



P.O. BOX 265
OGDENSBURG, NY
U.S.A. 13669-0265

TEL: 888-670-8729 (USA & Canada) or +1-613-686-6675 (Intl)
FAX: 800-561-1970 (USA & Canada) or +1-613-686-6679 (Intl)

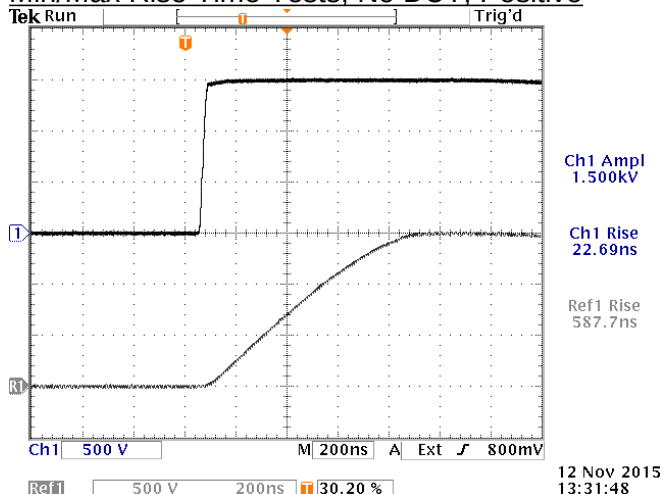
BOX 5120, LCD MERIVALE
OTTAWA, ONTARIO
CANADA K2C 3H5

info@avtechpulse.com - http://www.avtechpulse.com/

PERFORMANCE CHECKSHEET

Model: AVRQ-4-B-SCHB-AC03
Type: Common Mode Transient Immunity (CMTI) Test for Opto-Couplers
S.N.: 13351
Date: November 12, 2015

Min/Max Rise Time Tests, No DUT, Positive



a) Output Signal Amplitude: ± 1 kV, ± 1.5 kV

b) Rise Time (10%-90%): 25 ns - 250 ns

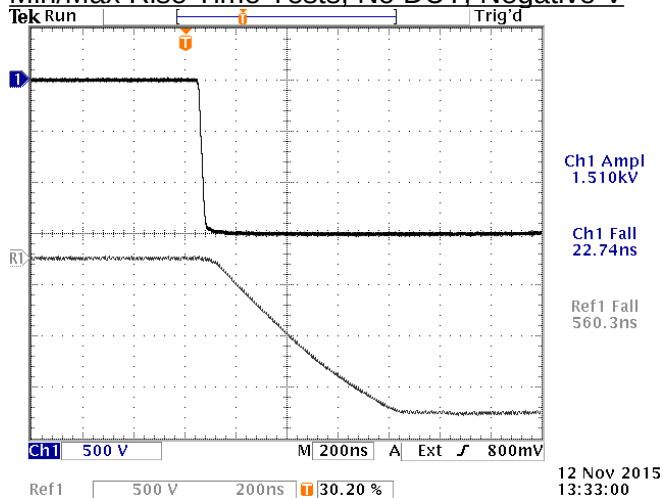
c) PRF: 1 Hz - 10 Hz

d) Jitter, Stability: OK

e) Prime Power: 100-240V AC, 50-60 Hz.

Top: minimum rise time setting, +1.5 kV
Bottom: maximum rise time setting, +1.5 kV

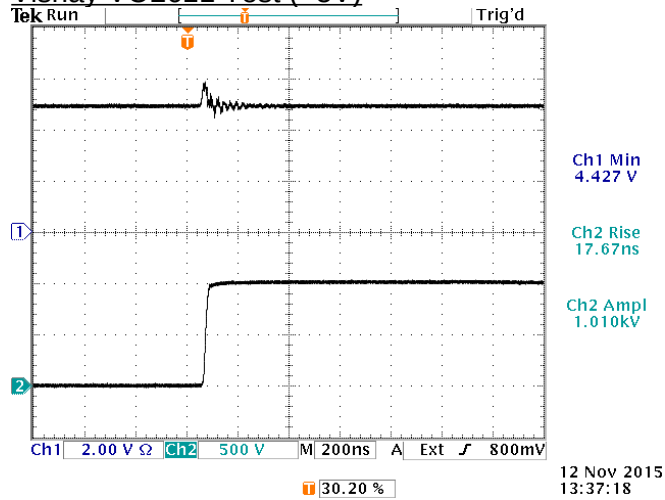
Min/Max Rise Time Tests, No DUT, Negative V



Top: minimum rise time setting, -1.5 kV
Bottom: maximum rise time setting, -1.5 kV

References levels: 10%, 90%.

