

PULSE MODULES

ISO10605-330pF, 330Ω



Pulse Module ISO 10605 – 330 pF, 330 Ω

Advanced TLP/HMM/HBM Solutions



1 Features

- Pulse module compatible with HPPI TLP-xxx10A/C
- Pulse waveform ISO10605 - 330 pF, 330 Ω [1]
- 120 A first peak current with TLP-12010A/C
- High voltage BNC connector

2 Electrical Characteristics

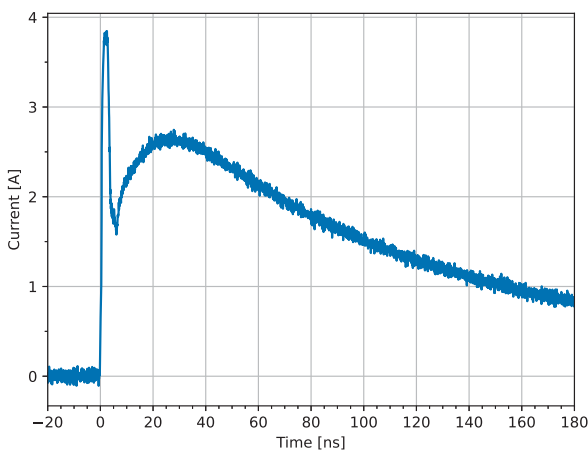


Figure 1: Normalized pulse current

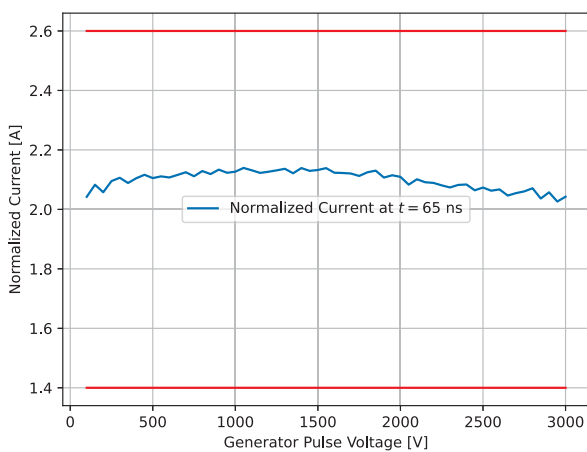


Figure 2: Normalized extracted current at $t_1 = 65$ ns

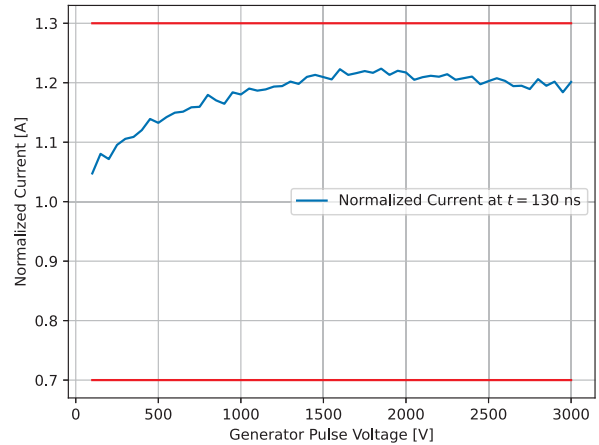


Figure 3: Normalized extracted current at $t_2 = 130$ ns

3 Test Setup

Fig. 4 shows the test setup to verify the electrical characteristics of the ISO 10605 – 330 pF, 330 Ω pulse module.

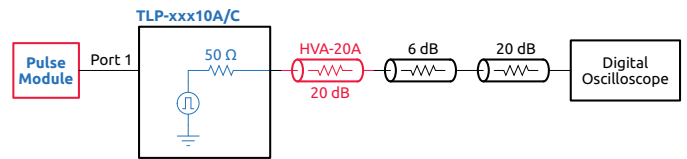


Figure 4: Test setup

4 SPICE Equivalent Model

Fig. 5 shows the SPICE equivalent model of the pulse generation circuit [2]. The 0.15 m transmission line must be simulated in the time domain as well.

