Page 1 of 2 BROADVIEW INSTRUMENTATION SERVICES, INC.



Calibration Certificate #2046.01

CERTIFICATE OF CALIBRATION

NAME: Rigol Technologies PURCHASE OR. RU090090 ADDRESS: Oakwood Village OH MATERIAL MATERIAL ZIP: 44146 TOTAL COST MATERIAL RECD COND. Within Spec RETURNED Within Spec RECD COND. Within Spec RETURNED Within Spec RECD COND. Within Spec RETURNED Within Spec MAUFACTURER: DG10130400480 NA TERWR H% 23.8°C 73.3% SERIAL / ASSET: DG10130400480 NA TERWR H% 23.8°C 73.3% Frequency Synthesis Accuracy: ± 20.90n 19.99986 -7 ppm Mitz 20.00 19.99986 -7 ppm 19.99986 -7 ppm Mitz 20.00 19.99986 -0.0780% 9.92200 -0.780% Morinal Accuracy, 50 Ohms: ± 1% Seming + 207 mV MVms 10.00 9.9420 -0.069% S00.00 500.103 0.021% 500.103 0.021% 50.013 0.021% Vms 1.00 0.994960 -0.036% 3.51922	10041		7632B Hub Parkway	Valley View, C	DHIO 44125	216-525-005
ADDRESS: 7401 First Place Sulte N LABOR CITYVISTATE: Oakwood Village OH MATERIAL ZIP: 44146 TOTAL COST CONTACT: Hossam ON-SITE NO RECD COND. Within Spec RETURNED Within Spec RECD COND. Within Spec RETURNED T-Apr-11 SERIAL / ASSET: DG1022 ary Waveform Gen CAL DUE: T-Apr-12 SERIAL / ASSET: DG1030400480 NA TEMP/ RH% 23.8°C / 37.3% Frequency Synthesis Accuracy: & 20 ppn AS FOWD DEVIATION AS LEFT DEVIATION ch2 20.00 19.99986 -7 ppm 19.99986 -7 ppm mtra 10.00 9.92200 -0.780% 9.92200 -0.780% Vmm 1.00 0.994960 -0.64% 9.99461 -0.154% S00.00 500.103 0.021% 500.103 0.021% Vmm 1.00 0.994960 -0.306% 9.99404 -0.306% S00.00 94965		NAME:	Rigol Technologies		PURCHASE OR.	RU090090
CITY/STATE: Oakwood Village OH MATERIAL ZP: 44146 TOTAL COST NO CONTACT: Hossam ON-SITE NO RECD COND Rigol CAL DATE 7.Apr-11 MODEL: DG1022 ary Waveform Gen CAL DATE 7.Apr-12 SERIAL / ASSET: DG10130400480 NA TEMP/ RH*, 23.8°C 7.37.3% Frequency Synthesis Acuracy: ± 30 ppm AS FOUND DEVIATION AS LEFT DEVIATION MHz 20.00 19.99986 -7 ppm 19.99986 -7 ppm MHz 20.00 19.99986 -6 ppm Amplitude Accuracy, 50 Ohms: ± 1% Semig + 707 mV mVms 10.00 9.92200 -0.780% 9.92200 -0.504% 500.00 500.103 0.021% 500.103 0.021% Vms 1.00 0.994960 -0.305% 9.994960 -0.504% MVms 15.00 14.7963 -1.358% 14.7963 -1.358% MVms 100.00		ADDRESS:	7401 First Place Suit	e N	LABOR	
ZIP: 44146 TOTAL COST CONTACT: Hossam ON-SITE NO RECD COND Within Spec RETURNED Within Spec MANUFACTURER: DG1022 ary Waveform Gen CAL DATE 7.Apr11 MODEL: DG1022 ary Waveform Gen CAL DATE 7.Apr12 SERIAL / ASSET: DG1020 0000 NA TEMP/ RH% 23.8°C / 37.3% Seruency Synthesis Accuracy: = 20 ppm 19.99986 -7 ppm MHz 20.00 19.99986 -6 ppm 7.99986 Anplitude Accuracy, 50 Ohms: = 1% Setting + 707 mV mvms 100.00 99.8461 -0.154% S00.00 S00.103 0.021% 500.103 0.021% 500.103 0.021% Vrms 1.00 0.994860 -0.504% 0.994860 -0.504% S00.00 500.103 0.021% 500.103 0.021% Vrms 1.00 0.994960 -0.504% 0.994960 -0.504% Vrms 1.00 9.9950 -0.437%<		CITY/STATE:	Oakwood Village	ОН	MATERIAL	
