SK9901

MEASALL® RF Multimeter

SK9901C/S/V/M/Q is a RF multi-meter based on the network analyzer architecture. Five models covering the frequency 9kHz to 20 GHz. The main feature of the SK9901x is a one and half port VNA , extend simple spectrum display, field strength meter, RF source, AF source, and time domain analysis based on the network analyzer architecture.

The SK9901Q is a special model in this series, which is capable of operating up to 20 GHz, bu t does not have a built-in directional coupler witch need to purchase externa.

The five models cover different frequency ranges.

	SK9901C	SK9901S	SK9901V	SK9901M	SK9901Q
Frequency range (standard)	9kHz~2GHz	9kHz~4GHz	5kHz~6.8GHz	9kHz~9.8GHz	9kHz~20GHz
Frequency range (allowed settings)	0kHz~2GHz	0kHz~4.1GHz	0kHz~7GHz	0kHz~10GHz	1kHz~29.9GHz
SPAN range	1kHz~2GHz	1kHz~4GHz	1kHz~7GHz	1kHz~10GHz	1kHz~29.9GHz

Aside from the differences mentioned above, all the released models of the SK9901x have the same basi c functionality.

Free *KCSDI* software makes it easy to expand the measurement capabilities in the lab and measure remotely via an Ethernet connection.

Ordering Information

Model	Frequency range	Part numbers	State
SK9901C	9kHz...2GHz	SK99510.19.2	mass production
SK9901S	9kHz...4GHz	SK99510.19.3	mass production
SK9901V	9kHz...6.8GHz	SK99511.20.5	mass production
SK9901M	9kHz...9.8GHz	SK99511.20.6	mass production
SK9901Q	9kHz...20GHz	SK99513.06.2	mass production

Technical Parameters

The technical specifications of SK9901x are basically the same, with slightly different output levels for differen t models. This table is for selection reference only, subject to the parameters contained in the datasheet.

Obj	Condition	Typical value					Note
		SK9901C	SK9901S	SK9901V	SK9901M	SK9901Q	
Sweep speed	RBW=30kHz, per point	1.2ms					
	30kHz,450pt sweep	0.6s					
Output level for all modes (set to maximum gain)	1MHz-4GHz	10dBm				10dBm	
	4GHz-7.5GHz			10dBm	10dBm	10dBm	
	7.5GHz-9.8GHz				3dBm	3dBm	
	9.8GHz-20GHz					3dBm	
Output adj. range		25dB					
Noise floor	1MHz-5GHz	-110dBm				-110 dBm	RBW=1kHz
	5GHz-6.8GHz			-100dBm	-100dBm	-103 dBm	
	6.8GHz-20GHz				-94dBm	-100 dBm	
Dynamic range for transmission measurements	1MHz-1GHz	100dB					
	1GHz-2GHz	70dB					
	2GHz-4GHz		60dB	60dB	60dB	60dB	
	4GHz-9.8GHz			40dB	40dB	60dB	
	9.8GHz-20GHz					50dB	
Transmission uncertainty	1MHz-4GHz	± (0.2+0.03L)					>Dynamic range+20dB
	4GHz-20GHz	± (0.3 + 0.05 L)					
S11 uncertainty	3dB < RL < 25dB	± (0.5 + 0.1 RL)					<20dB
S11 directionality	After calibration	40dB				NA	
Phase Uncertainty	100kHz-1GHz	2°					Return loss <20dB
	1GHz-4GHz	5°			7°	5°	
	4GHz-9.8GHz	8°			8°	8°	
	9.8GHz-20GHz					16°	
Tracer noise	RMS value	0.05dB				0.01dB	Loss <10dB
IF Feedthrough Suppression		30dB					
Frequency stability, per year		1ppm					
Supply voltage	DC	11V-32V (charger socket), 5V (Type-C port)					
	AC Power Adapter	105V-230V					
	internal battery	6.5V-8.4V					
Damage level	All Ports	DC15V, +20dBm					
Dimensions		200×114×46mm (L×W×T)					
Weight	Include battery	1kg					
	Package standard	2kg					

NOTE: Unless otherwise noted, metrics are measured in medium speed mode, with an analytical bandwidth (RBW) of 10 kHz, output attenuation of 0, temperature of 25°C, and calibrated by the user. A few occasional or permanent anomalous data segments may be outside the range of the parameter.