



**QUANTA
LABORATORIES**

3199 De La Cruz Boulevard • Santa Clara, CA 95054-2483

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Certificate of Conformance

This is to certify that the results from the test(s) requested by

ALPHA NOVATECH are on file under

Quanta Laboratories Job No. QL-11-0087 and conform

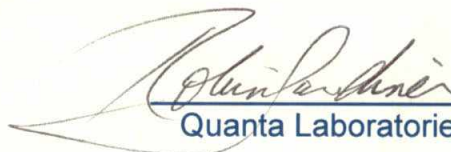
to the specification(s) stated in P.O. No. 20110125A05

These results apply to the following equipment and are available for review upon request.

Model No: HEAT SINK SAMPLES (QSZ CLIP, SHOULDER SCREW ETC)

S/N: N/A

*** VIBRATION AND SHOCK TESTS***


Quanta Laboratories



1/20/11
Date

SINE SWEEP VIBRATION TEST DATA



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CLIENT: ALPHA NOVATECH	P.O. NO: 20110125A05
MODEL: HEAT SINK SAMPLES (QSZ CLIP, SHOULDER SCREW ETC)	JOB NO: QL-11-0087
SPECIFICATION: ALPHA NOVATECH'S SPEC.	PAGE 1 OF 1

DATE	S/N	AXIS	FREQUENCIES & LEVELS	REMARKS
01/25/2011	N/A	X	5-500-5Hz SINE SWEEP VIB. TEST: 5 Hz @ 0.5 G 10-500 Hz @ 2.0 G Sweep Rate: 1.0 Oct/Min Duration: 13MIN17SEC/Axis	NON-OPERATIONAL TEST THE TEST COMPLETED TO THE SPECIFICATION REQUIREMENT.
		Y		
		Z		

<p>DEFINITION OF AXES</p>	TEST CONDUCTOR: <i>[Signature]</i>	DATE: 01/25/2011
	TEST ENGINEER: <i>[Signature]</i>	DATE: 01/25/2011
	WITNESS:	DATE:
	Q. A. ENGINEER: <i>[Signature]</i>	DATE: 01/25/2011

RANDOM VIBRATION TEST DATA



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CLIENT: ALPHA NOVATECH	P.O. NO: 20110125A05
SPECIMEN: HEAT SINK SAMPLES (QSZ CLIP, SHOULDER SCREW ETC)	JOB NO: QL-11-0087
SPECIFICATION: ALPHA NOVATECH 'S SPEC.	PAGE 1 OF 1

DATE	S/N	AXIS	FREQUENCIES & LEVELS	REMARKS
04-14-2010	N/A	X	5-500 HZ RANDOM VIBRATION TEST: 5 Hz @ 0.002 G ² /Hz 10-100 Hz @ 0.0064 G ² /Hz 500 Hz @ 0.0005 G ² /Hz Overall: 1.12G rms At full level 30 Min. per axis	NON-OPERATIONAL TEST THE TEST COMPLETED TO THE SPECIFICATION REQUIREMENT
		Y		
		Z		

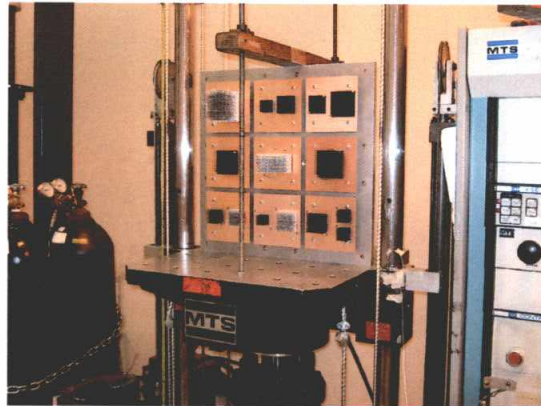
 DEFINITION OF AXES	TEST CONDUCTOR: <i>[Signature]</i>	DATE: 01/25/2011
	TEST ENGINEER: <i>[Signature]</i>	DATE: 01/25/2011
	WITNESS:	DATE:
	Q. A. ENGINEER: <i>[Signature]</i>	DATE: 01/25/2011

