



SOUTHWEST RESEARCH INSTITUTE®

6220 Culebra Road, P.O. Drawer 28510
Institute Quality Systems
Institute Calibration Laboratory
Phone: 210-522-5215 Fax 210-522-4834



Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Cost Center / Customer: DIV20 / DON BANNON

Mail Stop: B57

Manufacturer/Model: TEKTRONIX / DPO3034

Description: OSCILLOSCOPE

Serial Number: C010808

Asset Number: 017133

Procedure: TEKTRONIX MSO & DPO 3000 SERIES - 07 SEP 10

Work Order: 303103327

Date Issued: 29-Aug-2011

Date Calibrated: 29-Aug-2011

*** Date Due :** 29-Aug-2012

**** Results:** FOUND-LEFT

Temperature: 72.2 °F

Humidity: 45 %RH

Barometer: N/A

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 2005, ANSI/NCSL Z540-1-1994 and relevant requirements of the ISO 9000-2000 standard. This certificate shall not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. This certificate shall not be used to claim product endorsement by Southwest Research Institute, American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government. Results of this calibration relate only to the instrument described above at the time of calibration and does not imply any long term stability of the instrument.

*Determined by the customer, does not imply the instrument will remain within tolerance as any number of factors may cause an out-of-tolerance condition before this date. **Data type found in this certificate or attached measurement report must be interpreted as: Found-left - adjustment and/or repair was not performed, As-found - data is before unit is adjusted and/or repaired, As-left - data is after adjusted and/or repaired was performed. The customer has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance.

Measurement uncertainty calculated in accordance with the method described in the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM), for a confidence level of approximately 95 percent using a coverage factor of $k=2$.

Remarks: none

Standards Used

<u>Asset #</u>	<u>Manufacturer</u>	<u>Model</u>	<u>Description</u>	<u>Cal Date</u>	<u>Due Date</u>
006413	FLUKE	5520A/SC1100	MULTI-PRODUCT CALIBRATOR	3-May-2011	3-May-2012
014805	AGILENT	33250A	ARBITRARY/FUNCTION GENERATOR	28-Jul-2011	28-Jul-2012
015482	HEWLETT-PACKARD	3458A/OPT 002	MULTIMETER	25-Aug-2011	25-Aug-2012

Walt Hill

Laboratory Manager

Carlos Mendoza

Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11
Remarks:					