CONTACT: Hessam ON-SITE NO RECD COD. Within Spec RETURNED Within Spec MANUFACTURER: DG1022 ary Waveform Gen CAL DATE 7.Apri-11 MODEL: DG1024 ary Waveform Gen CAL DUE: 7.Apri-12 SERIAL / ASSET: DG10130400480 NA TEMP/ RH%. 23.8°C / 37.3%. Frequency Synthesis Accuracy: ± 30 ppm DEVIATION AS LEFT DEVIATION MHz 20.00 19.99986 -7 ppm 19.99986 -7 ppm MMz 20.00 19.99986 -0.700% 9.92200 -0.760% Mortine Accuracy, 50 Ohms: ± 1% Sems + 707 mV MVms 1.00 0.99460 -0.021% Vms 1.00 0.99460 -0.036% 3.51922 -0.305% 3.51922 -0.305% Amplitude Accuracy, High-Z: ± 1% Sems + 707 mV mVmm mVms 1.00 0.99460 -0.036% 500.00 497.937 -0.413% 497.9337 -0.413% V		ZIP:	44146		TOTAL COST	
RECD COND. Within Spec RETURNED Within Spec MANUFACTURER: DG10130400480 NA T-Apri-11 MODEL: DG10130400480 NA TEMP/ RH% 23.8°C / 37.3% SERIAL / ASSET: DG10130400480 NA TEMP/ RH% 23.8°C / 37.3% AS FOUND DEVIATION AS FOUND DEVIATION AS LEFT DEVIATION Frequency Synthesis Accuracy: ± 20 pm 19.99986 -7 ppm 19.99986 -7 ppm MHz 20.00 19.99986 -7 ppm 19.99986 -0 T80% Mms 100.00 9.92200 -0.780% 9.92200 -0.780% Vms 1.00 0.994960 -0.504% 0.994960 -0.504% Vms 1.00 0.994960 -0.036% 3.51922 -0.305% Amplitude Accuracy, High-Z: ± 1% Setting +707 mV mVms 1.00 0.994960 -0.036% Vms 1.00 14.7963 -1.389% 14.7963 -1.389% Vms 5.00 4.97655 <td< td=""><td></td><td>CONTACT:</td><td>Hossam</td><td></td><td>ON-SITE</td><td>NO</td></td<>		CONTACT:	Hossam		ON-SITE	NO
MANDFACTURER: Rigol CAL DATE 7-Apr-11 MODEL: DG10120 ary Waveform Gen (CAL DUE: 7-Apr-12 SERIAL / ASSET: DG10130400480 NA TEMP/ RH% 23.8°C / 37.3% Frequency Synthesis Accuracy: ±20.pm 19.99986 -7 ppm 19.99986 -7 ppm MHz 20.00 19.99986 -6 ppm 19.99986 -6 ppm Amplitude Accuracy: 50 Ohms: ±1% Setting + 707 mV m/mms 10.00 9.92200 -0.780% 9.92200 -0.780% 500.00 500.103 0.021% 500.103 0.027% 0.994960 -0.504% Vms 1.00 0.994960 -0.504% 0.994960 -0.504% 3.53 3.51922 -0.305% 3.51922 -0.306% Amplitude Accuracy, High-Z: ±1% Setting + 707 mV m/ms 1.500 14.7963 -1.358% 14.7963 -1.358% Vms 1.00 0.998619 -0.036% 9.99640 -0.036% Vms 1.00 0.998519 -0	REC'D CC	ND.	Within Spec		RETURNED	Within Spec
MODEL: DG1022 ary Waveform Gen CAL DUE: 7-Apr12 AS FOUND NA TEMP/RH% 23.8°C / 37.3% MHz 20.00 19.99986 -7 ppm 19.99986 -7 ppm MHz 20.00 19.99988 -6 ppm 19.99988 -6 ppm Amplitude Accuracy, 50 Ohms: ± 1% Seming + 707 mV 9.92200 -0.780% 9.92200 -0.780% Vms 100.00 9.92200 -0.760% 9.92200 -0.760% Vms 100.00 9.92200 -0.760% 9.92200 -0.760% Vms 100.00 9.92200 -0.760% 9.92200 -0.760% Vms 100.00 9.92460 -0.564% 0.994960 -0.564% S00.00 14.7963 -1.358% 14.7963 -1.358% MVms 15.00 14.7963 -0.438% 99.9640 -0.036% S00.00 497.937 -0.413% 497.937 -0.413% Vms S00.00 9.9955 -0.469% 9.99650 -0.95% <td>MANUFAC</td> <td>CTURER:</td> <td>Rigol</td> <td></td> <td>CAL. DATE</td> <td>7-Apr-11</td>	MANUFAC	CTURER:	Rigol		CAL. DATE	7-Apr-11
