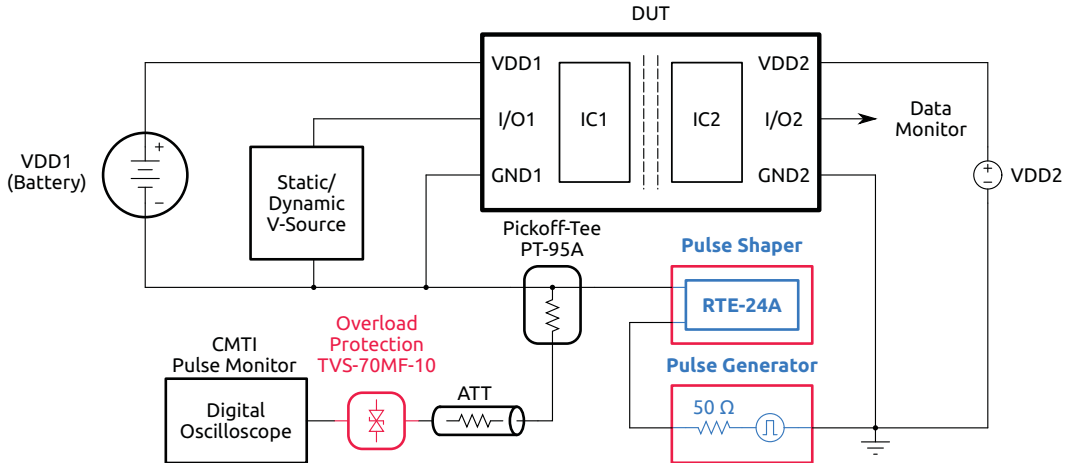


- ▶ CMTI standards: [1], [2]

Static CMTI: Option #1 “Open Load”

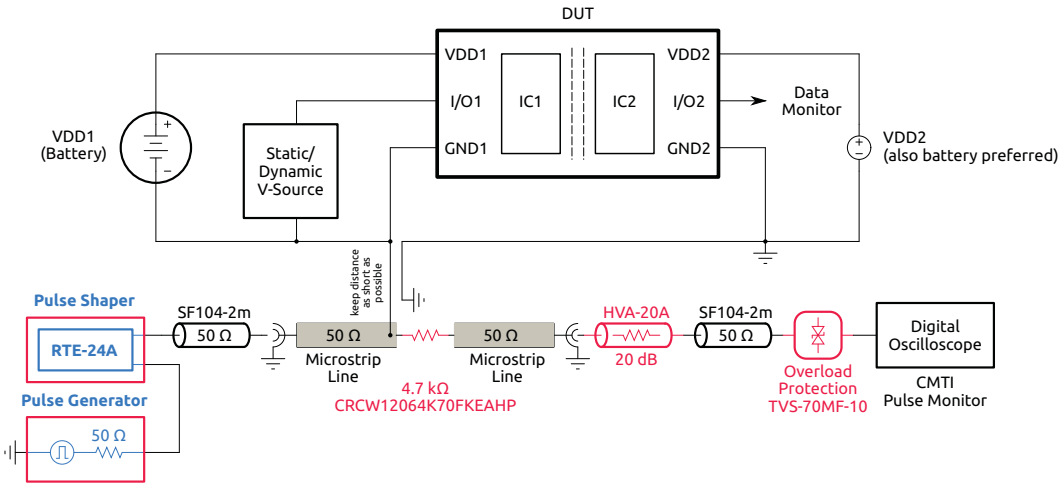
50 Ω CMTI Source Impedance



- ▶ To monitor the CMTI/TLP pulse you can use the trigger output of the CMTI-8010 at its backside
- ▶ The CMTI pulse generator output is terminated with high impedance (“open load”)

Static CMTI: Option #1 “Open Load”

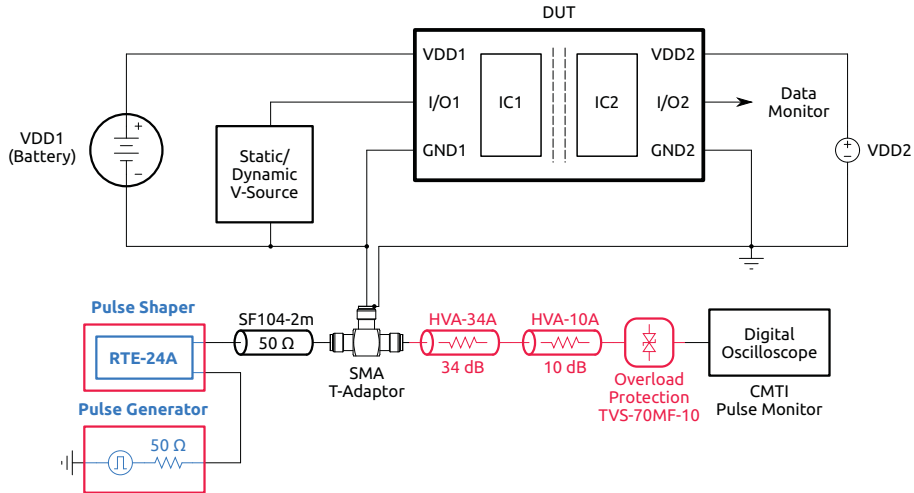
Recommended Board Layout



- ▶ The parasitic shunt impedance of the SMA T-adaptor can be avoided by proper board layout including on-board voltage divider

