

ASNT9001-JI

Advanced Jitter Generation & Insertion Module with USB Control

- Operates up to 29GHz clock input/output bandwidth
- Selectable jitter generation/insertion mode
- Built-in two types of controlled jitter sources:
 - Gaussian Noise
 - Flicker Noise
- Accepts external (user defined) jitter source
- Differential CML input and output data/clock buffers
- Precision delay adjustment capability for each pair of data/clock outputs
- USB port for connection to an external PC
- Full functional control with GUI software
- Single +12V power supply from an external AC-DC converter (provided)
- Available as a board-level and stand-alone bench-top instrument
- Power consumption: 16W

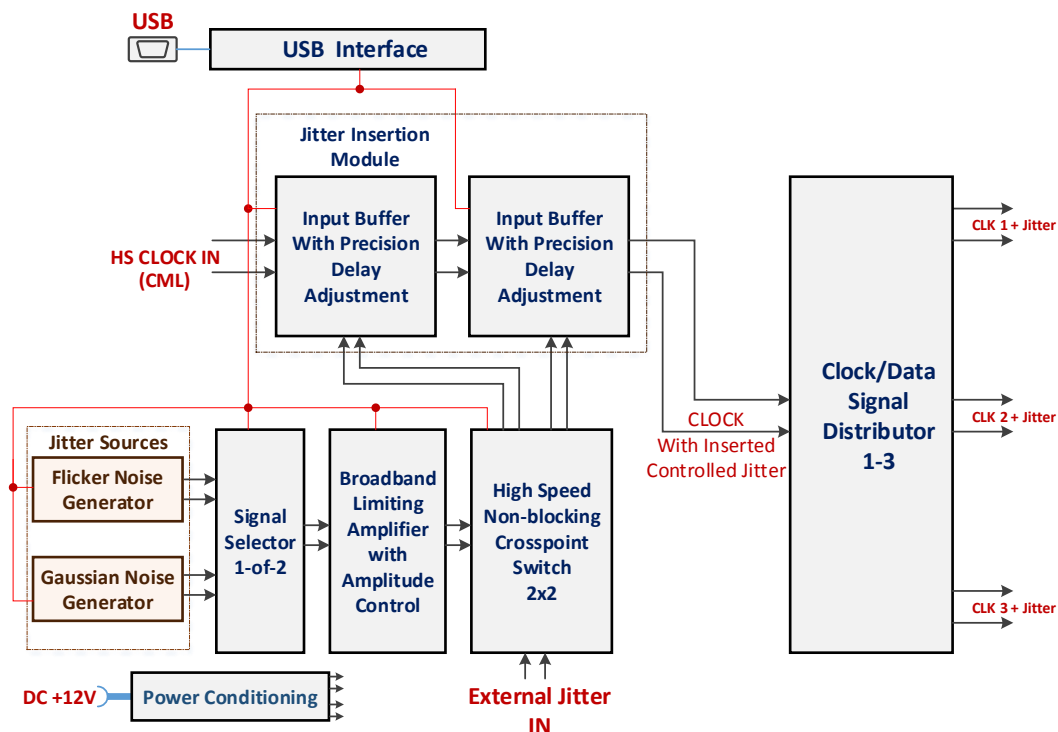


Fig. 1. Block diagram of the ASNT9001-JI Advanced Jitter Generation & Insertion Module with USB Control

DESCRIPTION

The ASNT9001_JI advanced jitter generation and insertion module can be used for test applications, design verification and R&D environments. It supports controlled jitter insertion into test clock signal up to 29GHz (*Fig.2*). The unit consists of two independently selectable jitter sources (*Fig. 3 and 4*) and allow for an external jitter source (*Fig.5*) interconnect. The module is available as a stand-alone bench type instrument and a board-level product suitable for installation into customer's test equipment. The module requires single +12VDC power supply source and fully controlled via USB interface by advanced GUI provided with the module.