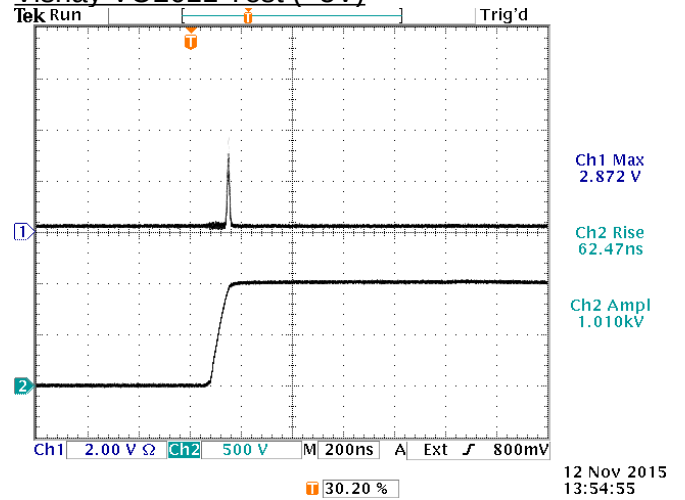
Vishay VO2611 Test (+5V)



+1 kV, +5V, 0 mA, 348Ω load ("A" PCB).

No glitches at minimum risetime, so the CMTI exceeds $(1\text{kV} \times (90\% - 10\%) / 17.67 \text{ ns}) = 45.3 \text{ kV/us}$.

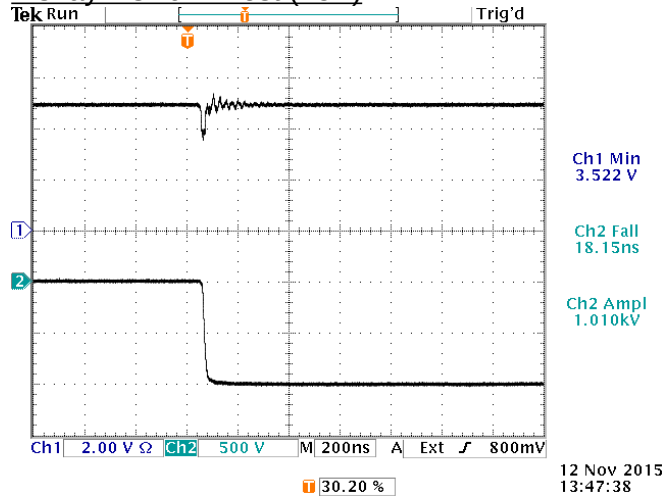
Vishay VO2611 Test (+5V)



+1 kV, +5V, 7.5 mA, 348Ω load ("D7" PCB).

A ~50% glitch starts to occur at $1 \text{ kV} \times (90\% - 10\%) / 62.47 \text{ ns} = 12.8 \text{ kV/us}$.

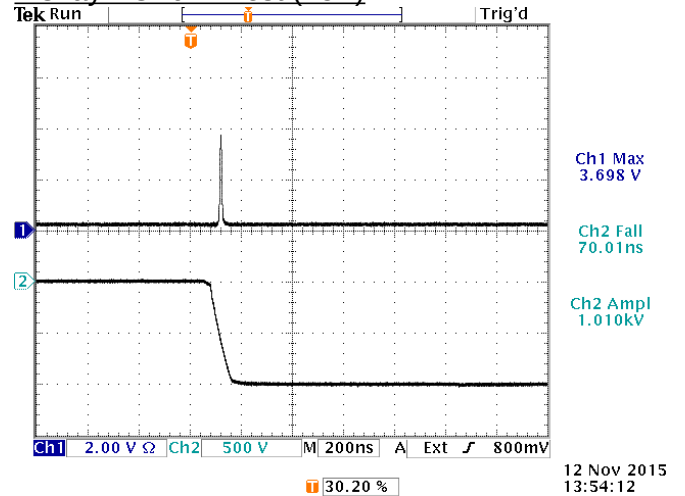
Vishay VO2611 Test (+5V)



-1 kV, +5V, 0 mA, 348Ω load ("A" PCB).

The glitch at minimum risetime does not dip below 50%, so the CMTI exceeds $(1\text{kV} \times (90\% - 10\%) / 18.15 \text{ ns}) = 44.1 \text{ kV/us}$.

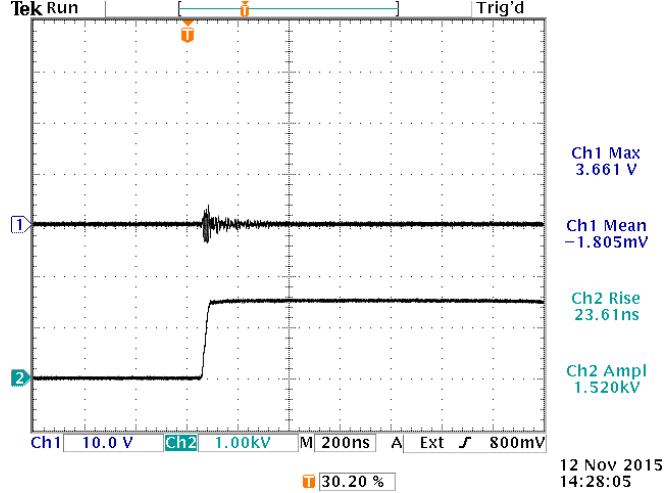
Vishay VO2611 Test (+5V)



-1 kV, +5V, 7.5 mA, 348Ω load ("D7" PCB).

