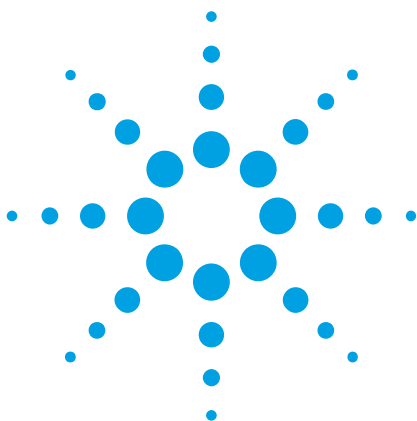


Agilent JS-1000 Performance Jitter Solution

JS-1000 E5510B



Compliance to SONET/SDH standards for clock jitter generation, tolerance, and transfer

A fully integrated solution

The Agilent JS-1000 is a high-performance, characterization and verification solution for testing electrical components or modules in optical transport communication systems with the utmost accuracy and repeatability.

The JS-1000 solution is a tailored Phase Noise System that measures clock jitter characteristics in the 2.5G and 10G frequency ranges.

JS-1000 was created for designers who want to differentiate their products on performance, time to market, or price as the JS-1000 impacts. It allows for the characterization of products to SONET/SDH standards for clock jitter generation, tolerance, and transfer.

Go beyond compliance testing

The JS-1000 goes beyond compliance testing to ITU-T 0.172 to offer ongoing competitive advantage in two areas:

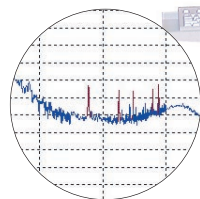
- Maximum design insight through very low intrinsic jitter; repeatable jitter generation measurements; "Deterministic" jitter output for advanced diagnosis; international jitter modulation capability.

- Maximum ROA through flexibility to test more than SONET/SDH frequencies: 2.4-3.125 Gb and 9-13 Gb; flexibility in products tested; re-use of hardware.

Test system features & benefits

Agilent's JS-1000 is a flexible platform designed to help you quickly respond to ever-changing manufacturing needs, such as the need to test diverse jitter frequencies.

Agilent's test system derives much of its accuracy and advanced diagnostic capability from using the E5500 series Phase Noise Solution, which allows you to examine clock jitter in the frequency



domain as well as the time domain. Measuring jitter in the frequency domain offers many advantages including:

Frequency domain rms noise measurements have very low intrinsic jitter; flexibility in the frequencies you measure beyond SONET/SDH data rates; diagnostic insight by viewing random and non-random components; and the capability to measure every zero-crossing on the incoming signal within 100 MHz of bandwidth.

Tailored to your specific needs

Applications vary, so the Agilent JS-1000 was designed to meet specific testing needs by offering flexible, tailored solutions for software, data acquisition, external switching, DUT power, coms, facility interface, and power supplies. All JS-1000 platform and tailored solutions offer consulting and uptime support as well.



Typical Characteristics

JS-1000 Jitter Generation Measurement Specifications

	Min	Value	Max	Units	Notes
Output Clock Rate	2.4		3	GHz	OC-48 range
	9.5		12.5	GHz	OC-192 range
Measurement Modes	Full rate				OC-48 range
	Full, half, and quarter rates				OC-192 range
Clock Input Level	0.20		1.0	Vpp	Into 50 ohm termination
Clock Output Level	.56		1	Vpp	Generation Clk In port
Jitter Measurement Ranges	0.25			UI pk-pk	For full rate clocks only
	0.5			UI pk-pk	For half rate clocks only
	1			UI pk-pk	
	2			UI pk-pk	
	4			UI pk-pk	
Jitter Accuracy	+/-R% + W				0.25 range, >30 mUIpp
Pk - Pk (R)	-15%		15%		
Pk - Pk (W)	-7 mUI		.7 mUI		OC-48 range
	-1 mUI		1 mUI		OC-192 range
RMS (R)	-15%		15%		
RMS (W)	-.07 mUI		.07 mUI		OC-48 range
	-.10 mUI		.10 mUI		OC-192 range

JS-1000 Jitter Tolerance Measurement Specifications

	Min	Max	Units	Notes
Clock Output Level	0.56	1.0	Vpp	Into 50 ohm termination
Clock Rates	2.4	3	GHz	OC-48 range
	9.5	12.5	GHz	OC-192 range
Induced Jitter Bandwidth				
OC-48 Range	10Hz		20MHz	
OC-192 Range	10Hz		80MHz	
Maximum Induced Jitter Clock Rate				
OC-48 Range and OC-192 Range is 0.172 seconds 8.5				

JS-1000 Jitter Transfer Measurement Specifications

	Min	Max	Units	Notes
Output Clock Rate	2.4	3	GHz	OC-48 range
	9.5	12.5	GHz	OC-192 range
Measurement Modes	Full Rate			OC-48 range
	Full, half, and quarter rates			OC-192 range
Clock Input Level	0.2	2.0	Vpp	port
Clock Output Level	0.56	1.0	Vpp	Generator Clk In port
Jitter Transfer Flatness at +/-0.05 dB from 10Hz to 5MHz at ITU applied Jitter levels				

JS-1000 Jitter Operating Temperature Range

Temp Range	5 ^o	30 ^o C
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Printed in USA, July 28, 2003

5988-9875EN



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