

Transition Time Converters

015-0710-00 / 015-0711-00 / 015-0712-00 / 015-0713-00 / 015-0714-00

Product Overview

These converters are designed to convert the fixed transition times, 150ps, 250ps, 500ps, 1ns, and 2ns (see Figure 2). The new design of these converters ensures low signal reflection, unlike conventional converters (see Figure 3). Reducing the signal transition times also increases the overall pulse-performance for overshoot/reflection sensitive applications (see Figure 1). The converters are fitted with SMA connectors, one male, and one female. The converters can be used in both directions.

Typical Characteristics

Converters:	015-0710-00	015-0711-00	015-0712-00	015-0713-00	015-0714-00
Output Transition Time*	150ps	250ps	500ps	1000ps	2000ps
-3dB point	2.8GHz	1.5GHz	750MHz	340MHz	170MHz
Input Voltage	< 10Vp-p				
Insertion Loss	< 0.2dB				
Overshoot and Ringing	< 3%				
VSWR	< 1.4 under -3dB point				

* All transition times are from 10% to 90% of amplitude.

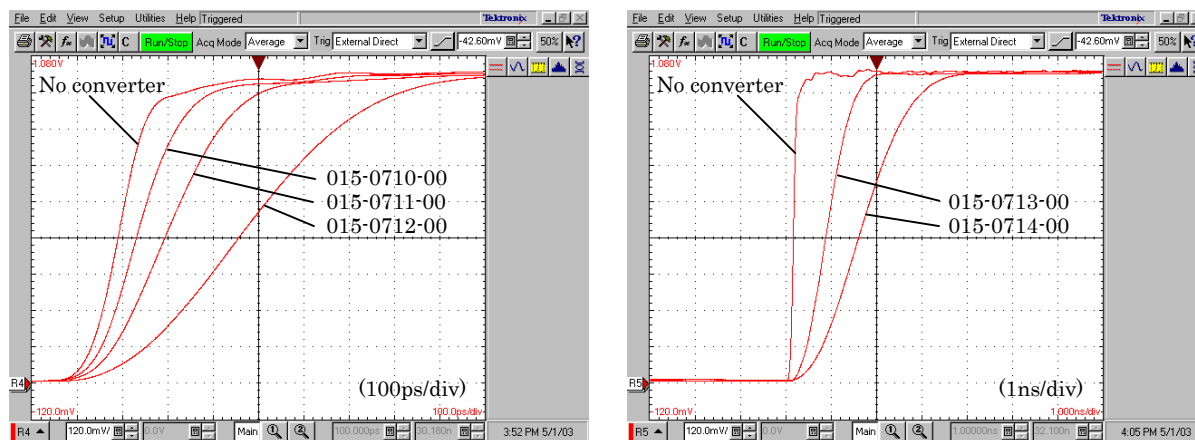
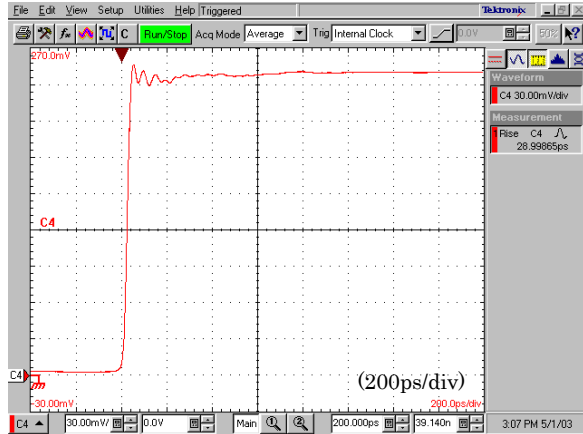
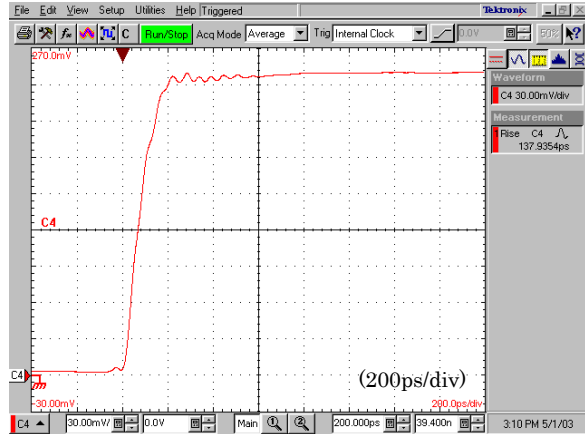