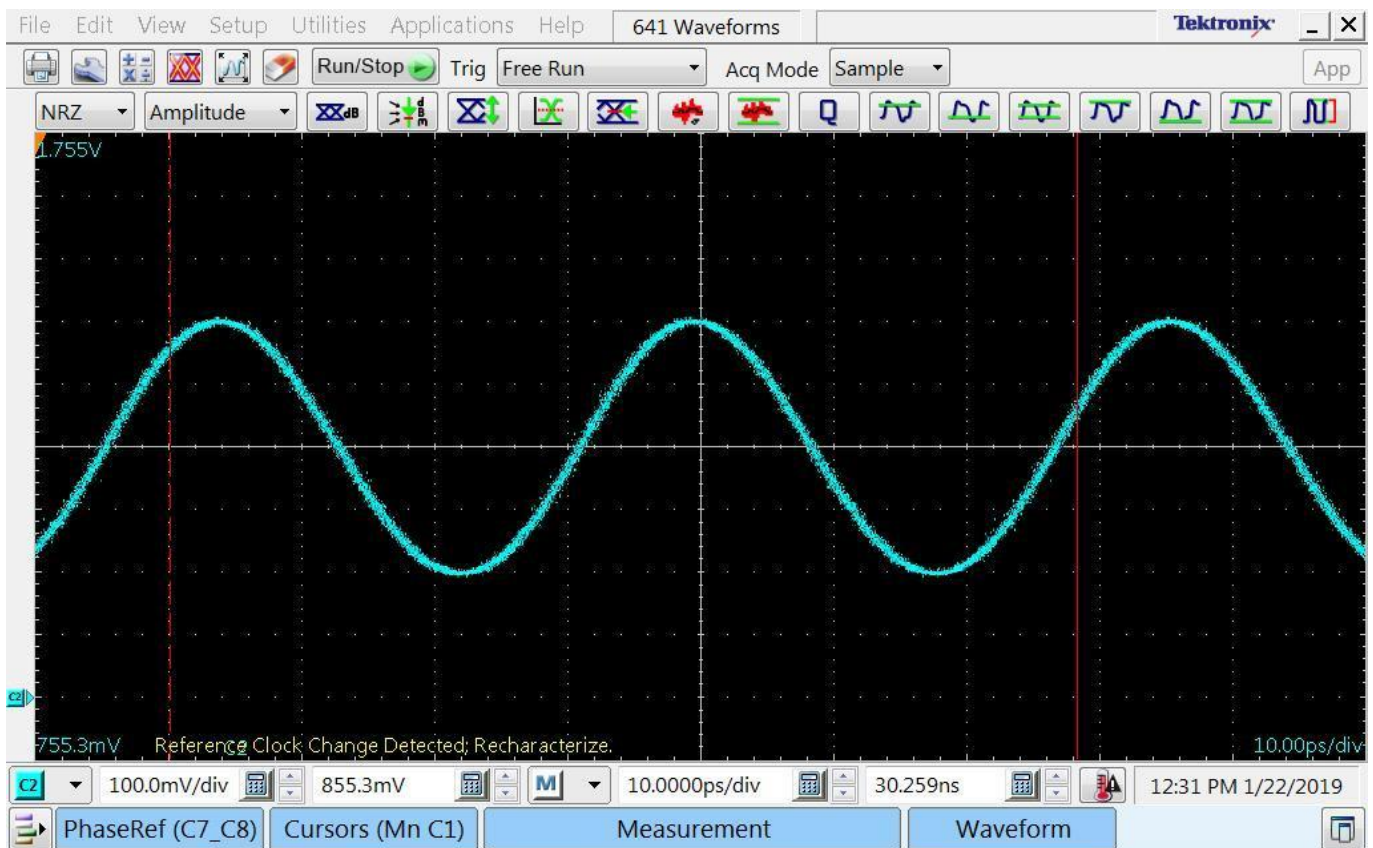


Fig.2 28GHz Clock Output of the ASNT9001-JI

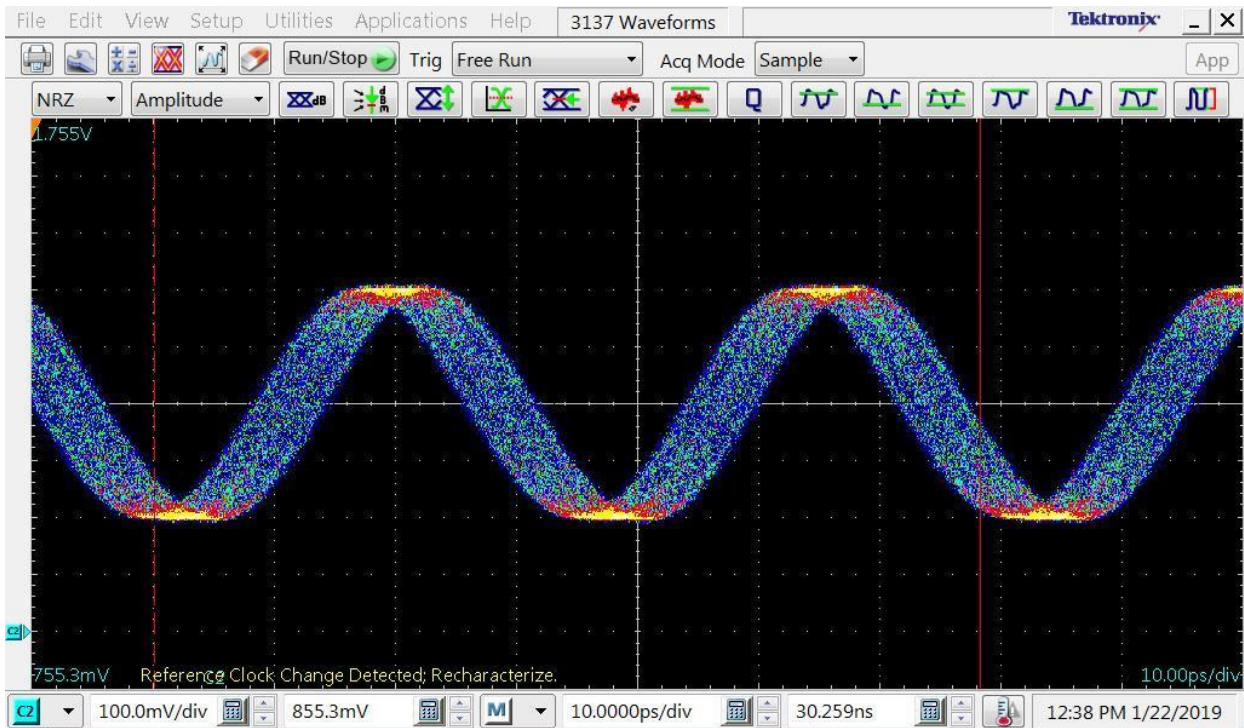


Fig. 3. 28GHz Clock Output of the ASNT9001-JI with inserted internally generated Gaussian Noise