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
Input Impedance 1 MΩ							
	MΩ	MΩ	MΩ	MΩ	MΩ	Result	
CH 1 10 mV/div	1.000	1.005	-0.005	0.01	0.00003	Pass	50%
CH 1 100 mV/div	1.000	1.005	-0.005	0.01	0.00003	Pass	50%
CH 2 10 mV/div	1.000	1.005	-0.005	0.01	0.00003	Pass	46%
CH 2 100 mV/div	1.000	1.005	-0.005	0.01	0.00003	Pass	46%
CH 3 10 mV/div	1.000	1.005	-0.005	0.01	0.00003	Pass	46%
CH 3 100 mV/div	1.000	1.005	-0.005	0.01	0.00003	Pass	46%
CH 4 10 mV/div	1.000	1.005	-0.005	0.01	0.00003	Pass	46%
CH 4 100 mV/div	1.000	1.005	-0.005	0.01	0.00003	Pass	46%
Input Impedance 75 Ω							
	Ω	Ω	Ω	Ω	Ω		
CH 1 100 mV/div	75.00	75.10	-0.100	0.75	0.008	Pass	13%
CH 2 100 mV/div	75.00	75.13	-0.127	0.75	0.008	Pass	17%
CH 3 100 mV/div	75.00	75.12	-0.117	0.75	0.008	Pass	16%
CH 4 100 mV/div	75.00	75.21	-0.205	0.75	0.008	Pass	27%
Input Impedance 50 Ω							
	Ω	Ω	Ω	Ω	Ω		
CH 1 100 mV/div	50.0	50.3	-0.33	0.5	0.001	Pass	67%
CH 2 100 mV/div	50.0	49.9	0.09	0.5	0.001	Pass	18%
CH 3 100 mV/div	50.0	49.9	0.11	0.5	0.001	Pass	22%
CH 4 100 mV/div	50.0	50.0	0.04	0.5	0.001	Pass	7%
DC Balance CH 1 50 Ω							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	-0.03	0.03	0.5	0.004	Pass	5%
150 MHz BW	0.00	-0.05	0.05	0.5	0.004	Pass	11%
Full BW	0.00	-0.04	0.04	0.5	0.004	Pass	9%
2 mV/Div 20 MHz BW	0.00	-0.02	0.02	0.5	0.004	Pass	4%
150 MHz BW	0.00	-0.06	0.06	0.5	0.004	Pass	11%
Full BW	0.00	-0.07	0.07	0.5	0.004	Pass	15%
10 mV/Div 20 MHz BW	0.00	0.08	-0.08	2.0	0.008	Pass	4%
150 MHz BW	0.00	0.02	-0.02	2.0	0.008	Pass	1%
Full BW	0.00	0.03	-0.03	2.0	0.008	Pass	2%
100 mV/Div 20 MHz BW	0	2.0	-2	20	0.10	Pass	10%
150 MHz BW	0	1.3	-1	20	0.10	Pass	7%
Full BW	0	1.7	-2	20	0.10	Pass	8%
1 V/Div 20 MHz BW	0	11.5	-11	200	0.49	Pass	6%
150 MHz BW	0	5.6	-6	200	0.49	Pass	3%
Full BW	0	6.2	-6	200	0.49	Pass	3%
DC Balance CH 1 75 Ω							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	-0.06	0.06	0.5	0.004	Pass	12%
150 MHz BW	0.00	-0.08	0.08	0.5	0.004	Pass	17%
Full BW	0.00	-0.07	0.07	0.5	0.004	Pass	13%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
DC Balance CH 1 75 Ω (Cont)							
	mV	mV	mV	mV	mV		
2 mV/Div 20 MHz BW	0.00	-0.03	0.03	0.5	0.004	Pass	6%
150 MHz BW	0.00	-0.07	0.07	0.5	0.004	Pass	14%
Full BW	0.00	-0.07	0.07	0.5	0.004	Pass	14%
10 mV/Div 20 MHz BW	0.00	0.1	-0.09	2.0	0.014	Pass	5%
150 MHz BW	0.00	0.00	0.00	2.0	0.014	Pass	0%
Full BW	0.00	0.02	-0.02	2.0	0.014	Pass	1%
100 mV/Div 20 MHz BW	0	0.8	-1	20	0.07	Pass	4%
150 MHz BW	0	0.0	0	20	0.07	Pass	0%
Full BW	0	0.1	0	20	0.07	Pass	0%
1 V/Div 20 MHz BW	0	10.9	-11	200	0.36	Pass	5%
150 MHz BW	0	4.8	-5	200	0.36	Pass	2%
Full BW	0	4.7	-5	200	0.36	Pass	2%
DC Balance CH 1 1 MΩ							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	-0.06	0.06	0.5	0.005	Pass	12%
150 MHz BW	0.00	-0.08	0.08	0.5	0.005	Pass	16%
Full BW	0.00	-0.07	0.07	0.5	0.005	Pass	13%
2 mV/Div 20 MHz BW	0.00	-0.04	0.04	0.5	0.005	Pass	9%
150 MHz BW	0.00	-0.06	0.06	0.5	0.005	Pass	12%
Full BW	0.00	-0.07	0.07	0.5	0.005	Pass	15%
10 mV/Div 20 MHz BW	0.00	0.07	-0.07	2.0	0.018	Pass	3%
150 MHz BW	0.00	0.02	-0.02	2.0	0.018	Pass	1%
Full BW	0.00	0.03	-0.03	2.0	0.018	Pass	1%
100 mV/Div 20 MHz BW	0	0.7	-1	20	0.08	Pass	3%
150 MHz BW	0	0.2	0	20	0.08	Pass	1%
Full BW	0	0.3	0	20	0.08	Pass	1%
1 V/Div 20 MHz BW	0	11.4	-11	200	0.0004	Pass	6%
150 MHz BW	0	7.2	-7	200	0.0004	Pass	4%
Full BW	0	7.6	-8	200	0.0004	Pass	4%
