

- Compact design
- Ultra Broadband
- High isolation
- High Pulse-Repetition Frequency

Brochure and preliminary specifications

SW2601A RF Modulator – DC-30GHz



AMCAD RF Modulator – SW2601A DC – 30GHz

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RF Modulator main features

- Ultra Broadband frequency: DC-30 GHz
- High isolation
- High Pulse-Repetition Frequency
- Compact design
- 2.92mm connectors
- USB Powered (USB to Micro-USB cable included)

Main purpose



The pulse modulation signal is a TTL signal that creates an envelop modulation of the CW RF signal





Application example

Power Amplifier Characterization

AMCAD SW2601A RF Modulator has been developed to provide pulse generation to systems lacking this capability. It allows power amplifier characterization while mitigating the heating effects.

This RF Modulator works on an ultrawideband DC-30GHz range and with a high pulse repetition frequency.

IQSTAR[™] module IQS100B-10</sup> allows the characterization of Power amplifiers using a scalar setup comprising an analog RF source, power meters and power supplies.

With the Arbitrary Waveform/Function Generator's help, the SW2601A RF Modulator converts a CW RF signal into a Pulsed RF signal with the desired timings.





Scalar setup with SW2601A



Typical Performances (preliminary measurements)

Insertion Loss vs. Frequency



Input Return Loss



Isolation vs. Frequency



Output Return Loss





Preliminary Specifications

	Symbol	Min	Typical	Max	Unit
USB Power Supply					
Voltage	V _{cc}	3.0	5	5.4	V
Current	I _{CC}			1	mA
Power					
Input power	P _{IN}			18	dBm
Input power for f<100MHz	P _{IN_Low_freq}			12	dBm
Insertion loss					
10MHz	IL		0.8		dB
6GHz			2.4		dB
10GHz			3.2		dB
26GHz			6.1		dB
Input Return loss					
10MHz to 6GHz	RL _{IN}			-15	dB
6GHz to 30GHz				-8	dB
Isolation ON/OFF					
DC to 12GHz		56			dB
12GHz to 30GHz		50			dB
Timings					
Pulse Repetition Frequency	PRF	DC		80	MHz
Rise time (10% to 90% RF LinMag)	t _{RISE}	2			ns
Fall time (90% to 10% RF LinMag)	t _{FALL}	5			ns
Delay (50% V _{IN} to 10/90% RF LinMag)	t _{on}		25		ns
	t _{OFF}		15		ns
Control					
Voltage OFF	V _{INL}	1.8		V _{cc} + 0.3V	V
Voltage ON	V _{INH}	0		0.8	V
Temperature					
Operating T°	Т _{ор}	-40		65	°C
w/o case		-40	1	85	°C
Mechanics					
Height	h		18.8		mm
Length	L		74		mm
Width	w		67		mm
Weight	w		100		g

¹ 'Input power' is the power range for normal use in linear zone while 'Absolute Input power' is the power range without damaging the RF Modulator but without warranty of linearity.



Mechanical Dimensions

- Weight : 100 g
- Dimension : mm







Note : Typical and nominal characteristics are included for information only and they are not specifications.



Warranty

Any AMCAD product comes with a two-year parts and labor warranty, when returned to our workshops. A phone support service is also available for the same period.

At the end of the initial two-year period, a further contract can be subscribed, including:

- a preventive functional check and calibration of the modules (on site or in our workshop)
- a further two-year warranty period

Quality Regulations & Environment

AMCAD Systems and all modules are compliant to the applicable European directive and hold the CE mark.

- Products are designed and manufactured in France.
- · Serial number-based life cycle management
- All products are 100% tested (test reports on demand)
- AMCAD only uses RoHS compliant components and does not use substances banned by the COSHH regulation.
- AMCAD complies with the relevant national regulations related to the safety and health of its employees against hazardous substances.
- As we are always seeking to improve our products, the information in this document gives only a general indication of the product capacity, performance and suitability, none of which shall form part of any contract. We reserve the right to make design changes without notice.

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