SERIAL 7 ASSE I: DEID 130400480 IVA ITEMP? RT% 23.8°C 73.3% AS FOUND DEVIATION AS LET DEVIATION AS LET DEVIATION MHz 20.00 19.99986 -7 ppm 19.99986 -7 ppm 0 Amplitude Accuracy, 50 Ohms: * 1% Setting + 707 mV 19.99988 -6 ppm Amplitude Accuracy, 50 Ohms: * 1% Setting + 707 mV -0.760% 9.92200 -0.760% 100.00 9.924860 -0.504% 0.994860 -0.504% 0.994960 -0.504% 3.53 3.51922 -0.306% 3.51922 -0.306% -0.305% Amplitude Accuracy, High-Z: ± 1% Setting + 707 mV mtm 16.00 14.7963 -1.358% 14.7963 -1.358% 100.00 9.9640 -0.036% 9.99640 -0.036% 500.00 497.937 -0.413% Vrms 1.00 0.998819 -0.108% 0.998919 -0.108% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00	MODEL:		DG1022 a	ary Waveform Gen	CAL DUE:	7-Apr-12
Frequency Synthesis Accuracy: # 20 pm MHz 20.00 19.99986 -7 ppm dt2 20.00 19.99986 -7 ppm mylinude Accuracy, 50 Dhms: # 1%. Setting + 707 mV	SERIAL /	ASSEL	DGTDT30400480			23.8% / 37.3%
Height Synthesis Accuracy: ± 20.0pm 19.99986 -7 ppm 19.99986 -7 ppm ch2 20.00 19.99988 -6 ppm 19.99988 -6 ppm Amplitude Accuracy, 50 Ohms: ± 1% Setting +.707 mV 100.00 9.92200 -0.780% 9.92200 -0.780% 100.00 99.8461 -0.154% 99.8461 -0.154% 99.8461 -0.154% 500.00 500.103 0.021% 500.103 0.021% 500.103 0.021% Vrms 1.00 0.994960 -0.504% 0.994960 -0.604% 3.53 3.51922 -0.305% 3.51922 -0.305% Amplitude Accuracy, High-Z: ± 1% Setting +.707 mV mVms 15.00 14.7963 -1.358% 100.00 99.9640 -0.036% 99.9640 -0.036% 99.9640 -0.036% Vms 1.00 0.998919 -0.108% 0.998919 -0.108% 0.998919 -0.108% Vms 1.00 9.9050 -0.95% 9.9050 -0.95% 0.1066 <td>Eroquor</td> <td>au Cunthasia Asa</td> <td>AS FOUND</td> <td>DEVIATION</td> <td>ASLEFI</td> <td>DEVIATION</td>	Eroquor	au Cunthasia Asa	AS FOUND	DEVIATION	ASLEFI	DEVIATION
Mrtz 20.00 19.9998b -r. ppm 19.9998b -r. ppm ch2 20.00 19.9998b -6 ppm 19.9998b -6 ppm Amplitude Accuracy, 50 Ohms: ±1% Setting + .707 mV mV m mVms 10.00 9.92200 -0.780% 9.92200 -0.780% 100.00 99.8461 -0.154% 99.8461 -0.164% 500.00 500.103 0.021% 500.103 0.021% Vrms 1.00 0.994960 -0.504% 0.994960 -0.504% 3.53 3.51922 -0.305% 3.51922 -0.305% Amplitude Accuracy, High-Z: ±1% Setting + .707 mV mVms 15.00 14.7963 -1.358% 14.7963 -1.358% 100.00 99.9640 -0.036% 99.9640 -0.036% 50.048% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 5.0469% DC Offset: ±2% Setting	Frequer	icy Synthesis Act	40.00000	± 20 ppm	10.00000	7