DC Balance CH 2 50 Ω							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	-0.01	0.01	0.5	0.004	Pass	3%
150 MHz BW	0.00	-0.05	0.05	0.5	0.004	Pass	11%
Full BW	0.00	-0.06	0.06	0.5	0.004	Pass	13%
2 mV/Div 20 MHz BW	0.00	-0.02	0.02	0.5	0.004	Pass	4%
150 MHz BW	0.00	-0.10	0.10	0.5	0.004	Pass	21%
Full BW	0.00	-0.12	0.12	0.5	0.004	Pass	24%
10 mV/Div 20 MHz BW	0.00	0.16	-0.16	2.0	0.008	Pass	8%
150 MHz BW	0.00	-0.01	0.01	2.0	0.008	Pass	0%
Full BW	0.00	-0.03	0.03	2.0	0.008	Pass	2%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
DC Balance CH 2 50 Ω (Cont)							
	mV	mV	mV	mV	mV		
100 mV/Div 20 MHz BW	0	1.3	-1	20	0.10	Pass	6%
150 MHz BW	0	-0.3	0	20	0.10	Pass	1%
Full BW	0	-0.6	1	20	0.10	Pass	3%
1 V/Div 20 MHz BW	0	13.5	-13	200	0.49	Pass	7%
150 MHz BW	0	-2.0	2	200	0.49	Pass	1%
Full BW	0	-5.9	6	200	0.49	Pass	3%
DC Balance CH 2 75 Ω							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	-0.02	0.02	0.5	0.004	Pass	4%
150 MHz BW	0.00	-0.03	0.03	0.5	0.004	Pass	7%
Full BW	0.00	-0.05	0.05	0.5	0.004	Pass	10%
2 mV/Div 20 MHz BW	0.00	-0.03	0.03	0.5	0.004	Pass	6%
150 MHz BW	0.00	-0.08	0.08	0.5	0.004	Pass	16%
Full BW	0.00	-0.09	0.09	0.5	0.004	Pass	19%
10 mV/Div 20 MHz BW	0.00	0.16	-0.16	2.0	0.014	Pass	8%
150 MHz BW	0.00	0.02	-0.02	2.0	0.014	Pass	1%
Full BW	0.00	-0.03	0.03	2.0	0.014	Pass	1%
100 mV/Div 20 MHz BW	0	1.8	-2	20	0.07	Pass	9%
150 MHz BW	0	0.3	0	20	0.07	Pass	2%
Full BW	0	-0.3	0	20	0.07	Pass	1%
1 V/Div 20 MHz BW	0	14.4	-14	200	0.36	Pass	7%
150 MHz BW	0	-1.2	1	200	0.36	Pass	1%
Full BW	0	-4.6	5	200	0.36	Pass	2%
DC Balance CH 2 1 MΩ							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	-0.02	0.02	0.5	0.005	Pass	5%
150 MHz BW	0.00	-0.05	0.05	0.5	0.005	Pass	9%
Full BW	0.00	-0.05	0.05	0.5	0.005	Pass	10%
2 mV/Div 20 MHz BW	0.00	-0.02	0.02	0.5	0.005	Pass	4%
150 MHz BW	0.00	-0.10	0.10	0.5	0.005	Pass	19%
Full BW	0.00	-0.11	0.11	0.5	0.005	Pass	23%
10 mV/Div 20 MHz BW	0.00	0.16	-0.16	2.0	0.018	Pass	8%
150 MHz BW	0.00	0.01	-0.01	2.0	0.018	Pass	0%
Full BW	0.00	-0.04	0.04	2.0	0.018	Pass	2%
100 mV/Div 20 MHz BW	0	1.6	-2	20	0.08	Pass	8%
150 MHz BW	0	0.2	0	20	0.08	Pass	1%
Full BW	0	-0.2	0	20	0.08	Pass	1%
1 V/Div 20 MHz BW	0	12.8	-13	200	0.0004	Pass	6%
150 MHz BW	0	-3.1	3	200	0.0004	Pass	2%
Full BW	0	-8.3	8	200	0.0004	Pass	4%
DC Balance CH 3 50 Ω							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	0.06	-0.06	0.5	0.004	Pass	12%
150 MHz BW	0.00	0.08	-0.08	0.5	0.004	Pass	15%
Full BW	0.00	0.09	-0.09	0.5	0.004	Pass	18%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
DC Balance CH 3 50 Ω (Cont)							
	mV	mV	mV	mV	mV		
2 mV/Div 20 MHz BW	0.00	0.05	-0.05	0.5	0.004	Pass	9%
150 MHz BW	0.00	0.10	-0.10	0.5	0.004	Pass	20%
Full BW	0.00	0.10	-0.10	0.5	0.004	Pass	21%
10 mV/Div 20 MHz BW	0.00	0.20	-0.20	2.0	0.008	Pass	10%
150 MHz BW	0.00	0.14	-0.14	2.0	0.008	Pass	7%
Full BW	0.00	0.06	-0.06	2.0	0.008	Pass	3%
100 mV/Div 20 MHz BW	0	1.6	-2	20	0.10	Pass	8%
150 MHz BW	0	1.0	-1	20	0.10	Pass	5%
Full BW	0	0.1	0	20	0.10	Pass	0%
1 V/Div 20 MHz BW	0	10.1	-10	200	0.49	Pass	5%
150 MHz BW	0	2.9	-3	200	0.49	Pass	1%
Full BW	0	-5.6	6	200	0.49	Pass	3%
DC Balance CH 3 75 Ω							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	0.08	-0.08	0.5	0.004	Pass	17%
150 MHz BW	0.00	0.10	-0.10	0.5	0.004	Pass	20%
Full BW	0.00	0.13	-0.13	0.5	0.004	Pass	26%
2 mV/Div 20 MHz BW	0.00	0.08	-0.08	0.5	0.004	Pass	16%