ALPHA NOVATECH

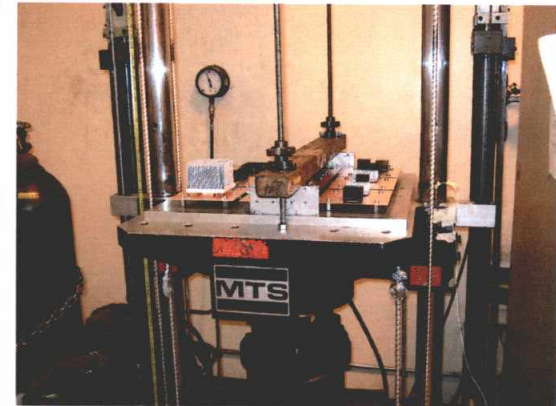
SHOCK TEST



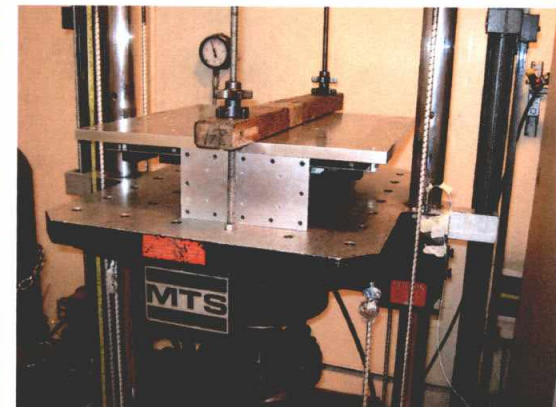
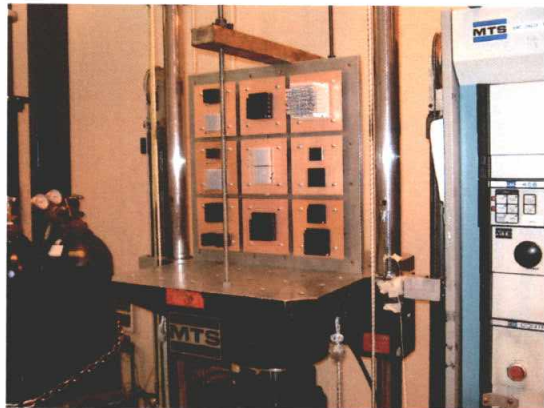
X axis



Y axis



Z axis



EQUIPMENT LIST FOR VIBRATION TEST



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CLIENT	ALPHA NOVATECH	JOB NO.	QL-11-0087			
		P.O. NO.	20110125A05			
MFR	DESCRIPTION	RANGE	EQUIP. USED	ASSET NO.	SERIAL NO.	CALIBRATION DUE DATE
DACTRON	DSP	0.1Hz - 3 KHz RES. 0.1dB		QL-0665	5542452	
				QL-0650	8204911	
			X	QL-0659	6313890	01/04/2012
				QL-0655	7385467	
				SEISMIC QL-0517 QL-0518	8177263 6904178	
LING ELECTRONICS	5/6-1 AMPLIFIER A-175 SHAKER (SILVER)	5Hz - 3 KHz		QL-0016	1672	TIME OF TEST
	5/6-5 AMPLIFIER(AGREE)			QL-0015	67	
	20/35 AMPLIFIER B-300 SHAKER (GREEN)			QL-0511	241	
	35/70 AMPLIFIER			QL-0151	30	
	60/100 AMPLIFIER B335 SHAKER (GOLD)			QL-0013	80	
	DMA-48 SOLID STATE AMPLIFIER			QL-0150	34	
	8024-SOLID STATE AMP #2 B335 SHAKER (BLUE)			QL-0014	22	
	B-300 SHAKER (BLUE)			QL-0135	153	
	B-300 SHAKER (AGREE)		X	QL-0504	46	
	B335 SHAKER (RED)			QL-0510	12	
	B335 SHAKER (GREEN)			QL-0509	92	
	MTS		2456 HYDR. SHAKER 406 CONTROL UNIT 436 CONTROL UNIT	1 Hz - 500 Hz 6" MAX DIS		
				QL-0006	863	
				QL-0007	3964	
TEAM CORP	SYSTEM 7269 HYDR. SHAKER	13" MAX DIS		QL-0522	533	
DYTRAN	ACCELEROMETER 3141A	F.S. 50 g's SENS. 100 mV/G		QL- 0240		
	ACCELEROMETER 3055A2			QL-0274		
	ACCELEROMETER 3132A		X	QL-0701	457	01/19/2012
	ACCELEROMETER 3030A4	F.S. 500 g's SENS. 10 mV/G		QL-		
	ACCELEROMETER 3141A			QL-		
	ACCELEROMETER 3031AG			QL-		
	ACCELEROMETER 3101B			QL-		
ACCELEROMETER 3093M3 (TRIAXIAL ACC)	F.S. 200 g's SENS. 50 mV/G		QL-			
ACCELEROMETER	F.S. 200 g's SENS. 50 mV/G		QL-			
ENDEVCO	ACCELEROMETER 7254-10	F.S. 500 g's SENS. 10 mV/G		QL-		
PCB	ACCELEROMETER			QL-		
				QL-		