ch2 20.00 19.9998 -6 ppm 19.9998 -6 ppm Amplitude Accuracy, 50 Ohms: * 1% Setting +.707 mV *	MHZ	20.00	19.99986	-7 ppm	19.99986	-7 ppm
Amplitude Accuracy, 50 Ohms: # 1% Setting +.707 mV mVms 100.00 9.92200 -0.780% 9.92200 -0.780% 100.00 99.8461 -0.154% 99.8461 -0.154% 500.00 500.103 0.021% 500.103 0.021% Vrms 1.00 0.994960 -0.504% 0.994960 -0.504% 3.53 3.51922 -0.305% 3.51922 -0.305% Amplitude Accuracy, High-Z: # 1% Setting +.707 mV mVms 15.00 14.7963 -1.358% 100.00 99.9640 -0.036% 99.9640 -0.036% 90.9640 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% mVDC 10.00 9.9050 -0.95% 9.9050 -0.95% 9.000 501.502 0.309% 501.502 0.309% VDC 1.00 1.0106	ch2	20.00	19.99988	-6 ppm	19.99988	-6 ppm
mVrms 10.00 9.92200 -0.780% 9.92200 -0.780% 100.00 99.8461 -0.154% 99.8461 -0.154% 500.00 500.103 0.021% 500.103 0.021% Vrms 1.00 0.994960 -0.504% 0.994960 -0.504% 3.53 3.51922 -0.305% 3.51922 -0.305% Amplitude Accuracy, High-Z: ± 1% Setting +.707 mV mvrms 1.00 99.9640 -0.036% 100.00 99.9640 -0.036% 99.9640 -0.036% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% DC Offset: ± 2% Setting mVDC 10.00 9.8434 -1.57% 98.434 -1.57% 500.00 501.502 0.30% 501.502 0.30% 0.29% 5.01465 0.29% VDC 1.00 1.01066 1.07% 1.01066 0.29% 5.01465 0.29% <t< td=""><td>Amplitu</td><td>de Accuracy, 50 C</td><td>Ohms:</td><td>± 1% Setting + .707 mV</td><td></td><td></td></t<>	Amplitu	de Accuracy, 50 C	Ohms:	± 1% Setting + .707 mV		
100.00 99.8461 -0.154% 99.8461 -0.154% 500.00 500.103 0.021% 500.103 0.021% Vms 1.00 0.994960 -0.504% 0.994960 -0.504% 3.53 3.51922 -0.305% 3.51922 -0.305% Amplitude Accuracy, High-Z: ±1% Setting + .707 mV ************************************	mVrms	10.00	9.92200	-0.780%	9.92200	-0.780%
500.00 500.103 0.021% 500.103 0.021% Vrms 1.00 0.994960 -0.504% 0.994960 -0.504% 3.53 3.51922 -0.305% 3.51922 -0.305% Amplitude Accuracy, High-Z: ± 1% Setting + .707 mV		100.00	99.8461	-0.154%	99.8461	-0.154%
Vrms 1.00 0.994960 -0.504% 0.994960 -0.504% 3.53 3.51922 -0.305% 3.51922 -0.305% Amplitude Accuracy, High-Z: ±1% Setting +.707 mV mVms 15.00 14.7963 -1.358% 100.00 99.9640 -0.036% 99.9640 -0.036% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ±2% Setting		500.00	500.103	0.021%	500.103	0.021%
Bit of the second sec	Vrms	1.00	0.994960	-0.504%	0.994960	-0.504%
Amplitude Accuracy, High-Z: ± 1% Setting +.707 mV mVrms 15.00 14.7963 -1.358% 14.7963 -1.358% 100.00 99.9640 -0.036% 99.9640 -0.038% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ±2% Setting		3 53	3 51922	-0.305%	3 51922	-0.305%
Amplitude Accuracy, High-Z: ± 1% Setting + .707 mV mVrms 15.00 14.7963 -1.358% 14.7963 -1.358% 100.00 99.9640 -0.036% 99.9640 -0.036% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ± 2% Setting		0.00	0.01022	0.00070	0.01322	0.00070