Fig. 4. 28GHz Clock Output of the ASNT9001-JI with inserted internally generated Flicker Noise

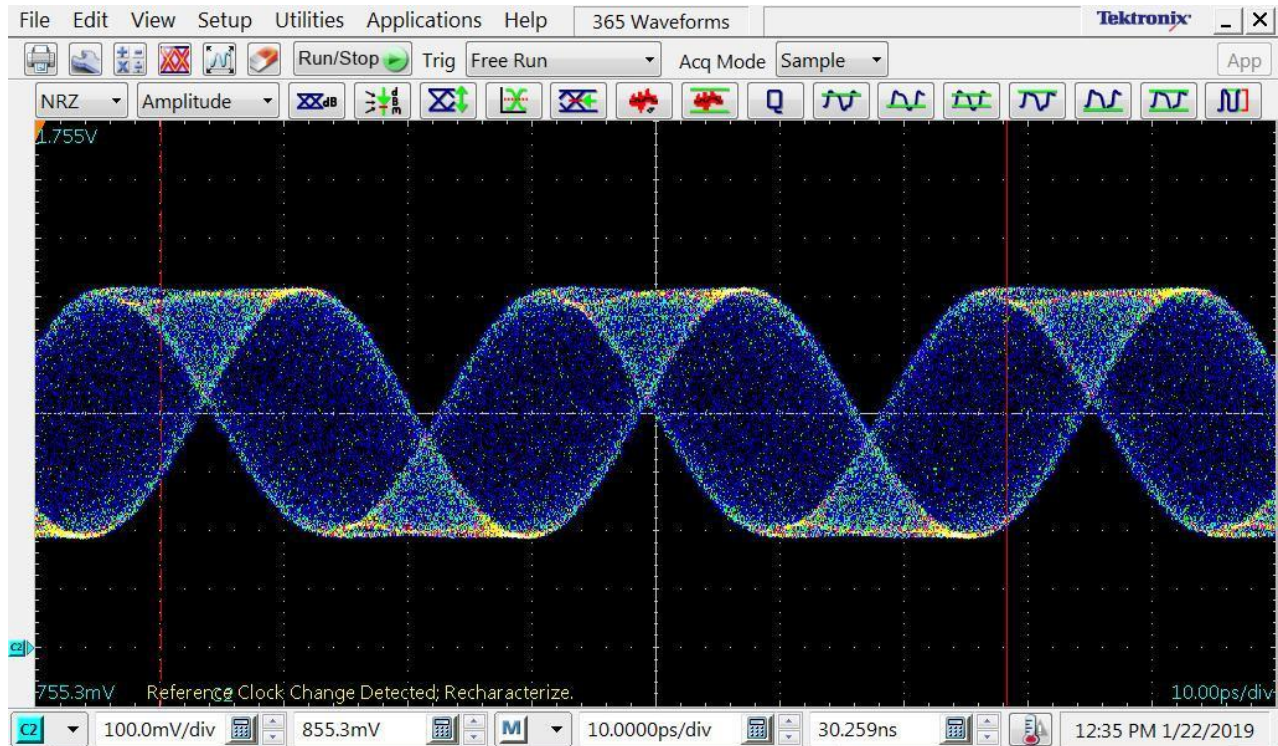


Fig. 5. 28GHz Clock Output of the ASNT9001-JI with inserted externally generated Sinusoidal Noise