SHOCK TEST DATA

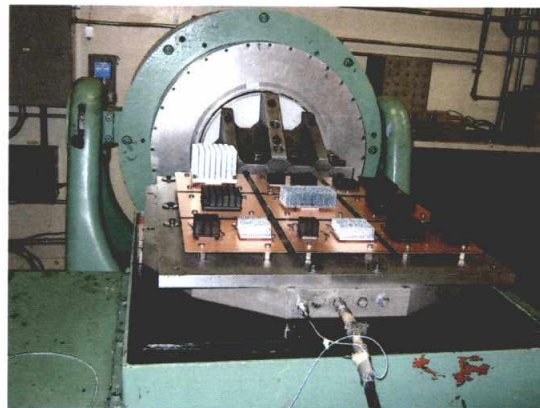


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CLIENT: ALPHA NOVATECH				P.O. NO: 20110125A05		
SPECIMEN: HEAT SINK SAMPLES (QSZ CLIP, SHOULDER SCREW ETC)				JOB NO: QL-11-0087		
SPECIFICATION: ALPHA NOVATECH'S SPEC.		WAVE FORM: TRAPEZOIDAL		PAGE 1 OF 1		
DATE	S/N	AXIS	LEVEL (G)	DURATION(MS)	NO. OF SHOCKS	REMARKS
01-26-2011	N/A	+X	TRAPEZOIDAL SHOCK TEST: 40G, 18MS. 3 SHOCKS/DIRECTION		3	TEST COMPLETED TO SPECIFICATION REQUIREMENTS.
		-X			3	
		+Y			3	
		-Y			3	
		+Z			3	
		-Z			3	
 DEFINITION OF AXES		TEST CONDUCTOR: <i>[Signature]</i>			DATE: 01-26-2011	
		TEST ENGINEER: <i>[Signature]</i>			DATE: 01-26-2011	
		WITNESS:			DATE:	
		Q. A. ENGINEER: <i>[Signature]</i>			DATE: 01-26-2011	



X axis



Y axis



Z axis

EQUIPMENT LIST FOR SHOCK/DROP TEST



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CLIENT:	ALPHA NOVATECH			P.O.:	20110125A05	
				JOB NO.	QL-11-0087	
MFGR	DESCRIPTION	RANGE	EQUIP. USED	ASSET NO.	SERIAL NO.	CALIBRATION DUE DATE
AVCO	SM105-8 SHOCK TESTER	3000 G MAX		QL-050	1978	
MTS	SHOCK TABLE MODEL # 846.240	70" DROP MAX DV=8 m/sec	X	QL-009		TIME OF TEST
LAB	DROP TESTER MODEL: 2D-500	24" TO 68"		QL-169		
LANSMONT CORPORATION	TEST PARTNER SOFTWARE VER. 2	3000 G MAX		QL-0479		
ECON	T-05H		X	QL-0494		
	3031A ACCELEROMETER	F.S. 500 g's		QL-		
		SENS. 10 mV/g		QL-		
				QL-		
	3013A ACCELEROMETER	F.S. 500 g's		QL-		
	TRI-AXIAL	SENS. 10 mV/g		QL-		
				QL-		
	3151A ACCELEROMETER	F.S. 200 g's		QL-		
	TRI-AXIAL	SENS. 50 mV/g		QL-		
				QL-		
DYTRAN	3132A ACCELEROMETER	F.S. 50 g's		QL-		
		SENS. 100 mV/g		QL-		
				QL-		
	3141A ACCELEROMETER	F.S. 50 g's	X	QL-0584	137266	12/18/2011
		SENS. 100 mV/g		QL-		
				QL-		
	3200A5T ACCELEROMETER	F.S. 5000 g's		QL-		
		SENS. 1 mV/g		QL-		
				QL-		
	3200B5T ACCELEROMETER	F.S. 500 g's		QL-		
		SENS. 10 mV/g		QL-		
				QL-		



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Quanta Laboratories Test Report

Quanta Laboratories submits this report with our Certificate of Conformance to the requirements of the applicable specifications and with appropriate supporting data, but with no other expressed or implied warranty. Customer assumes full responsibility when using or interpreting the data herein for evaluation and/or reporting purposes.

End of Report