Ampirude Accuracy, mg/r2. 1 % setting + 20 mV mVms 15.00 14.7963 -1.358% 14.7963 -1.358% 100.00 99.9640 -0.036% 99.9640 -0.036% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ±2% Setting ************************************	Amplitu	de Acourcov Hig	h 7.	. 40/ Cotting : 707 m)/		
Invitins 15.00 14.7963 -1.358% 14.7963 -1.358% 100.00 99.9640 -0.036% 99.9640 -0.036% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ± 2% Setting	Ampiliu		44 7000	± 1% Setting + .707 mV	447000	4.0500/
IOU.00 99.9640 -0.036% 99.9640 -0.036% 500.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ± 2% Sating	mvrms	15.00	14.7963	-1.358%	14.7963	-1.358%
S00.00 497.937 -0.413% 497.937 -0.413% Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ± 2% Setting mVDC 10.00 9.9050 -0.95% 9.9050 -0.95% 100.00 98.434 -1.57% 98.434 -1.57% 98.434 -1.57% 500.00 501.502 0.30% 501.502 0.30% VDC 1.00 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% 5.01465 0.29% EQUIPMENT USED IN CALIBRATION: QC# Manufacturer Model Date Due Traceability information: This calibration was conducted using an unbroken chain of standards to National Institute of Standards to National Institute of Standards to National Institute of Standards and Technology. 0648 OMEGA I SERVER 12-May-11 Bit Marchal Standards to National Institute of Standards and Technology. 0648 OMEGA I SERVER 12-May-11 Eduit C.T.Tuit	-	100.00	99.9640	-0.036%	99.9640	-0.036%
Vrms 1.00 0.998919 -0.108% 0.998919 -0.108% 5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ± 2% Setting mVDC 10.00 9.9050 -0.95% 9.9050 -0.95% 100.00 98.434 -1.57% 98.434 -1.57% 500.00 501.502 0.30% 501.502 0.30% VDC 1.00 1.01066 1.07% 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% 5.00 5.01465 0.29% 5.01465 0.29% 5.00 5.01465 0.29% 5.01465 0.29% 5.00 5.01465 0.29% 5.01465 0.29% 5.00 5.01465 0.29% 5.01465 0.29% 5.01465 0.29% 5.01465 0.29% 5.01465 0.29% 406405914 Traceability information: This calibration was conducted usin		500.00	497.937	-0.413%	497.937	-0.413%
5.00 4.97655 -0.469% 4.97655 -0.469% DC Offset: ± 2% Setting mVDC 10.00 9.9050 -0.95% 9.9050 -0.95% 100.00 98.434 -1.57% 98.434 -1.57% 500.00 501.502 0.30% 501.502 0.30% VDC 1.00 1.01066 1.07% 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% 5.00 5.01465 0.29% 5.01465 0.29% Cupped And And And And And And And And And An	Vrms	1.00	0.998919	-0.108%	0.998919	-0.108%