150 MHz BW	0.00	0.12	-0.12	0.5	0.004	Pass	24%
Full BW	0.00	0.13	-0.13	0.5	0.004	Pass	26%
10 mV/Div 20 MHz BW	0.00	0.36	-0.36	2.0	0.014	Pass	18%
150 MHz BW	0.00	0.19	-0.19	2.0	0.014	Pass	10%
Full BW	0.00	0.04	-0.04	2.0	0.014	Pass	2%
100 mV/Div 20 MHz BW	0	2.4	-2	20	0.07	Pass	12%
150 MHz BW	0	1.5	-1	20	0.07	Pass	7%
Full BW	0	0.8	-1	20	0.07	Pass	4%
1 V/Div 20 MHz BW	0	11.8	-12	200	0.36	Pass	6%
150 MHz BW	0	4.3	-4	200	0.36	Pass	2%
Full BW	0	-4.4	4	200	0.36	Pass	2%
DC Balance CH 3 1 MΩ							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	0.09	-0.09	0.5	0.005	Pass	17%
150MHz BW	0.00	0.10	-0.10	0.5	0.005	Pass	19%
Full BW	0.00	0.11	-0.11	0.5	0.005	Pass	22%
2 mV/Div 20 MHz BW	0.00	0.06	-0.06	0.5	0.005	Pass	13%
150 MHz BW	0.00	0.11	-0.11	0.5	0.005	Pass	23%
Full BW	0.00	0.11	-0.11	0.5	0.005	Pass	22%
10 mV/Div 20 MHz BW	0.00	0.21	-0.21	2.0	0.018	Pass	10%
150MHz BW	0.00	0.15	-0.15	2.0	0.018	Pass	7%
Full BW	0.00	0.06	-0.06	2.0	0.018	Pass	3%
100 mV/Div 20 MHz BW	0	2.2	-2	20	0.08	Pass	11%
150 MHz BW	0	1.4	-1	20	0.08	Pass	7%
Full BW	0	0.6	-1	20	0.08	Pass	3%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
DC Balance CH 3 1 MΩ (Cont)							
	mV	mV	mV	mV	mV		
1 V/Div 20 MHz BW	0	17.8	-18	200	0.0004	Pass	9%
150 MHz BW	0	10.2	-10	200	0.0004	Pass	5%
1 V/Div Full BW	0	2.4	-2	200	0.0004	Pass	1%
DC Balance CH 4 50 Ω							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	0.04	-0.04	0.5	0.004	Pass	9%
150 MHz BW	0.00	0.05	-0.05	0.5	0.004	Pass	11%
Full BW	0.00	0.07	-0.07	0.5	0.004	Pass	14%
2 mV/Div 20 MHz BW	0.00	0.04	-0.04	0.5	0.004	Pass	7%
150 MHz BW	0.00	0.05	-0.05	0.5	0.004	Pass	11%
Full BW	0.00	0.09	-0.09	0.5	0.004	Pass	18%
10 mV/Div 20 MHz BW	0.00	0.16	-0.16	2.0	0.008	Pass	8%
150 MHz BW	0.00	0.17	-0.17	2.0	0.008	Pass	8%
Full BW	0.00	0.17	-0.17	2.0	0.008	Pass	8%
100 mV/Div 20 MHz BW	0	1.4	-1	20	0.10	Pass	7%
150 MHz BW	0	1.3	-1	20	0.10	Pass	7%
Full BW	0	1.5	-1	20	0.10	Pass	7%
1 V/Div 20 MHz BW	0	7.2	-7	200	0.49	Pass	4%
150 MHz BW	0	5.6	-6	200	0.49	Pass	3%
Full BW	0	5.4	-5	200	0.49	Pass	3%
DC Balance CH 4 75 Ω							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	0.01	-0.01	0.5	0.004	Pass	1%
150 MHz BW	0.00	0.03	-0.03	0.5	0.004	Pass	7%
Full BW	0.00	0.04	-0.04	0.5	0.004	Pass	9%
2 mV/Div 20 MHz BW	0.00	0.03	-0.03	0.5	0.004	Pass	6%
150 MHz BW	0.00	0.04	-0.04	0.5	0.004	Pass	7%
Full BW	0.00	0.07	-0.07	0.5	0.004	Pass	15%
10 mV/Div 20 MHz BW	0.00	0.16	-0.16	2.0	0.014	Pass	8%
150 MHz BW	0.00	0.14	-0.14	2.0	0.014	Pass	7%
Full BW	0.00	0.15	-0.15	2.0	0.014	Pass	8%
100 mV/Div 20 MHz BW	0	1.4	-1	20	0.07	Pass	7%
150 MHz BW	0	1.4	-1	20	0.07	Pass	7%
Full BW	0	1.4	-1	20	0.07	Pass	7%
1 V/Div 20 MHz BW	0	6.5	-6	200	0.36	Pass	3%
150 MHz BW	0	5.2	-5	200	0.36	Pass	3%
Full BW	0	5.5	-5	200	0.36	Pass	3%
DC Balance CH 4 1 MΩ							
	mV	mV	mV	mV	mV		
1 mV/Div 20 MHz BW	0.00	0.01	-0.01	0.5	0.005	Pass	3%
150 MHz BW	0.00	0.02	-0.02	0.5	0.005	Pass	4%
Full BW	0.00	0.03	-0.03	0.5	0.005	Pass	6%
2 mV/Div 20 MHz BW	0.00	0.02	-0.02	0.5	0.005	Pass	3%
150 MHz BW	0.00	0.03	-0.03	0.5	0.005	Pass	6%
Full BW	0.00	0.06	-0.06	0.5	0.005	Pass	11%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
DC Balance CH 4 1 MΩ (Cont)							
	mV	mV	mV	mV	mV		
10 mV/Div 20 MHz BW	0.00	0.13	-0.13	2.0	0.018	Pass	6%
150 MHz BW	0.00	0.12	-0.12	2.0	0.018	Pass	6%
Full BW	0.00	0.13	-0.13	2.0	0.018	Pass	6%
