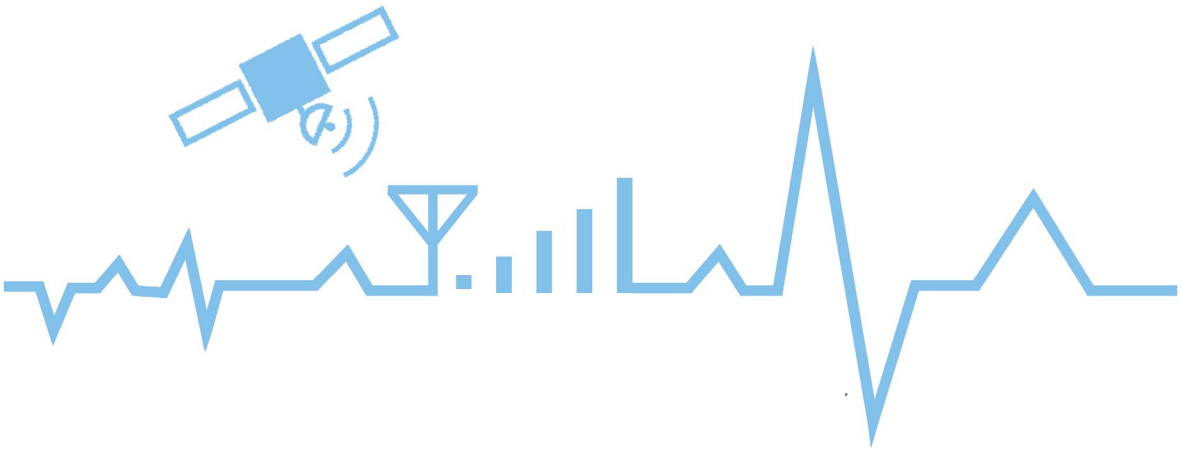
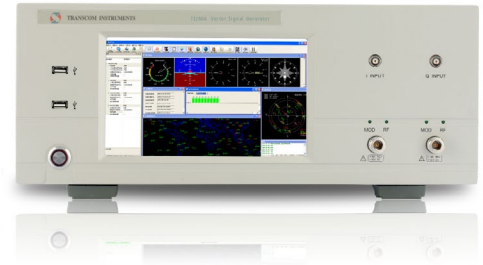
TRANSCOM INSTRUMENTS
Product Brochure



TRANSCOM
INSTRUMENTS

Vector Signal Generator T3260A



Overview

Transcom Vector Signal Generator T3260A is a high performance signal generator with frequency range 250KHz to 6GHz and 160MHz wide RF modulation baseband. It generate various radio system signal format for testing both analog and digital communications systems. The flexibility allow customer to customize its own special standard according. With the Satellite Signal option, the T3260A transform to a Satellite vector signal generator. For its dual independent signal generator output, it can simulate world command satellite signal such as BeiDou/ GPS/GLONASS/GALILEO and interference signal.

Features

- High performance CW outputs(250kHz to 6GHz/0.01Hz resolution)
- High accuracy amplitude output(-120dBm to +20dBm/0.01dB resolution)
- Wide modulation bandwidth(supporting LTE-A 100MHz and 802.11ac 160MHz bandwidth)
- QPSK digital modulation
- 3GPP TD-LTE signal output
- Analog I/Q inputs
- Support BeiDou/GPS/GLONASS/GALILEO

Frequency Specifications			
Frequency Range	Frequency Range	250kHz～6GHz	
	Min Frequency	250kHz	
	Frequency resolution	0.01Hz	
Frequency switching Time	CW mode	ALC on	≤ 8ms
		ALC off	≤ 100μs
	Sweep Mode	≤8ms	
	Digital Mode	≤8ms	
	SCPI Mode	≤ 8ms	
Clock Accuracy	Internal Clock Accuracy	Aging Rate	$<\pm 2\times10^{-8}$/yr
		Resolution	$<5\times10^{-8}$
		Temperature Stability	$<\pm 3\times10^{-9}$/yr（-40°～+80°）
		Line Voltage Effects	$<\pm 0.3\times10^{-9}$/yr（±5%）
	Internal Reference Output	Frequency	10MHz
		Amplitude	+2dBm～+6dBm
		Impedence	50Ω
		Waveform	Sine
	External Reference Input	Frequency	10MHz
		Amplitude	-15dBm～+5dBm
		Impedence	50Ω
		Waveform	Sine/Square
Sweep Mode	Working Mode	Single Sweep	
		Cycle Sweep	
	Step Range	±（0.01Hz～3GHz）	
	Sweep Range	same frequency range as the instrument	
	Dwell Time	100μs～100s	