Figure 1. Tektronix DTG5274 with DTGM30+Converter Outputs
(Using Tektronix CSA8000 Oscilloscope with 80E03 Sampling Module)

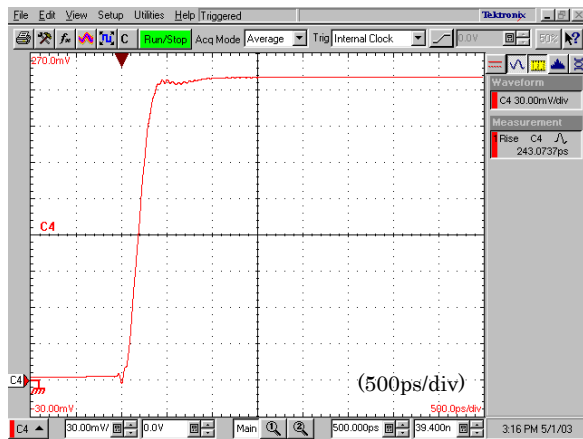
Input Step (80E04 TDR, $t_R=30ps$)



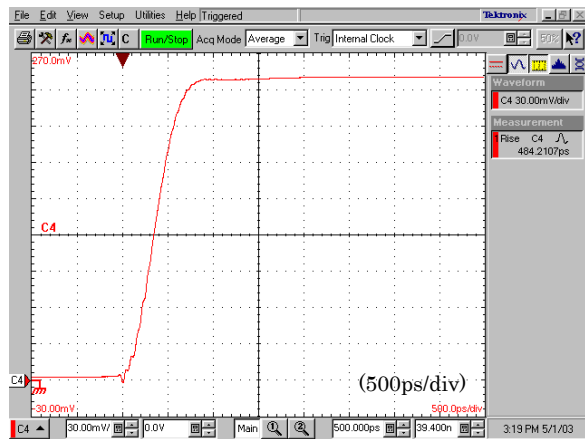
015-0710-00 (150ps)



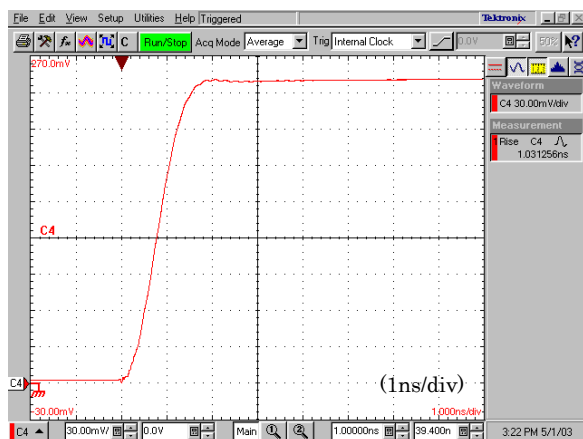
015-0711-00 (250ps)



015-0712-00 (500ps)



015-0713-00 (1000ps)



015-0714-00 (2000ps)