100 mV/Div 20 MHz BW	0	1.0	-1	20	0.08	Pass	5%
150 MHz BW	0	1.0	-1	20	0.08	Pass	5%
Full BW	0	1.2	-1	20	0.08	Pass	6%
1 V/Div 20 MHz BW	0	8.1	-8	200	0.0004	Pass	4%
150 MHz BW	0	8.1	-8	200	0.0004	Pass	4%
Full BW	0	8.5	-9	200	0.0004	Pass	4%
Bandwidth CH 1 50 Ω							
	mV p-p	mV p-p	mV p-p	mV p-p	mV p-p		
5 mV/Div 300 MHz	30.80	27.1	0.880	≥ 0.707	0.34	Pass	N/A
2 mV/Div 250 MHz	13.10	12.0	0.916	≥ 0.707	0.34	Pass	N/A
1 mV/Div 150 MHz	6.90	5.8	0.841	≥ 0.707	0.34	Pass	N/A
Bandwidth CH 2 50 Ω							
	mV p-p	mV p-p	mV p-p	mV p-p	mV p-p		
5 mV/Div 300 MHz	31.20	28.6	0.917	≥ 0.707	0.34	Pass	N/A
2 mV/Div 250 MHz	13.40	12.3	0.918	≥ 0.707	0.34	Pass	N/A
1 mV/Div 150 MHz	6.94	6.02	0.867	≥ 0.707	0.34	Pass	N/A
Bandwidth CH 3 50 Ω							
	mV p-p	mV p-p	mV p-p	mV p-p	mV p-p		
5 mV/Div 300 MHz	30.20	27.2	0.901	≥ 0.707	0.34	Pass	N/A
2 mV/Div 250 MHz	12.50	11.3	0.904	≥ 0.707	0.34	Pass	N/A
1 mV/Div 150 MHz	6.20	5.24	0.845	≥ 0.707	0.34	Pass	N/A
Bandwidth CH 4 50 Ω							
	mV p-p	mV p-p	mV p-p	mV p-p	mV p-p		
5 mV/Div 300 MHz	30.80	28.87	0.937	≥ 0.707	0.34	Pass	N/A
2 mV/Div 250 MHz	12.50	11.6	0.928	≥ 0.707	0.34	Pass	N/A
1 mV/Div 150 MHz	6.11	5.35	0.876	≥ 0.707	0.34	Pass	N/A
DC Gain CH 1 1 MΩ							
	mV	mV	mV	mV	mV		
1 mV/Div	7	6.95	-0.05	0.11	0.06	Pass	44%
2 mV/Div	14	13.93	-0.07	0.21	0.06	Pass	34%
4.98 mV/Div	34.86	34.65	-0.21	1.05	0.07	Pass	20%
5 mV/Div	35	35.11	0.11	0.53	0.07	Pass	21%
10 mV/Div	70	70.21	0.21	1.05	0.09	Pass	20%
20 mV/Div	140	140.12	0.12	2.1	0.14	Pass	6%
49.8 mV/Div	348.6	348.7	0.1	10.46	0.3	Pass	1%
50 mV/Div	350	351.2	1.2	5.25	0.3	Pass	23%
100 mV/Div	700	700.4	0.4	10.5	0.7	Pass	4%
200 mV/Div	1400	1400.4	0.4	21	1.0	Pass	2%
500 mV/Div	3500	3500	0	52.5	3	Pass	0%
1 V/Div	7000	6983	-17	105	5	Pass	16%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
DC Gain CH 2 1 MΩ	mV	mV	mV	mV	mV		
1 mV/Div	7	7.01	0.01	0.11	0.06	Pass	9%
2 mV/Div	14	14.05	0.05	0.21	0.06	Pass	23%
4.98 mV/Div	34.86	34.90	0.04	1.05	0.07	Pass	4%
5 mV/Div	35	35.01	0.01	0.53	0.07	Pass	2%
10 mV/Div	70	70.02	0.02	1.05	0.09	Pass	2%
20 mV/Div	140	139.88	-0.12	2.1	0.14	Pass	6%
49.8 mV/Div	348.6	347.9	-0.7	10.46	0.3	Pass	7%
50 mV/Div	350	349.6	-0.4	5.25	0.3	Pass	8%
100 mV/Div	700	699.4	-0.6	10.5	0.7	Pass	6%
200 mV/Div	1400	1401.2	1.2	21	1.0	Pass	6%
500 mV/Div	3500	3502	2	52.5	3	Pass	4%
1 V/Div	7000	6963	-37	105	5	Pass	35%
DC Gain CH 3 1 MΩ	mV	mV	mV	mV	mV		
1 mV/Div	7	6.98	-0.02	0.11	0.06	Pass	17%
2 mV/Div	14	13.96	-0.04	0.21	0.06	Pass	20%
4.98 mV/Div	34.86	34.79	-0.07	1.05	0.07	Pass	7%
5 mV/Div	35	34.97	-0.03	0.53	0.07	Pass	6%
10 mV/Div	70	70.00	0.00	1.05	0.09	Pass	0%
20 mV/Div	140	139.93	-0.07	2.1	0.14	Pass	3%
49.8 mV/Div	348.6	347.5	-1.1	10.46	0.3	Pass	11%
50 mV/Div	350	349.8	-0.2	5.25	0.3	Pass	4%
100 mV/Div	700	698.6	-1.4	10.5	0.7	Pass	13%
200 mV/Div	1400	1405.7	5.7	21	1.0	Pass	27%
500 mV/Div	3500	3502	2	52.5	3	Pass	4%
1 V/Div	7000	6960	-40	105	5	Pass	38%
DC Gain CH 4 1 MΩ	mV	mV	mV	mV	mV		
1 mV/Div	7	6.98	-0.02	0.11	0.06	Pass	18%
2 mV/Div	14	13.98	-0.02	0.21	0.06	Pass	9%
4.98 mV/Div	34.86	34.93	0.07	1.05	0.07	Pass	7%
5 mV/Div	35	34.96	-0.04	0.53	0.07	Pass	8%
10 mV/Div	70	70.02	0.02	1.05	0.09	Pass	2%
20 mV/Div	140	140.01	0.01	2.1	0.14	Pass	0%
49.8 mV/Div	348.6	348.8	0.2	10.46	0.3	Pass	2%
50 mV/Div	350	349.7	-0.3	5.25	0.3	Pass	6%
100 mV/Div	700	703.3	3.3	10.5	0.7	Pass	31%
200 mV/Div	1400	1400.9	0.9	21	1.0	Pass	4%
