Comparison of	frequency co	mparators		
Features	CHK7-51	- CHK7-1012	CHK7-1014	CH7-1015
Frequency 10,24 MHz	/ of measured signa	on the PC	on the PC	+
10,24 MHz 10 MHz		on the PC	+	+
5 MHz		on the PC	+	+
2.048 MHz		on the PC	on the PC	+
2,040 MHZ 1 MHz		on the PC	on the PC	+
	y of reference signa		Т	Ŧ
10 MHz		+	+	+
5 MHz		+	+	+
	istics to be measure	ed		
Relative frequency deviation	+	on the PC	+	+
Average frequency deviation	+	on the PC	+	+
Drift	+	on the PC	+	+
Standard deviation	+	on the PC	+	+
Allan variance	+	on the PC	+	+
Max value	_	on the PC	on the PC	+
Min value	-	on the PC	on the PC	+
Scatter	_	on the PC	on the PC	+
Median value	_	-	-	+
Hadamard variance		_	_	· ·
	-	-	-	т
Voltage of input signals	-	-	-	+
Noise analysis	-	on the PC	on the PC	on the PC
	of measurement re	SullS		
The calculation of the statistical characteristics of the array	-	on the PC	on the PC	+
measurements in real time				
Tabular presentation of measurement results	-	on the PC	on the PC	+
Graphical display of measurement results:	-	on the PC	on the PC	+
A plot of the frequency deviation of the time		on the PC	on the PC	+
A plot of the Standard deviation and Allan variance of the time		on the PC	on the PC	+
Measurement distribution histogram		on the PC	on the PC	+
	export measurement		and the DO	
To Stable32 software format (Hamilton Technical Service)	-	on the PC	on the PC	+
To Shortime software format (JSC RUKNAR)	- ning a measurement	on the PC	on the PC	+
In the text format	-	-	_	+
In the PDF format	_	-	_	+
In the PDF format Capa	- bilities of control	-		
Capa	- bilities of control full(IEEE-488)	-		+
Capa Remote control of all operating modes of the device	full(IEEE-488)	- - on the PC	- - buttons	+ full (TCP/IP)
Capa Remote control of all operating modes of the device Local control of all operating modes of the device	full(IEEE-488) buttons		- - buttons	+ full (TCP/IP) capacitive touch screen
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display	full(IEEE-488)	- on the PC on the PC	-	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others	full(IEEE-488) buttons		- - buttons	+ full (TCP/IP) capacitive touch screen
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English)	full(IEEE-488) buttons LCD, one string - -	on the PC - -	- - buttons	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device	full(IEEE-488) buttons LCD, one string - -	on the PC - -	- - buttons	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device	full (IEEE-488) buttons LCD, one string - - ce without involving	on the PC - -	- - buttons	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devie Averaging time	full (IEEE-488) buttons LCD, one string - - ce without involving +	on the PC - -	- buttons LCD, four strings - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time	full (IEEE-488) buttons LCD, one string - - ce without involving + +	on the PC - -	- buttons LCD, four strings - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s	full (IEEE-488) buttons LCD, one string - - ce without involving + + +	on the PC - -	- buttons LCD, four strings - - + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devi Averaging time 1s 10s	full (IEEE-488) buttons LCD, one string - - ce without involving + + + -	on the PC - -	- buttons LCD, four strings - - + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 1000s 3600s	full (IEEE-488) buttons LCD, one string - - ce without involving + + + - -	on the PC - -	- buttons LCD, four strings - - + + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 1000s 3600s 1day	full (IEEE-488) buttons LCD, one string - - ce without involving + + + - -	on the PC - -	- buttons LCD, four strings - - + + + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 100s 3600s 1day	full (IEEE-488) buttons LCD, one string - - without involving + + + - - - - - -	on the PC - -	- buttons LCD, four strings - - + + + + + + + + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + + + + + + + +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device Averaging time 1s 100s 100s 1000s 3600s 1day Accumulation mode feature The volume of the array of measurements, values	full (IEEE-488) buttons LCD, one string - - ce without involving + + + - -	on the PC - -	- buttons LCD, four strings - - + + + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + + + + + + + 3 10000
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 1000s 3600s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory	full (IEEE-488) buttons LCD, one string - - without involving + + + - - - - - -	on the PC - -	- buttons LCD, four strings - - + + + + + + + + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + + + + + + 3 10000 +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 100s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements	full (IEEE-488) buttons LCD, one string - - without involving + + + - - - - - -	on the PC - -	- buttons LCD, four strings - - + + + + + + + + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + + + + + + + 3 10000
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 100s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian	full (IEEE-488) buttons LCD, one string - - without involving + + + - - - - - -	on the PC - -	- buttons LCD, four strings - - + + + + + + + + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + + + + + + + 3 10000 +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 1000s 1000s 3600s 10dos 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface)	full (IEEE-488) buttons LCD, one string - - - - - - - - - - - - - - - - - - -	on the PC - - an external PC - - - - - - - - - - - - - - - - - - -	- buttons LCD, four strings - - + + + + + + + + + +	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + + + + + 3 10000 + +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 100s 1000s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface)	full (IEEE-488) buttons LCD, one string - - - ce without involving + + + + - - - - - 3 99 - - - - -	on the PC - - an external PC - - - - - - - - - - - - - - - - - - -	- buttons LCD, four strings - - + + + + + + + 5,10,30,50,100 - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + + 3 10000 + +
