD debug
- Touchscreen ITO trace fuse and breakdown test
- Charge recovery time test
- Component ESD Pulse reliability test

4. Specifications

Parameters	TLP-1010A	TLP-1030A	TLP-1050A	Unit	Comments
Output voltage @ open load	± 10 ~ 2000	± 10 ~ 6000	± 10 ~ 10000	V	
Output voltage @ 50 Ω load	± 5 ~ 1000	± 5 ~ 3000	± 5 ~ 5000	V	
Min voltage step	10	10	10	V	
Output voltage precision	Better than ± 5 % or ± 10 V			NA	
Output current @ short load	± 0.2 ~ 40	± 0.2 ~ 120	± 0.2 ~ 200	A	
Output current @ 50 Ω load	± 0.1 ~ 20	± 0.1 ~ 60	± 0.1 ~ 100	A	
Intrinsic TLP rise-time	≤ 0.2	≤ 1	≤ 2	ns	
Other rise-time options	0.06 ~ 50			ns	Available depends on model
Intrinsic TLP pulse width	10 ± 1			ns	Default
Other pulse-width options	1 ~ 3200	5 ~ 1000	5 ~ 500	ns	Available depends on model
Pulse repetition time	0.05 ~ 2			s	Selectable
Dimensions	470 X 520 X 160			mm	
Weight	9	10	11	kg	

5. Ordering Information

Line	Part # or Option #	Description
TLP IV-Curve System Basic Configuration		
1.1	TLP-1010A	Transmission line Pulse Generator Max 1000V @ 50 Ohm Load
1.2	TLP-1030A	Transmission line Pulse Generator Max 3000V @ 50 Ohm Load
1.3	TLP-1050A	Transmission line Pulse Generator Max 5000V @ 50 Ohm Load
Pulse Rise-time Customization		
2.1	TLP-PIRT	Programable Internal Rise-time Options
2.2	TLP-MERT	Manual External Rise-time Filter Options
Pulse Fall-time Customization		
3.1	TLP-SFT	Slow Fall-time Option
Pulse Width Customization		
4.1	TLP-PIPW	Programable Internal Pulse-width Option
4.2	TLP-MEPW	Manual External Pulse-width Option
Reflection Control Customization		
5.1	TLP-ATT	Internal Bidirectional Attenuator (reduce reflections)
5.2	TLP-RNT	Reverse Negative Termination (reduce negative reflections)

Customizations are available upon request.

ESDEMC Technology LLC, 2001 Forum Drive, Rolla, MO, 65401, USA
www.esdemc.com Tel: (+1)-573-202-6411 Fax: (+1) 877-641-9358 Email: info@esdemc.com