500 mV/Div	3500	3515	15	52.5	3	Pass	29%
1 V/Div	7000	6994	-6	105	5	Pass	6%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
DC Offset CH 1 1 MΩ	mV	mV	mV	mV	mV		
1 mV/Div	700	699.9	-0.1	3.8	0.5	Pass	3%
1 mV/Div	-700	-700.4	-0.4	3.8	0.5	Pass	11%
2 mV/Div	700	699.9	-0.1	3.9	0.5	Pass	3%
2 mV/Div	-700	-700.3	-0.3	3.9	0.5	Pass	8%
10 mV/Div	1000	1000.0	0.0	7.0	0.001	Pass	0%
10 mV/Div	-1000	-1000.0	0.0	7.0	0.001	Pass	0%
	V	V	V	V	V		
100 mV/Div	10	10.00	0.00	0.07	0.01	Pass	0%
100 mV/Div	-10	-10.01	-0.01	0.07	0.01	Pass	14%
1 V/Div	100	99.93	-0.1	0.7	0.1	Pass	10%
1 V/Div	-100	-99.98	0.0	0.7	0.1	Pass	3%
1.01 V/Div	100	99.93	-0.1	0.7	0.1	Pass	10%
1.01 V/Div	-100	-99.75	0.3	0.7	0.1	Pass	36%
DC Offset CH 2 1 MΩ	mV	mV	mV	mV	mV		
1 mV/Div	700	700.0	0.0	3.8	0.5	Pass	0%
1 mV/Div	-700	-700.1	-0.1	3.8	0.5	Pass	3%
2 mV/Div	700	700.0	0.0	3.9	0.5	Pass	0%
2 mV/Div	-700	-700.1	-0.1	3.9	0.5	Pass	3%
10 mV/Div	1000	1000.0	0.0	7.0	0.001	Pass	0%
10 mV/Div	-1000	-1000.0	0.0	7.0	0.001	Pass	0%
	V	V	V	V	V		
100 mV/Div	10	10.00	0.00	0.07	0.01	Pass	0%
100 mV/Div	-10	-10.00	0.00	0.07	0.01	Pass	0%
1 V/Div	100	99.89	-0.1	0.7	0.1	Pass	16%
1 V/Div	-100	-99.94	0.1	0.7	0.1	Pass	9%
1.01 V/Div	100	99.89	-0.1	0.7	0.1	Pass	16%
1.01 V/Div	-100	-99.95	0.0	0.7	0.1	Pass	7%
DC Offset CH 3 1 MΩ	mV	mV	mV	mV	mV		
1 mV/Div	700	700.5	0.5	3.8	0.5	Pass	13%
1 mV/Div	-700	-699.7	0.3	3.8	0.5	Pass	8%
2 mV/Div	700	700.5	0.5	3.9	0.5	Pass	13%
2 mV/Div	-700	-699.8	0.2	3.9	0.5	Pass	5%
10 mV/Div	1000	1001.0	1.0	7.0	0.001	Pass	14%
10 mV/Div	-1000	-999.9	0.1	7.0	0.001	Pass	1%
	V	V	V	V	V		
100 mV/Div	10	10.01	0.01	0.07	0.01	Pass	14%
100 mV/Div	-10	-10.01	-0.01	0.07	0.01	Pass	14%
1 V/Div	100	99.95	0.0	0.7	0.1	Pass	7%
1 V/Div	-100	-99.98	0.0	0.7	0.1	Pass	3%
1.01 V/Div	100	99.95	0.0	0.7	0.1	Pass	7%
1.01 V/Div	-100	-99.99	0.0	0.7	0.1	Pass	1%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
DC Offset CH 4 1 MΩ	mV	mV	mV	mV	mV		
1 mV/Div	700	700.4	0.4	3.8	0.5	Pass	11%
1 mV/Div	-700	-700.0	0.0	3.8	0.5	Pass	0%
2 mV/Div	700	700.4	0.4	3.9	0.5	Pass	10%
2 mV/Div	-700	-699.9	0.1	3.9	0.5	Pass	3%
10 mV/Div	1000	1000.0	0.0	7.0	0.001	Pass	0%
10 mV/Div	-1000	-1000.0	0.0	7.0	0.001	Pass	0%
	V	V	V	V	V		
100 mV/Div	10	10.01	0.01	0.07	0.01	Pass	14%
100 mV/Div	-10	-10.00	0.00	0.07	0.01	Pass	0%
1 V/Div	100	99.93	-0.1	0.7	0.1	Pass	10%
1 V/Div	-100	-99.96	0.0	0.7	0.1	Pass	6%
1.01 V/Div	100	99.90	-0.1	0.7	0.1	Pass	14%
1.01 V/Div	-100	-99.97	0.0	0.7	0.1	Pass	4%
Sample Rate & Delay Time	Div	Div	Div	Div	Div		
	0	-0.1	-0.1	1	0.58	Pass	10%
Trigger Output 1 M Ω	V	V		V		Internal Test	
Main Trigger Out Low	0.40	0.20		≤ 0.40	n/a	Pass	N/A
Main Trigger Out High	3.25	3.64		≥ 3.25	n/a	Pass	N/A
Trigger Output 50 Ω	V	V		V			
Main Trigger Out Low	0.20	0.20		≤ 0.20	n/a	Pass	N/A
Main Trigger Out High	2.20	2.48		≥ 2.20	n/a	Pass	N/A
Random Noise, Sample Acquisition Mode	mV	mV		mV		Internal Test	
CH 1 Full BW	6.140	2.60		≤ 6.140	n/a	Pass	N/A
CH 1 150 MHz BW	6.080	1.98		≤ 6.080	n/a	Pass	N/A
CH 1 20 MHz BW	5.030	1.84		≤ 5.030	n/a	Pass	N/A
	mV	mV		mV			
CH 2 Full BW	6.140	2.80		≤ 6.140	n/a	Pass	N/A
CH 2 150 MHz BW	6.080	2.60		≤ 6.080	n/a	Pass	N/A
CH 2 20 MHz BW	5.030	1.63		≤ 5.030	n/a	Pass	N/A
	mV	mV		mV			
CH 3 Full BW	6.140	2.34		≤ 6.140	n/a	Pass	N/A
CH 3 150 MHz BW	6.080	1.86		≤ 6.080	n/a	Pass	N/A
CH 3 20 MHz BW	5.030	1.38		≤ 5.030	n/a	Pass	N/A