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Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device Averaging time 1s 10s 100s 1000s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging	full (IEEE-488) buttons LCD, one string - - - ce without involving + + + + - - - - - 3 99 - - - - - - - - - - - - - - - - - -	on the PC - - an external PC - - - - - - - - - - - - - - - - - - -	- buttons LCD, four strings - - + + + + + + + 5,10,30,50,100 - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + + + 3 10000 + +
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device Averaging time 1s 10s 100s 1000s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz	full (IEEE-488) buttons LCD, one string - - ce without involving + + + + - - - 3 99 - - - - - netrological charact ±1,0E-06	on the PC - - an external PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - + + + + + + + 5,10,30,50,100 - - - - ±1,0E-06 8,0E-12	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + ±1,0E-06 5,0E-12
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device Averaging time 1s 10s 100s 100s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz 2,048 MHz	full (IEEE-488) buttons LCD, one string - - ce without involving + + + + - - - 3 99 - - - - - netrological charact ±1,0E-06 -	on the PC - - an external PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - + + + + + + 5,10,30,50,100 - - - - ±1,0E-06 8,0E-12 8,0E-12	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + ±1,0E-06 5,0E-12 5,0E-12
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100 100 3600s 1000 3600s 104 4 Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz 2,048 MHz 5 MHz	full (IEEE-488) buttons LCD, one string - - ce without involving + + + + - - 3 99 - - - - t1,0E-06 - - 1,0E-11	on the PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - - - 5,10,30,50,100 - - - - ±1,0E-06 8,0E-12 8,0E-12 2,0E-12	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + + ±1,0E-06 5,0E-12 5,0E-12 1,2E-12
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device Averaging time 1s 10s 100s 100s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz 2,048 MHz 5 MHz 10 MHz	full (IEEE-488) buttons LCD, one string - - - ce without involving + + + + - - 3 99 - - - - t1,0E-06 - - 1,0E-11 1,0E-11	on the PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - - - 5,10,30,50,100 - - - - ±1,0E-06 8,0E-12 8,0E-12 2,0E-12 1,0E-12	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + + + + ±1,0E-06 5,0E-12 5,0E-12 1,2E-12 8,0E-13
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device Averaging time 1s 10s 100s 100s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz 2,048 MHz 5 MHz 10 MHz 10,24 MHz	full (IEEE-488) buttons LCD, one string - - - ce without involving + + + + - - 3 99 - - - - - t1,0E-06 - - 1,0E-11 1,0E-11 - -	on the PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - - - - - - - - - - - - - - - - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + + + 5,0E-12 5,0E-12 1,2E-12 8,0E-13 5,0E-12
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device Averaging time 1s 10s 100s 100s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz 2,048 MHz 5 MHz 10 MHz 10,24 MHz Voltage of input signals, V @ 50 Ohm loading	full (IEEE-488) buttons LCD, one string - - - ce without involving + + + + - - - 3 99 - - - - - t1,0E-06 - - 1,0E-11 1,0E-11 1,0E-11 - 0,7 - 1,3	on the PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - - - - - - - - - - - - - - - - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + + + 5,0E-12 5,0E-12 1,2E-12 8,0E-13 5,0E-12 0,4 - 1,2
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 100s 1000s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz 2,048 MHz 5 MHz 10 Voltage of input signals, V @ 50 Ohm loading Voltage of power supply , V	full (IEEE-488) buttons LCD, one string - - - ce without involving + + + + - - - 3 99 - - - - - t1,0E-06 - - 1,0E-11 1,0E-11 1,0E-11 - 0,7 - 1,3 220 / +27	on the PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - - - - - - - - - - - - - - - - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + + + 3 10000 + + + 3 10000 + 1,2E-12 5,0E-12 5,0E-12 1,2E-12 8,0E-13 5,0E-12 0,4 - 1,2 220
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the devic Averaging time 1s 100s 100s 100s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz 2,048 MHz 5 MHz 10,24 MHz Voltage of input signals, V @ 50 Ohm loading Voltage of power supply , V Power consumption, VA	full (IEEE-488) buttons LCD, one string - - - ce without involving + + + + - - - 3 99 - - - - - netrological charact ±1,0E-06 - - 1,0E-11 1,0E-11 1,0E-11 1,0E-11 1,0E-11 220 / +27 40	on the PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - - - - - - - - - - - - - - - - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + + + 3 10000 + + + 3 10000 + 1,2E-12 5,0E-12 1,2E-12 8,0E-13 5,0E-12 0,4 - 1,2 220 30
Capa Remote control of all operating modes of the device Local control of all operating modes of the device Information display Remote desktop on Windows PC , Linux PC and others The ability to switch the interface language (Russian / English) Possibilities of the device Averaging time 1s 100s 100s 100s 3600s 1day Accumulation mode feature The volume of the array of measurements, values Saving protocols and measurement results in the device memory Automatic fixing of the date and time of measurements Built-in database of popular frequency standards (only in Russian interface) Electrical and r Max frequency deviation of measured signals The error of measuring of relative frequency deviation (@ averaging time 1s): 1 MHz 2,048 MHz 5 MHz 10 MHz 10,24 MHz Voltage of input signals, V @ 50 Ohm loading Voltage of power supply , V	full (IEEE-488) buttons LCD, one string - - - ce without involving + + + + - - - 3 99 - - - - - t1,0E-06 - - 1,0E-11 1,0E-11 1,0E-11 - 0,7 - 1,3 220 / +27	on the PC - - - - - - - - - - - - -	- buttons LCD, four strings - - - - - - - - - - - - - - - - - - -	+ full (TCP/IP) capacitive touch screen FullHD, AMOLED via VNC tecnilogy + + + + 3 10000 + + + + 3 10000 + + + 3 10000 + 1,2E-12 5,0E-12 1,2E-12 8,0E-13 5,0E-12 0,4 - 1,2 220

"On the PC" means a frequency comparator connected to a PC with Shortime software (JSC "RUKNAR")