T3AWG3K-series
Fact Sheet

High Definition 2, 4 and 8 Channel Arbitrary Waveform Generator

TELEDYNE TEST TOOLS
Everywhere**you**look™

Accurate and Versatile Waveforms Generation

- **16 Bit Vertical Resolution**
  - ✅ Exceptional signal fidelity for developing quality products with a reduced design cycle.

- **up to 24 V_{pp} Output Voltage and ±12 V HW Baseline Offset for a total output voltage window ±24 V or 48 V (50 Ohm into High Impedance)**
  - ✅ Unmatched wide output voltage window enables generating challenging in amplitude large-signal waveforms.

- **Waveform memory up to 1 Gpoint @Ch**
  - ✅ Unmatched deep memory depth allows to store and reproduce complex pseudo-random waveforms for long play time testing.

- **Mixed Signal Generation**
  - ✅ Combining the 2, 4 or 8 analog channels with 8, 16 or 32 synchronized Digital Channels for debugging and validating digital design.

- **Multifunctional solution instrument (AFG/AWG/DPG)**
  - ✅ Arbitrary Function Generator, Arbitrary Waveform Generation and Digital Pattern Generation functionalities combined into one instrument.

Standard warranty is one year (3 year optional)

For more information, please contact:

AUTHORIZED DISTRIBUTOR
TELEDYNE LECROY
Everywhereyoulook

Key Specifications

Model	T3AWG3252	T3AWG3352	T3AWG3254	T3AWG3258	T3AWG3354	T3AWG3358
# Analog Channels	2		4		8	
# Digital Pattern Channels	0−8		0−16		0−16−32	
Frequency Range (Sinewave, AFG mode)	1 µH to 250 MHz	1 µH to 350 MHz	1 µH to 250 MHz	1 µH to 350 MHz	1 µH to 250 MHz	1 µH to 350 MHz
Sample Rate (AWG mode, not interpolated)	1.0 GS/s	1.2 GS/s	1.0 GS/s	1.2 GS/s	1.0 GS/s	1.2 GS/s
Vertical Resolution	16 Bits					
Memory	Up to 1 Gpoint/Ch					
Output Voltage V_{pp} (peak to peak)	12 V_{pp} (50 Ohm into 50 Ohm), 24 V_{pp} (50 Ohm into High-Impedance)					

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High Definition 2, 4 and 8 Channel Arbitrary Waveform Generator
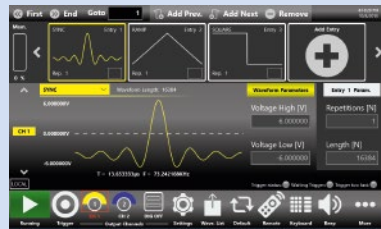
AFG Operational Mode
- Improved Direct Digital Synthesis (DDS) based technology
- Fixed sampling clock

Arbitrary Function Generation (AFG functionality)

AWG Operational Mode
- Variable Clock True-Arbitrary Technology
- Variable Sampling Clock
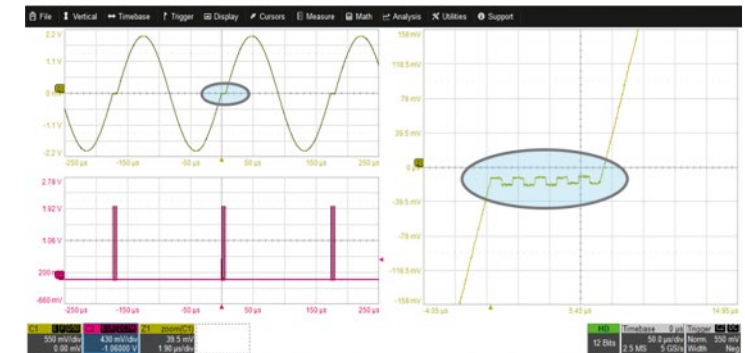- Mixed Signal Generation: 2 Analog Channels and 8 Digital Channels

Arbitrary Waveform Generation (AWG functionality)

Digital Pattern Generation (DPG functionality)

A multifunctional generator with an innovative architecture

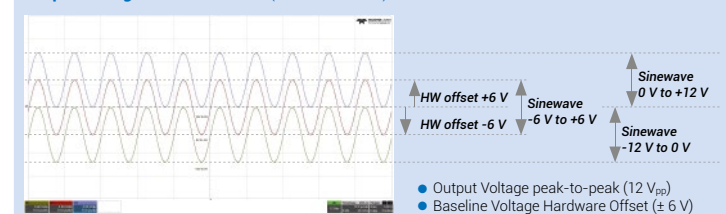### Exceptional Signal Fidelity with 16-bit Vertical Resolution