A ~50% glitch starts to occur at $1 \text{ kV} \times (90\% - 10\%) / 70.01 \text{ ns} = 11.4 \text{ kV/us}$.

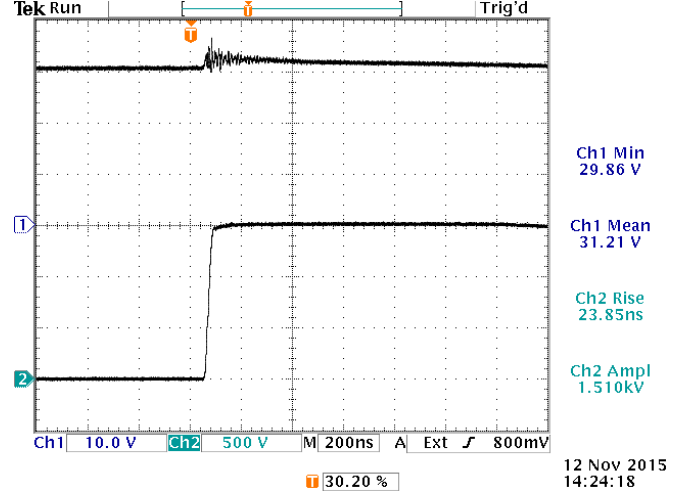
Vishay VO3120 Test (+32V)



+1.5kV, +32V, 0 mA

No glitches at minimum risetime, so the CMTI exceeds $(1.5\text{kV} \times (90\% - 10\%) / 23.61 \text{ ns}) = 50.8 \text{ kV/us}$.

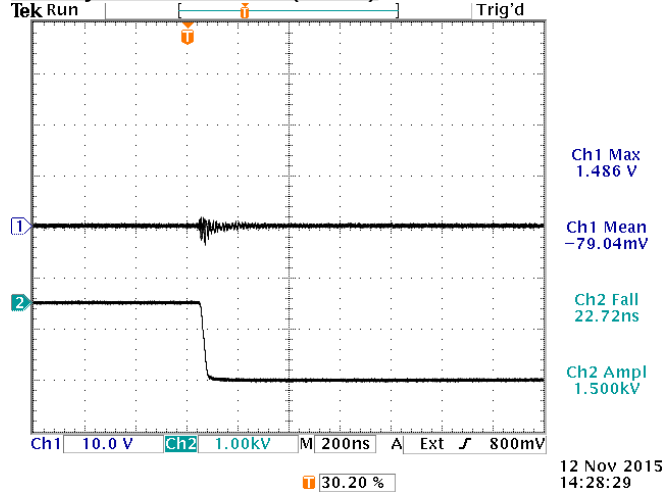
Vishay VO3120 Test (+32V)



+1.5kV, +32V, 10 mA

No glitches at minimum risetime, so the CMTI exceeds $(1.5\text{kV} \times (90\% - 10\%) / 23.85 \text{ ns}) = 50.3 \text{ kV/us}$.

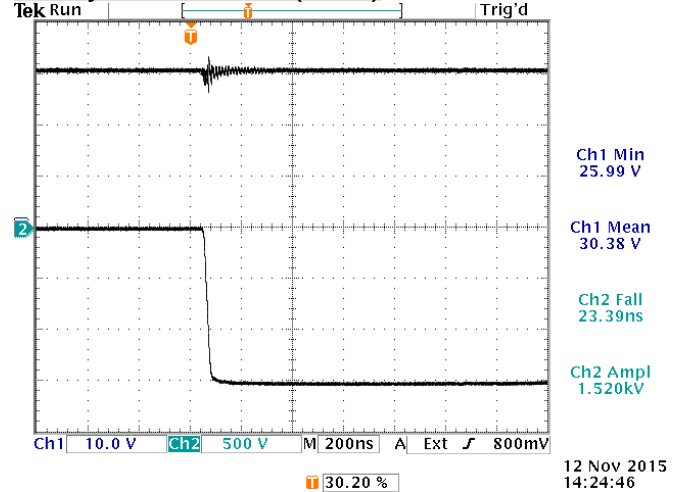
Vishay VO3120 Test (+32V)



-1.5kV, +32V, 0 mA

No glitches at minimum risetime, so the CMTI exceeds $(1.5\text{kV} \times (90\% - 10\%) / 22.72 \text{ ns}) = 52.8 \text{ kV/us}$.

Vishay VO3120 Test (+32V)



-1.5kV, +32V, 10 mA

No glitches at minimum risetime, so the CMTI exceeds $(1.5\text{kV} \times (90\% - 10\%) / 23.39 \text{ ns}) = 51.3 \text{ kV/us}$.

A P6139B probe was used to measure the logic output, instead of the P6246 differential probe, due to its limited voltage input range.

A non-standard daughterboard was used to test the VO3120, with:

- R1, R2, R5, R7, C6: unused
- R4, R6, R8, R10, R11: zero Ohms
- R3 = unused for 0 mA, 348 Ohms for 10 mA
- R9 = zero Ohms for 0 mA, unused for 10 mA