DC Offset: ± 2% Setting mVDC 10.00 9.9050 -0.95% 9.9050 -0.95% 100.00 98.434 -1.57% 98.434 -1.57% 500.00 501.502 0.30% 501.502 0.30% VDC 1.00 1.01066 1.07% 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% Current Model Date Due 100 406405914 Traceability information: This calibration was conducted using an unbroken chain of standards to National Institute of Standards and Technology. Standards and Technology. 0648 OMEGA I SERVER 12-May-11 Standards and Technology. 0648 OMEGA I SERVER 12-May-11 Standards to National Institute of Standards to St		5.00	4.97655	-0.469%	4.97655	-0.469%
DC Offset: ± 2% Setting mVDC 10.00 9.9050 -0.95% 9.9050 -0.95% 100.00 98.434 -1.57% 98.434 -1.57% 500.00 501.502 0.30% 501.502 0.30% VDC 1.00 1.01066 1.07% 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% EQUIPMENT USED IN CALIBRATION:						
mVDC 10.00 9.9050 -0.95% 9.9050 -0.95% 100.00 98.434 -1.57% 98.434 -1.57% 500.00 501.502 0.30% 501.502 0.30% VDC 1.00 1.01066 1.07% 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% EQUIPMENT USED IN CALIBRATION: QC# Manufacturer Model Date Due 0488 AGLENT 34401A 4-May-11 0203 RACAL-DANA 01992 15-May-11 0648 OMEGA I SERVER 12-May-11 0648 OMEGA	DC Offs	et:		± 2% Setting		
100.00 98.434 -1.57% 98.434 -1.57% 500.00 501.502 0.30% 501.502 0.30% VDC 1.00 1.01066 1.07% 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% EQUIPMENT USED IN CALIBRATION: BIS TEST REPORT NO: 406405914 QC# Manufacturer Model Date Due 0488 AGILENT 34401A 4-May-11 0203 RACAL-DANA 01992 15-May-11 0648 OMEGA I SERVER 12-May-11 0648 OMEGA </td <td>mVDC</td> <td>10.00</td> <td>9.9050</td> <td>-0.95%</td> <td>9.9050</td> <td>-0.95%</td>	mVDC	10.00	9.9050	-0.95%	9.9050	-0.95%
500.00 501.502 0.30% 501.502 0.30% VDC 1.00 1.01066 1.07% 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% EQUIPMENT USED IN CALIBRATION: QC# Manufacturer Model Date Due 0488 AGILENT 34401A 4-May-11 0203 RACAL-DANA 01992 15-May-11 0648 OMEGA I SERVER 12-May-11 0648 OMEGA I SERVER 12-May-11 <tr< td=""><td></td><td>100.00</td><td>98,434</td><td>-1.57%</td><td>98,434</td><td>-1.57%</td></tr<>		100.00	98,434	-1.57%	98,434	-1.57%
VDC 1.00 1.01066 1.07% 1.01066 1.07% 5.00 5.01465 0.29% 5.01465 0.29% EQUIPMENT USED IN CALIBRATION: BIS TEST REPORT NO: 406405914 QC# Manufacturer Model Date Due 0488 AGILENT 34401A 4-May-11 0203 RACAL-DANA 01992 15-May-11 0648 OMEGA I SERVER 12-May-11 0648 OMEGA I SERVER 12		500.00	501.502	0.30%	501.502	0.30%
5.00 5.01465 0.29% 5.01465 0.29% EQUIPMENT USED IN CALIBRATION: QC# Manufacturer Model Date Due Traceability information: This calibration 0488 AGILENT 34401A 4-May-11 Traceability information: This calibration 0203 RACAL-DANA 01992 15-May-11 of standards to National Institute of 0648 OMEGA I SERVER 12-May-11 Standards and Technology. 0699 TEKTRONIX TPS 2012 5-Oct-11 Standards and Technology. 0648 OMEGA I SERVER 12-May-11 Standards and Technology. Customer approval: Reviewed By: Jeffery P. Metrologist Brian Tusse	VDC	1.00	1.01066	1.07%	1.01066	1.07%