Static CMTI: Option #2 “Terminated”

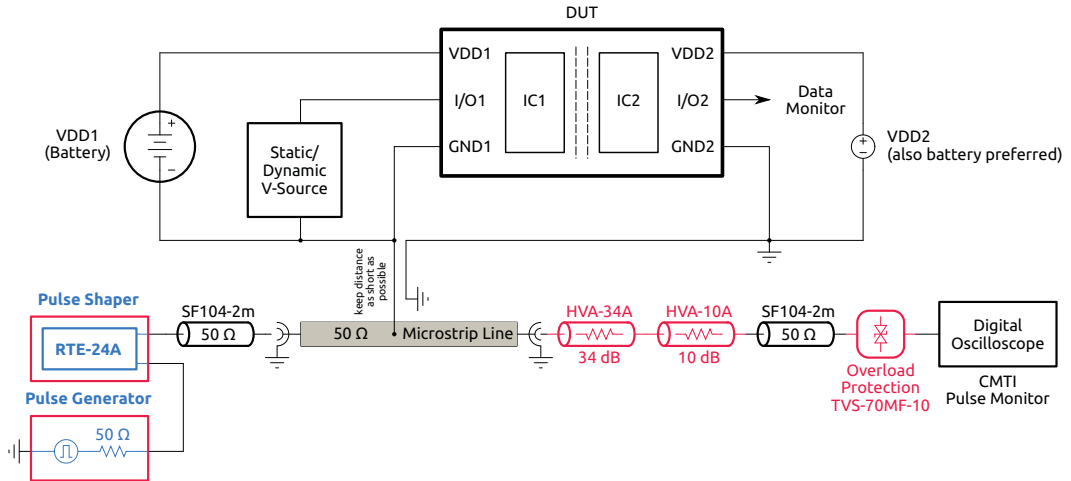
25 Ω CMTI Source Impedance



- ▶ High voltage attenuators are needed to get onto the level of the maximum allowed input voltage of the scope (normally 5 V)
- ▶ The CMTI pulse generator output is loaded with 50 Ω (“terminated”)

Static CMTI: Option #2 “Terminated”

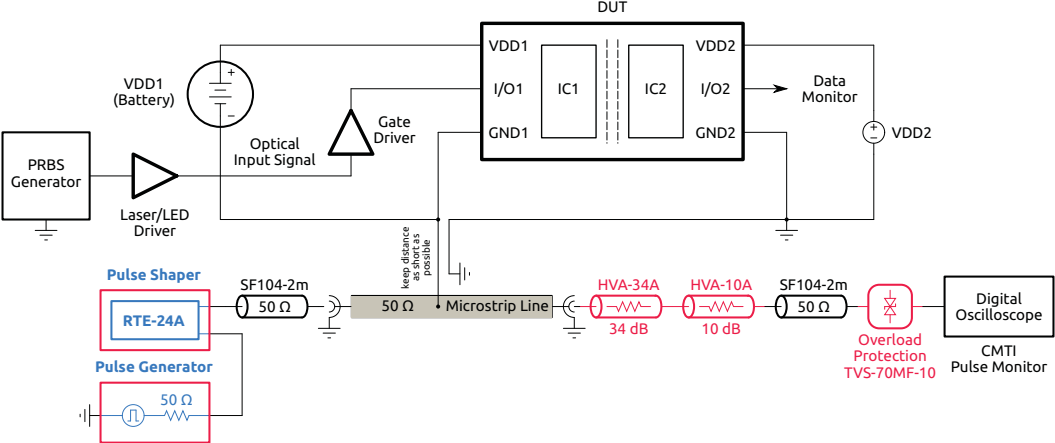
Recommended Board Layout



- ▶ Tap on 50 Ω microstrip transmission line
- ▶ The parasitic shunt impedance of the SMA T-adapter can be avoided by proper board layout with on-board tapped microstrip line

Dynamic CMTI: Option #3 “Terminated”

25 Ω CMTI Source Impedance



▶ PRBS input signal is optically isolated

References I

- [1] I. E. Commission, *IEC 60747-17: Semiconductor devices – Part 17: Magnetic and capacitive coupler for basic and reinforced isolation*, Edition 1.0, 2020.
- [2] I. E. Commission, *IEC 60747-5-5: Semiconductor devices – Part 5-5: Optoelectronic devices – Photocouplers*, Edition 1.0, 2007.