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
Random Noise,							
Sample Acquisition Mode (Cont)							
	mV	mV		mV			
CH 4 Full BW	6.140	2.00		≤ 6.140	n/a	Pass	N/A
CH 4 150 MHz BW	6.080	1.69		≤ 6.080	n/a	Pass	N/A
CH 4 20 MHz BW	5.030	1.49		≤ 5.030	n/a	Pass	N/A
Delta Time							
Measurement Accuracy							
CH1 4 ns/div, 240 MHz	ps	ps	ps	ps	ps		
5 mV/div 40 mV _{pp}	240	16	-223.73	≤ 240	0.006	Pass	0%
100 mV/div 800 mV _{pp}	240	11	-228.71	≤ 240	0.006	Pass	0%
500 mV/div 4 V _{pp}	240	8	-231.82	≤ 240	0.006	Pass	0%
1 V/div 4 V _{pp}	240	14	-225.74	≤ 240	0.006	Pass	0%
CH1 40 ns/div, 24 MHz	ps	ps	ps	ps	ps		
5 mV/div 40 mV _{pp}	450	199	-250.90	≤ 450	0.06	Pass	0%
100 mV/div 800 mV _{pp}	360	117	-243.40	≤ 240	0.06	Pass	0%
500 mV/div 4 V _{pp}	360	86	-274.34	≤ 240	0.06	Pass	0%
1 V/div 4 V _{pp}	590	182	-407.70	≤ 590	0.06	Pass	0%
CH1 400 ns/div, 2.4 MHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	3.8	1.7	-2.13	≤ 3.8	0.19	Pass	0%
100 mV/div 800 mV _{pp}	2.8	1.3	-1.53	≤ 2.8	0.19	Pass	0%
500 mV/div 4 V _{pp}	2.8	0.9	-1.95	≤ 2.8	0.19	Pass	0%
1 V/div 4 V _{pp}	5.4	1.3	-4.08	≤ 5.4	0.19	Pass	0%
CH1 4 μs/div, 240 kHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	38	18	-19.82	≤ 38	2	Pass	0%
100 mV/div 800 mV _{pp}	28	10	-17.73	≤ 28	2	Pass	0%
500 mV/div 4 V _{pp}	28	12	-15.55	≤ 28	2	Pass	0%
1 V/div 4 V _{pp}	54	15	-38.71	≤ 54	2	Pass	0%
CH1 40 μs/div, 24 kHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	380	85	-295.01	≤ 380	24	Pass	0%
100 mV/div 800 mV _{pp}	280	87	-193.48	≤ 280	24	Pass	0%
500 mV/div 4 V _{pp}	280	51	-228.88	≤ 280	24	Pass	0%
1 V/div 4 V _{pp}	540	91	-449.27	≤ 540	24	Pass	0%
CH1 40 μs/div, 2.4 kHz	μs	μs	μs	μs	μs		
5 mV/div 40 mV _{pp}	3.8	0.6	-3.18	≤ 3.8	0.24	Pass	0%
100 mV/div 800 mV _{pp}	2.8	0.7	-2.14	≤ 2.8	0.24	Pass	0%
500 mV/div 4 V _{pp}	2.8	0.9	-1.95	≤ 2.8	0.24	Pass	0%
1 V/div 4 V _{pp}	5.4	0.8	-4.56	≤ 5.4	0.24	Pass	0%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
CH2 4 ns/div, 240 MHz	ps	ps	ps	ps	ps		
5 mV/div 40 mV _{pp}	240	16	-224.22	≤ 240	0.006	Pass	0%
100 mV/div 800 mV _{pp}	240	10	-229.61	≤ 240	0.006	Pass	0%
500 mV/div 4 V _{pp}	240	9	-231.25	≤ 240	0.006	Pass	0%
1 V/div 4 V _{pp}	240	22	-218.32	≤ 240	0.006	Pass	0%
CH2 40 ns/div, 24 MHz	ps	ps	ps	ps	ps		
5 mV/div 40 mV _{pp}	450	156	-294.30	≤ 450	0.06	Pass	0%
100 mV/div 800 mV _{pp}	360	121	-239.50	≤ 240	0.06	Pass	0%
500 mV/div 4 V _{pp}	360	80	-279.82	≤ 240	0.06	Pass	0%
1 V/div 4 V _{pp}	590	137	-452.80	≤ 590	0.06	Pass	0%
CH2 400 ns/div, 2.4 MHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	3.8	1.8	-2.02	≤ 3.8	0.19	Pass	0%
100 mV/div 800 mV _{pp}	2.8	1.0	-1.79	≤ 2.8	0.19	Pass	0%
500 mV/div 4 V _{pp}	2.8	0.7	-2.09	≤ 2.8	0.19	Pass	0%
1 V/div 4 V _{pp}	5.4	1.3	-4.14	≤ 5.4	0.19	Pass	0%
CH2 4 μs/div, 240 kHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	38	13	-24.65	≤ 38	2	Pass	0%
100 mV/div 800 mV _{pp}	28	10	-17.54	≤ 28	2	Pass	0%
500 mV/div 4 V _{pp}	28	11	-16.52	≤ 28	2	Pass	0%
1 V/div 4 V _{pp}	54	18	-35.67	≤ 54	2	Pass	0%
CH2 40 μs/div, 24 kHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	380	86	-293.54	≤ 380	24	Pass	0%
100 mV/div 800 mV _{pp}	280	69	-211.30	≤ 280	24	Pass	0%
500 mV/div 4 V _{pp}	280	59	-221.07	≤ 280	24	Pass	0%
1 V/div 4 V _{pp}	540	129	-411.50	≤ 540	24	Pass	0%
CH2 40 μs/div, 2.4 kHz	μs	μs	μs	μs	μs		
5 mV/div 40 mV _{pp}	3.8	0.4	-3.36	≤ 3.8	0.24	Pass	0%
100 mV/div 800 mV _{pp}	2.8	0.5	-2.27	≤ 2.8	0.24	Pass	0%
500 mV/div 4 V _{pp}	2.8	0.5	-2.29	≤ 2.8	0.24	Pass	0%
1 V/div 4 V _{pp}	5.4	1.2	-4.23	≤ 5.4	0.24	Pass	0%
CH3 4 ns/div, 240 MHz	ps	ps	ps	ps	ps		
5 mV/div 40 mV _{pp}	240	16	-224.00	≤ 240	0.006	Pass	0%
100 mV/div 800 mV _{pp}	240	13	-227.35	≤ 240	0.006	Pass	0%
500 mV/div 4 V _{pp}	240	10	-229.86	≤ 240	0.006	Pass	0%
1 V/div 4 V _{pp}	240	13	-226.55	≤ 240	0.006	Pass	0%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
CH3 40 ns/div, 24 MHz	ps	ps	ps	ps	ps		
5 mV/div 40 mV _{pp}	450	179	-270.70	≤ 450	0.06	Pass	0%
100 mV/div 800 mV _{pp}	360	107	-253.10	≤ 240	0.06	Pass	0%
500 mV/div 4 V _{pp}	360	95	-265.00	≤ 240	0.06	Pass	0%
1 V/div 4 V _{pp}	590	164	-426.30	≤ 590	0.06	Pass	0%
CH3 400 ns/div, 2.4 MHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	3.8	1.6	-2.19	≤ 3.8	0.19	Pass	0%
100 mV/div 800 mV _{pp}	2.8	1.2	-1.60	≤ 2.8	0.19	Pass	0%
500 mV/div 4 V _{pp}	2.8	0.8	-2.02	≤ 2.8	0.19	Pass	0%
1 V/div 4 V _{pp}	5.4	1.2	-4.19	≤ 5.4	0.19	Pass	0%
CH3 4 μs/div, 240 kHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	38	15	-23.21	≤ 38	2	Pass	0%
100 mV/div 800 mV _{pp}	28	11	-17.01	≤ 28	2	Pass	0%
500 mV/div 4 V _{pp}	28	10	-17.73	≤ 28	2	Pass	0%
1 V/div 4 V _{pp}	54	18	-36.06	≤ 54	2	Pass	0%
CH3 40 μs/div, 24 kHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	380	105	-274.80	≤ 380	24	Pass	0%
100 mV/div 800 mV _{pp}	280	76	-203.81	≤ 280	24	Pass	0%
500 mV/div 4 V _{pp}	280	55	-224.91	≤ 280	24	Pass	0%
1 V/div 4 V _{pp}	540	102	-438.30	≤ 540	24	Pass	0%
CH3 40 μs/div, 2.4 kHz	μs	μs	μs	μs	μs		
5 mV/div 40 mV _{pp}	3.8	0.7	-3.07	≤ 3.8	0.24	Pass	0%
100 mV/div 800 mV _{pp}	2.8	0.8	-2.02	≤ 2.8	0.24	Pass	0%
500 mV/div 4 V _{pp}	2.8	0.7	-2.08	≤ 2.8	0.24	Pass	0%
1 V/div 4 V _{pp}	5.4	0.7	-4.67	≤ 5.4	0.24	Pass	0%
CH4 4 ns/div, 240 MHz	ps	ps	ps	ps	ps		
5 mV/div 40 mV _{pp}	240	14	-225.54	≤ 240	0.006	Pass	0%
100 mV/div 800 mV _{pp}	240	11	-228.97	≤ 240	0.006	Pass	0%
500 mV/div 4 V _{pp}	240	11	-228.99	≤ 240	0.006	Pass	0%
1 V/div 4 V _{pp}	240	13	-227.32	≤ 240	0.006	Pass	0%
CH4 40 ns/div, 24 MHz	ps	ps	ps	ps	ps		
5 mV/div 40 mV _{pp}	450	159	-291.10	≤ 450	0.06	Pass	0%
100 mV/div 800 mV _{pp}	360	107	-253.30	≤ 240	0.06	Pass	0%
500 mV/div 4 V _{pp}	360	108	-252.50	≤ 240	0.06	Pass	0%
1 V/div 4 V _{pp}	590	163	-426.80	≤ 590	0.06	Pass	0%