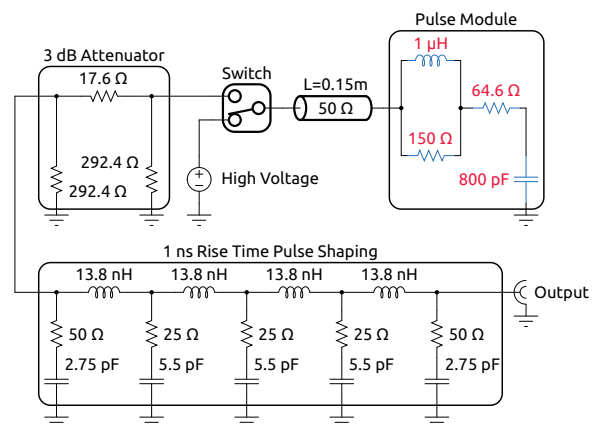


Figure 5: SPICE equivalent model

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5 Application Notes

The next 3 figures show a 50 Ω grounded DUT setup, 100 Ω grounded DUT setup and a 100 Ω floating DUT setup.

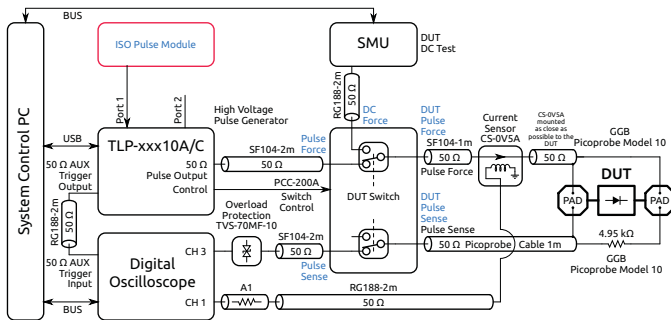


Figure 6: 50 Ω grounded DUT setup

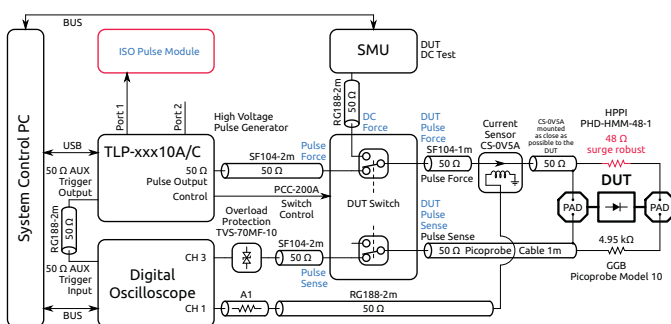


Figure 7: 100 Ω grounded DUT setup

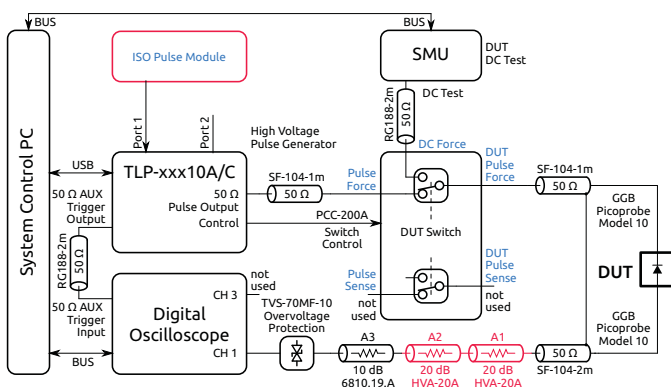


Figure 8: 100 Ω floating DUT setup

A 100 Ω setup (grounded or floating DUT) is preferred over a 50 Ω grounded DUT setup in order to achieve better pulse reflection suppression. This can be evaluated

by measurement comparison of a short circuit DUT for all 3 setups.

6 Ordering Information

Pos.	Description	Part No.
01	Pulse Module ISO 10605 – 330 pF, 330 Ω	330 pF / 330 Ω

References

- [1] “ISO 10605:2023 Road Vehicles - Test Methods for Electrical Disturbances From Electrostatic Discharge.” (), [Online]. Available: <https://www.iso.org/standard/79094.html> (visited on 07/21/2023).
- [2] Y. Cao, D. Johnsson, B. Arndt, and M. Stecher, “A TLP-based Human Metal Model ESD-generator for device qualification according to IEC 61000-4-2,” in *2010 Asia-Pacific International Symposium on Electromagnetic Compatibility*, Apr. 2010, pp. 471–474. DOI: [10.1109/APEMC.2010.5475621](https://doi.org/10.1109/APEMC.2010.5475621).

General

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High Power Pulse Instruments GmbH
 Stadlerstrasse 6A
 D-85540 Haar, Germany
 Phone : +49 (0)89 8780698 - 440
 Fax : +49 (0)89 8780698 - 444
 E-Mail : info@hppi.de

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