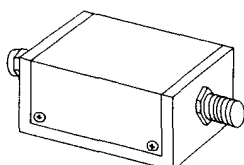


Transition-Time Converters

Models 15432B/15433B/15434B/15435A/15438A



About the Converters

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

These converters have been designed to convert the fixed transition-times of the following instruments to slower, fixed transition-times (150 ps, 250 ps, 500 ps, 1 ns, 2 ns) hence reducing the signal bandwidth.

- Agilent 8131A 500 MHz Pulse Generator (<200 ps transitions)
- Agilent 8133A 3 GHz Pulse Generator (< 100 ps transitions)
- Agilent 80000 1 GHz Data Generator Modules E2902A, E2903A (<250 ps transitions)

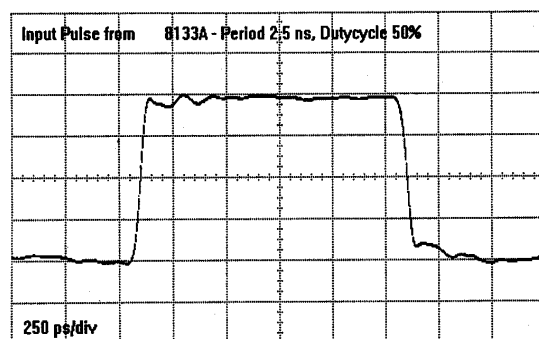
The new design of these converters ensures very low signal reflection far beyond the 3 dB point, unlike conventional converters (See "Reflection and Standing Wave Ratio Characteristics").

Reducing the signal transition-times also increases the overall pulse-performance for overshoot/reflection sensitive applications (Refer to the waveforms shown in "Typical Characteristics")

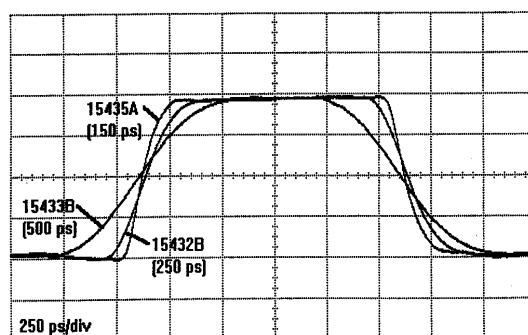
The converters are fitted with SMA connectors, one male, one female.

Typical Characteristics

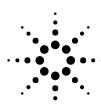
Converter:	15435A	15432B	15433B	15434B	15438A
Output Transition Time	150 ps	250 ps	500 ps	1000 ps	2000 ps
3 dB point	2.1 GHz	1.3 GHz	640 MHz	370 MHz	190 MHz
Input Voltage	< 10 V _{p-p}				
Insertion Loss	< 0.2 dB				
Overshoot and Ringing	< 3 %				

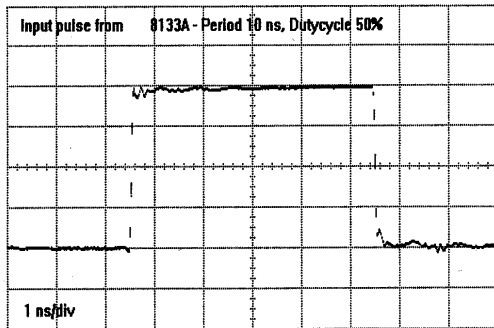


Typical Input Pulse - Width 1.25 ns

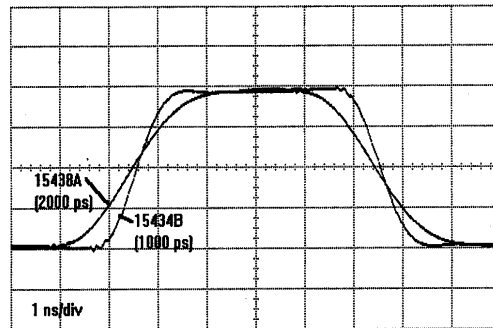


15435A, 15432B and 15433B Output Pulses

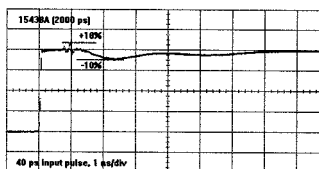
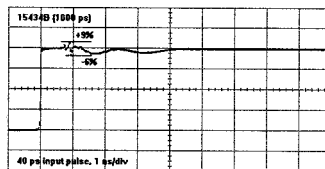
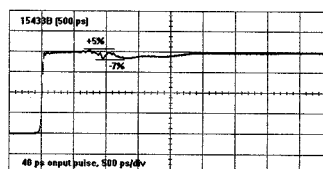
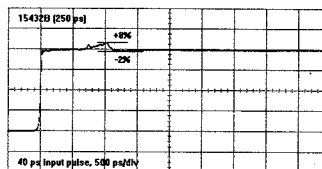
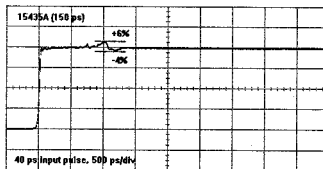




Typical Input Pulse - Width 5 ns



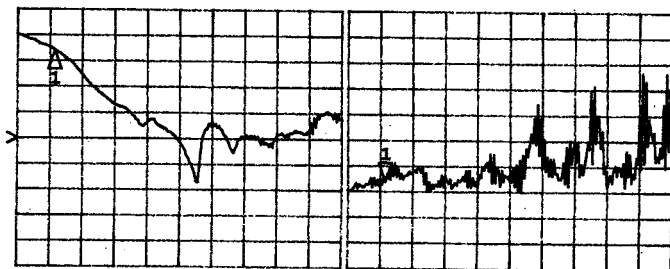
15434B and 15438A Output Pulses



(40 ps input step using 54121A oscilloscope TDR)

S12 REF -20.0 dB log MAG S11 REF 0.0 SWR
 Δ 5.0 dB/ 1 -2.8585 dB 1 500.0 m /
 hp 1.1924 = SWR_{-3dB}

MARKER 1
 $F_{-3dB} = 2.1585$ GHz



START 0.10000000 GHz
 STOP 18.00000000 GHz

15435A Frequency and SWR Response up to 18 GHz