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303103327	Mfr:	Tektronix	Technician:	com
Asset No:	017133	Model:	DPO 3034	Type Data:	Found-left
Serial No:	C010808	Type:	Oscilloscope	Cal Date:	29-Aug-11

Function/Range	Test Point	TI Reading	Difference	± Limits	± Uncertainty	Result	% Limit
CH4 400 ns/div, 2.4 MHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	3.8	2.3	-1.50	≤ 3.8	0.19	Pass	0%
100 mV/div 800 mV _{pp}	2.8	1.3	-1.51	≤ 2.8	0.19	Pass	0%
500 mV/div 4 V _{pp}	2.8	1.0	-1.75	≤ 2.8	0.19	Pass	0%
1 V/div 4 V _{pp}	5.4	1.2	-4.17	≤ 5.4	0.19	Pass	0%
CH4 4 μs/div, 240 kHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	38	16	-22.41	≤ 38	2	Pass	0%
100 mV/div 800 mV _{pp}	28	13	-15.30	≤ 28	2	Pass	0%
500 mV/div 4 V _{pp}	28	12	-16.44	≤ 28	2	Pass	0%
1 V/div 4 V _{pp}	54	14	-39.96	≤ 54	2	Pass	0%
CH4 40 μs/div, 24 kHz	ns	ns	ns	ns	ns		
5 mV/div 40 mV _{pp}	380	111	-269.10	≤ 380	24	Pass	0%
100 mV/div 800 mV _{pp}	280	102	-177.90	≤ 280	24	Pass	0%
500 mV/div 4 V _{pp}	280	66	-214.00	≤ 280	24	Pass	0%
1 V/div 4 V _{pp}	540	110	-429.60	≤ 540	24	Pass	0%
CH4 40 μs/div, 2.4 kHz	μs	μs	μs	μs	μs		
5 mV/div 40 mV _{pp}	3.8	0.7	-3.08	≤ 3.8	0.24	Pass	0%
100 mV/div 800 mV _{pp}	2.8	0.5	-2.29	≤ 2.8	0.24	Pass	0%
500 mV/div 4 V _{pp}	2.8	0.5	-2.33	≤ 2.8	0.24	Pass	0%
1 V/div 4 V _{pp}	5.4	1.0	-4.42	≤ 5.4	0.24	Pass	0%

END OF REPORT