Spectral Purity Specifications

Absolute SSB Phase Noise （dBc/Hz ）（@20kHz） （10dBm）	≤250MHz	-124
	250.1MHz	-136
	500MHz	-130
	1GHz	-124
	2GHz	-118
	3GHz	-115
	4GHz	-112
	6GHz	-109
Harmonics (CW, <+4dBm)	250kHz~1MHz	< -30dBc
	1MHz ~10MHz	< -30dBc
	10MHz~250MHz	< -40dBc
	250 MHz ~500MHz	< -30dBc
	500 MHz ~3GHz	< -35dBc
	3GHz~6GHz	< -30dBc
Non-Harmonics Spurious (CW, >10kHz)	250kHz～<10MHz	< -40dBc
	10～<250MHz	< -45dBc
	250～<750MHz	< -65dBc
	750MHz～<1.5GHz	< -65dBc
	1.5～<3GHz	< -70dBc
	3～<6GHz	< -70dBc
Sub-Harmonics (CW, >10kHz)	250kHz～<10MHz	< -50dBc
	10MHz～1.5GHz	< -65dBc
	>1.5～<3GHz	< -60dBc
	>3～6GHz	<-40dBc

Amplitude Specifications

Output Parameters	Output power setting range	-120～+15dBm		
	Level Resolution	0.01dB		
	Attenuator	0～100dB，10dB step		
	Connector	N type，50Ω		
Maximum Output Power	250kHz～1MHz	0dBm		
	>1MHz～10MHz	+8dBm		
	>10MHz～250MHz	+10dBm		
	>250MHz～1GHz	+15dBm		
	>1GHz～4GHz	+15dBm		
	>4GHz～6GHz	+13dBm		
Absolute amplitude level accuracy in CW mode (ALC ON)	Amplitude	+15～-60dBm	<-60～-100dBm	<-100～-120dBm
	10MHz～250MHz	±0.8dB	±1.0dB	±1.3dB
	>250MHz～4GHz	±0.6dB	±0.9dB	±1.5dB
	>4GHz～6GHz	±0.8dB	±1.1dB	±2.0dB
SWR (@ CW mode)	Amplitude	+15～-20dBm	< -20dBm	
	≤1GHz	<1.3	<1.3	
	>1～2GHz	<1.44	<1.44	
	>2～3GHz	<2.0	<1.3	
	>3～4GHz	<2.0	<2.0	
	>4～6GHz	<2.0	<2.0	
Maximum reflected Power	100k～6GHz	1W		
	Max DC Voltage	50VDC		