EQUIPMENT USED IN CALIBRATION: QC# Manufacturer Model Date Due 0488 AGILENT 34401A 4-May-11 0203 RACAL-DANA 01992 15-May-11 0648 OMEGA I SERVER 12-May-11 0699 TEKTRONIX TPS 2012 5-Oct-11 0648 OMEGA I SERVER 12-May-11 Customer approval: Reviewed By: Jeffery P. Metrologist Brian Tusse		5.00	5.01465	0.29%	5.01465	0.29%
EQUIPMENT USED IN CALIBRATION: QC# Manufacturer Model Date Due 0488 AGILENT 34401A 4-May-11 0203 RACAL-DANA 01992 15-May-11 0648 OMEGA I SERVER 12-May-11 0699 TEKTRONIX TPS 2012 5-Oct-11 0648 OMEGA I SERVER 12-May-11 Customer approval: Reviewed By: Jeffery P. Metrologist Brian Tusse						
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	Customer	approval:	Reviewed By:	Jeffery P.	Metrologist	Brian Tusse

All equipment used for this calibration is traceable to National Standards (e.g. NIST). Calibration meets ISO/IEC 17025, The Uncertainty of standards utilized for calibration meet a Test Uncertainty Ratio (TUR) of 4:1 (at k=2, 95% confidence interval) or better unless otherwise stated.

While the calibration due date is recommended, the client is advised that any number of factors may cause the item to drift out of calibration before the recommended due date expires. It is the responsibility of the client to monitor the calibration status while using the equipment

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Page 2 of 2 BROADVIEW INSTRUMENTATION SERVICES, INC. CERTIFICATE OF CALIBRATION calibrat



Calibration Certificate #2046.01

7632B Hub Parkway Valley View, OHIO 44125 216-525-0050 MANUFACTURER Rigol DG1022 MODEL SERIAL NUMBER DG1D130400480 ASSET NA AS FOUND % DEVIATION AS LEFT % DEVIATION **Amplitude Flatness:** ±1% < 10 MHz, ±1.5% 10-25 MHz, ±4% >25 MHz 1 kHz (Ref.) 0.504 Ref. 0.504 Ref. 0.00% 0.504 0.00% 100 Hz 0.504 10 kHz 0.508 0.79% 0.508 0.79% 100 kHz 0.508 0.79% 0.508 0.79% 0.504 0.504 1 MHz 0.00% 0.00% 10 MHz 0.504 0.00% 0.504 0.00% 0.500 0.500 20 MHz -0.79% -0.79% Within Spec **Modulation:** Within Spec **Sweep Functions:** Within Spec Within Spec Waveshapes: Within Spec Within Spec **BIS TEST REPORT NO:** 406405914 While the calibration due date is recommended, the client is advised that any number of factors may cause the item to drift out of calibration before the recommended due date expires. It is the responsibility of the client to monitor the calibration status while using the equipment FORM #10C Dec '07 REV.1.10 Note this form may not be reproduced except in full without written permission of Broadview Instrumentation Service. Inc.