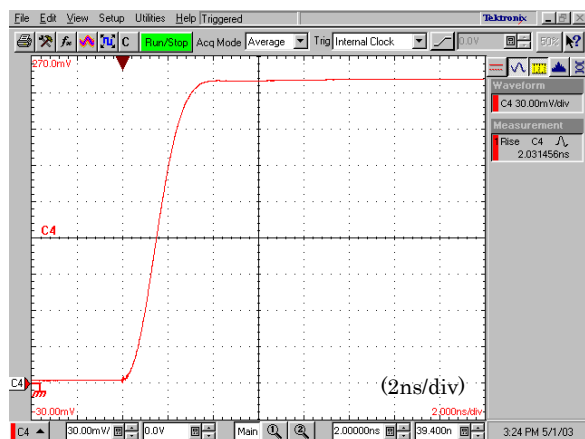
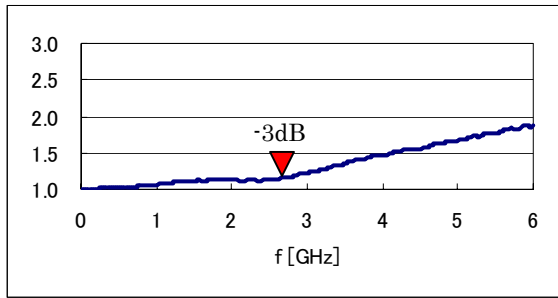
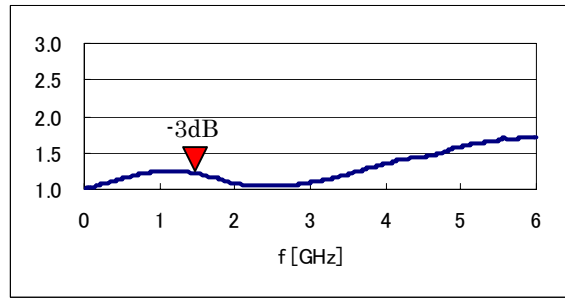


Figure 2. Rising Edge Waveforms
(Using Tektronix CSA8000 Oscilloscope with 80E04 TDR Sampling Module)

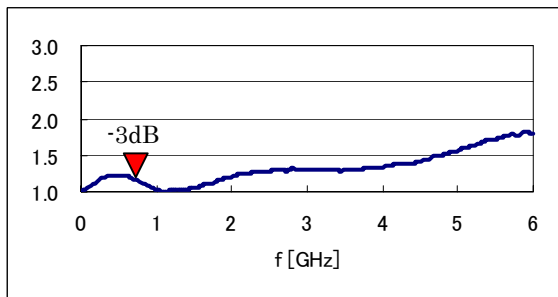
015-0710-00 (150ps)



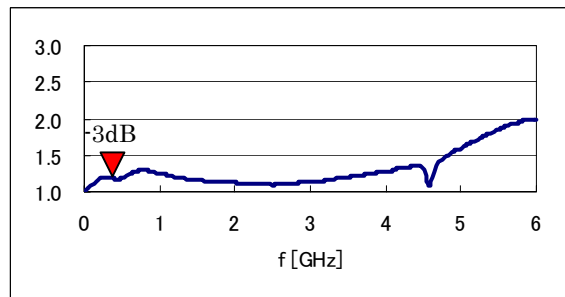
015-0711-00 (250ps)



015-0712-00 (500ps)



015-0713-00 (1000ps)



015-0714-00 (2000ps)

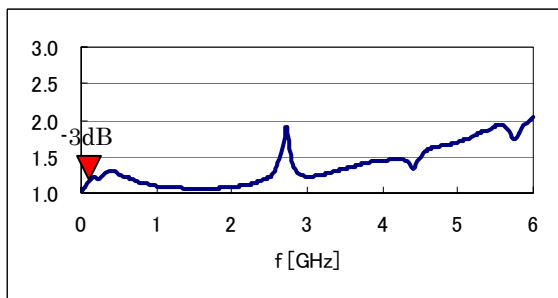


Figure 3. Voltage Standing Wave Ratio
(Using 30kHz - 6GHz Network Analyzer)