ELECTRICAL CHARACTERISTICS

PARAMETER	MIN	TYP	MAX	UNIT	COMMENTS
HS Input Clock					
Frequency	DC		29	GHz	
Swing	100		800	mV	Differential or SE, p-p
CM Voltage Level	vcc-0.8		vcc	V	Must match for both inputs
Duty Cycle	40	50	60	%	
HS Output Clock (with inserted Jitter)					
Frequency	DC		29	GHz	For clock signals
Rise/Fall Times	9		11	ps	20%-80%
External Noise Source Input					
Frequency	DC		16	GHz	
Swing	100		800	mV	Differential or SE, p-p



BOARD DIMENSIONS

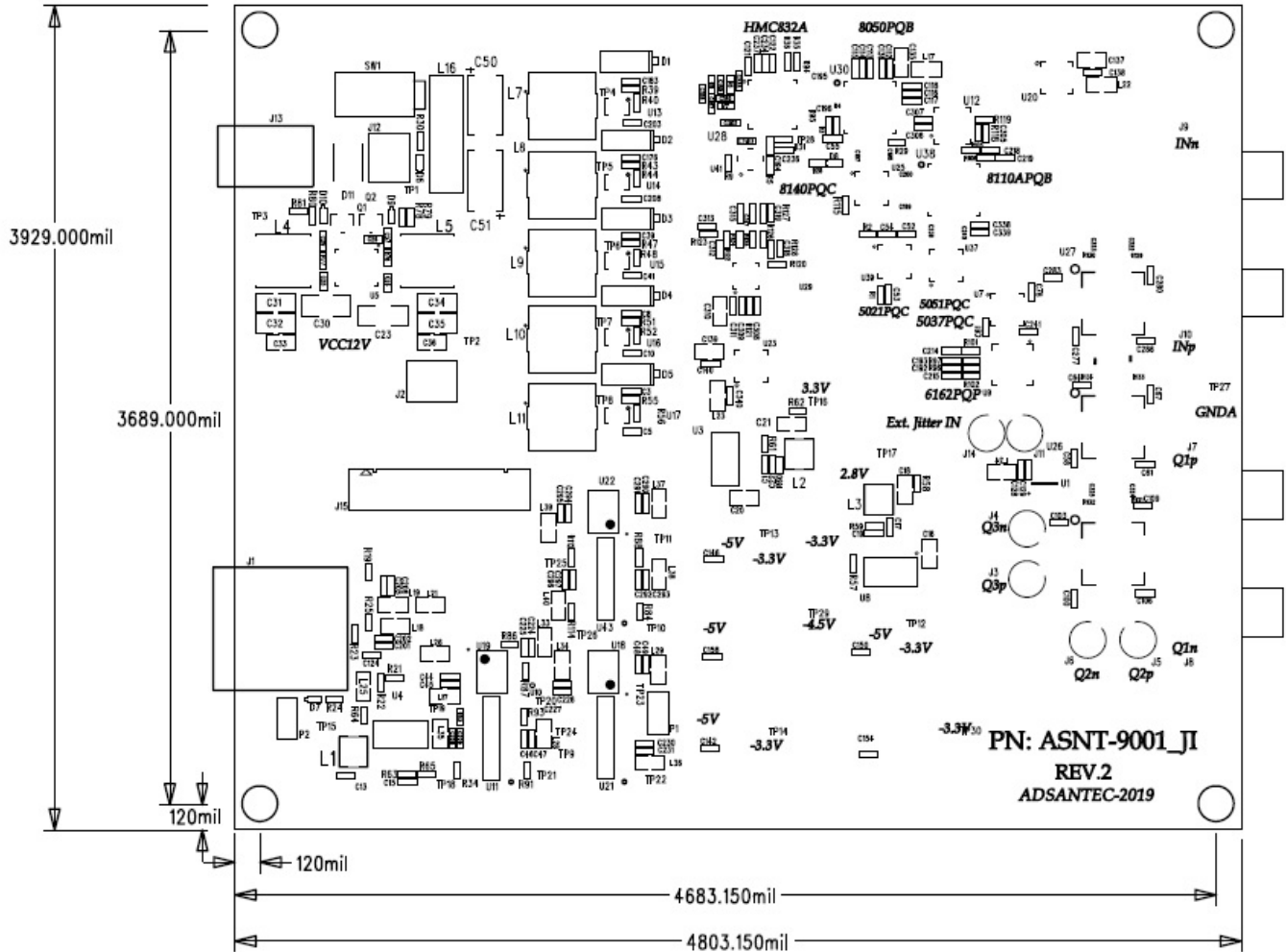


Fig. 6. Board Dimensions Diagram

REVISION HISTORY

Revision	Date	Changes
1.0.0.4	05-2023	Added Board Dimensions Section Added Board Dimensions Diagram
1.0.0.3	07-2019	Updated Letterhead
1.0.0.2	01-2019	Screenshots of the 28GHz output clock measurements added
1.0.0.1	08-2018	Initial Release