Amplitude Switching Time	CW Mode	ALC on	≤8ms
		ALC off	≤10μs
		SCPI Mode	≤8ms
	Digital Mode ON*	ALC on	≤8ms
Analog Modulation Specifications			
Frequency Modulation	Frequency Swing		20MHz
	Resolution		0.1Hz
	Carrier Frequency Accuracy		same accuracy as the RF source
Amplitude Modulation	Max Modulation Depth		80%
	Modulation Depth Resolution		0.1%
Internal Standard Simulator	Waveform		Sine（AM、FM） triangle/square/sawtooth（FM）
	Frequency Range		1Hz～10kHz
	Resolution		0.1Hz
	Frequency Accuracy		same accuracy as the RF source
Phase Modulation	On/Off Ratio		<4GHz >70dB >4GHz >60dB
	Raise/Fall		<200ns
	Min Phase Bandwidth (ALC off)		>2μs
	Repeat Frequency Rate (ALC off)		DC～250kHz
Internal Phase Generator	Mode		squere
	Square Rate		1Hz～250kHz，Resolution:1Hz
	Period		4μs～1s
	Phase Bandwidth		2μs～1s
	Resolution		2μs
Vector Modulation Specification			
External IQ Input	Max Bandwidth		0.1～160MHz
	Full Scale Input drive		0.5V，50Ω
I/Q Baseband output	Impedance		50Ω
	Type		Single end or Differential
	Maximum Voltage per Output		±0.5V_{p-p}
	Bandwidth		0.1～160MHz
	Common mode I/Q offset		0V
Baseband generator	Channels		4[I+/I- and Q+/Q-]
	Resolution		16 bit
	Sample rate		400MSa/s
	Max RF bandwidth		0.1～160MHz
Arbitrary Modulation mode (ARB)	Modulation		BPSK、QPSK、16QAM、64QAM
	Symbol Rate		0.1～160Msps
	Filter		RRC、RC
	Data Types		Pseudo-random patterns
EVM Specification (Channel corrections off)	Standard		LTE-TDD
	Modulation		QPSK
	Modulation rate	15Mhz	20Mhz
	Frequency range	1.8～2.2GHz	1.8～2.2GHz
	EVM Power level	≤7dBm	≤7dBm
	EVM	≤1.2%	≤1.5%
	EVM		QPSK
	Modulation rate(RRC, α=0.25)	4Msps	10Msps
	Frequency	≤4GHz	≤4GHz
	EVM Power level	≤4dBm	≤4dBm
	EVM	1.2%	1.2%

General Characteristics		
Front Panel Ports	RF Output	N-female, 50Ω
	I/Q Ubput	BNC, 50Ω, Max. 1Vp-p
	USB	3 x USB 2.0 Type A
Rear Panel Ports	I/Q Output	BNC, Analog baseband I /Q data out-put, Impedance 50Ω
	AM	Ext. AM Input, BNC/50Ω
	FM	Ext FM Input, BNC/50Ω
	Pulse	External pulse modulation input; this input is TTL and CMOS compatible; BNC/50Ω, nominal low level is 0V, and high level is +1V Low Level 0V, High level +1V
	REF IN	Accepts a 10MHz reference signal used to frequency lock the internal time base; nominal input level 0 to 20dBm, 50Ω, sine or square waveform wave
	REF OUT	Outputs the 10MHz reference signal used by internal time base; level 5dBm, 50Ω
	VGA	Ext Monitor
	USB(A)	Connect to external peripherals
	USB(B)	
	LAN	Remote control connection
Interfaces	Interfaces	LAN
	Control language	SCPI 1997.0
Power requirements	220～240VAC, 50/60Hz, 300W	
Operating Temperature range	0～40℃	
Storage Temperate range	-10～55℃	
Weight	≤18.5kg	
Dimensions	176mm H ×420mm W ×520mm L	

Keep innovating for excellence!

About Transcom

Shanghai Transcom Instrument Co., Ltd. (NEEQ: 831961), established in 2005, independently research and develop high-end radio frequency communication testing instruments and is a professional provider of overall testing solutions. Starting from 2009, Transcom, titled as National High-Tech Enterprise and the fostered enterprise by Shanghai Little Giant Project, has undertaken the tasks of development for National "New-Generation Broadband Wireless Mobile Communication Network" and the construction of Shanghai Engineering Research Center for Wireless Communication Testing Instruments.

In 2015, Transcom officially announced its new five-year development strategy "1+3" . In detail, Transcom will continue to enhance its potential to be the national team for domestic wireless communication instruments, and develop security software for mobile communication network (network communication/data mining), wireless signal (spectrum monitoring/situation analysis) and Beidou navigation (signal monitoring for satellite navigation/mobile anti-jam verification platform). The strategy has now been implemented systematically with progressive achievements in Shanghai, Guangdong and other cities.

Keep innovating for excellence!

ISO9001 ISO14001

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