4V$_{pp}$ Sine Wave and 5 x 10 mV$_{pp}$ Square Wave Sequencing

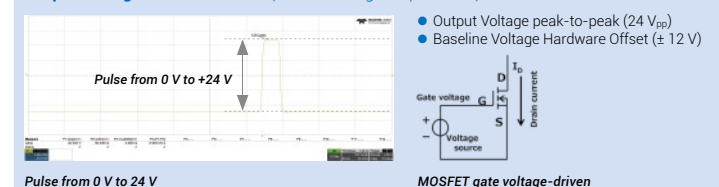## Ordering information (complete info available on T3AWG datasheet)

T3AWG3252 and T3AWG3352 Product Description (2 Channels)	Product Code
Arbitrary Waveform Generator, 2 Ch, 250 MHz, 16 bit, 128 Mpts/Ch, 6 V$_{pp}$, AFG/AWG	T3AWG3252
Arbitrary Waveform Generator, 2 Ch, 350 MHz, 16 bit, 128 Mpts/Ch, 6 V$_{pp}$, AFG/AWG	T3AWG3352
256 Mpts/Ch Memory option for 2 Ch mainframe	T3AWG3-M
512 Mpts/Ch Memory option for 2 Ch mainframe	T3AWG3-X
1024 Mpts/Ch Memory option for 2 Ch mainframe	T3AWG3-XL
High Voltage (12 V$_{pp}$ on 50 Ohm) for 2 Ch mainframe	T3AWG3-HV
Digital 8 Ch. Output (require 1 x Mini-SAS cable)	T3AWG-8 DIG
T3AWG3254 and T3AWG3354 Product Description (4 Channels)	**Product Code**
Arbitrary Waveform Generator, 4 Ch, 250 MHz, 16 bit, 128 Mpts/Ch, 6 V$_{pp}$, AFG/AWG	T3AWG3254
Arbitrary Waveform Generator, 4 Ch, 350 MHz, 16 bit, 128 Mpts/Ch, 6 V$_{pp}$, AFG/AWG	T3AWG3354
1024 Mpts/Ch Memory Option for 4 Ch mainframe	T3AWG3-XL-4CH
High Voltage (12 V$_{pp}$ on 50 Ohm) for 4 Ch mainframe	T3AWG3-HV-4CH
Digital 16 Ch. Output (require 2 x Mini-SAS cables)	T3AWG3-16DIG-4CH
T3AWG3258 and T3AWG3358 Product Description (8 Channels)	**Product Code**
Arbitrary Waveform Generator, 8 Ch, 250 MHz, 16 bit, 128 Mpts/Ch, 6 V$_{pp}$, AFG/AWG	T3AWG3258
Arbitrary Waveform Generator, 8 Ch, 350 MHz, 16 bit, 128 Mpts/Ch, 6 V$_{pp}$, AFG/AWG	T3AWG3358
1024 Mpts/Ch Memory Option for 8 Ch mainframe	T3AWG3-XL-8CH
High Voltage (12 V$_{pp}$ on 50 Ohm) for 8 Ch mainframe	T3AWG3-HV-8CH
Digital 16 Ch. Output (require 2 x Mini-SAS cables)	T3AWG3-16DIG-8CH
Digital 32 Ch. Output (require 4 x Mini-SAS cables)	T3AWG3-32DIG-8CH
Accessories	**Product Code**
Cable Mini SAS HD 1m for 8 DIG (require T3AWG3-8DIG)	T3AWG3-8DIG-MSCAB
LVDS to LVTTL adapter (require T3AWG3-8DIG and T3AWG3-8DIG-MSCAB)	T3AWG3-8DIG-TTL
Mini-SAS HD to x16 SMA cable (require T3AWG3-8DIG)	T3AWG3-8DIG-SMA

Output Voltage Window: ± 12 V (50 Ω into 50 Ω)

12 V$_{pp}$ waveform can be shifed of ±6 V from -12 V to 0 V to 0 V to +12 V

- HW offset +6 V
- HW offset -6 V
- Sinewave -6 V to +6 V
- Sinewave 0 V to +12 V
- Sinewave -12 V to 0 V

- Output Voltage peak-to-peak (12 V$_{pp}$)
- Baseline Voltage Hardware Offset (± 6 V)

Output Voltage Window: ± 24 V (50 Ω into High Impedance)

Pulse from 0 V to 24 V

Pulse from 0 V to +24 V

- Output Voltage peak-to-peak (24 V$_{pp}$)
- Baseline Voltage Hardware Offset (± 12 V)

MOSFET gate voltage-driven