



AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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U.S.A. 13669-0265
TEL: (315) 472-5270
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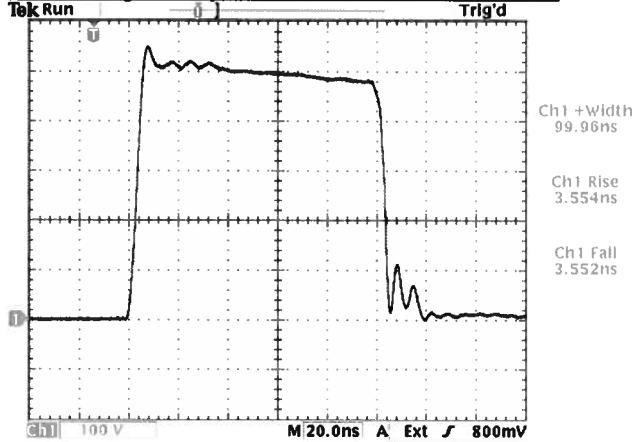
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BOX 5120, LCD MERIVALE
OTTAWA, ONTARIO
CANADA K2C 3H4
TEL: (613) 226-5772
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PERFORMANCE CHECKSHEET

Model: AVL-5-B-P
S.N.: 11286
Date: September 8, 2005

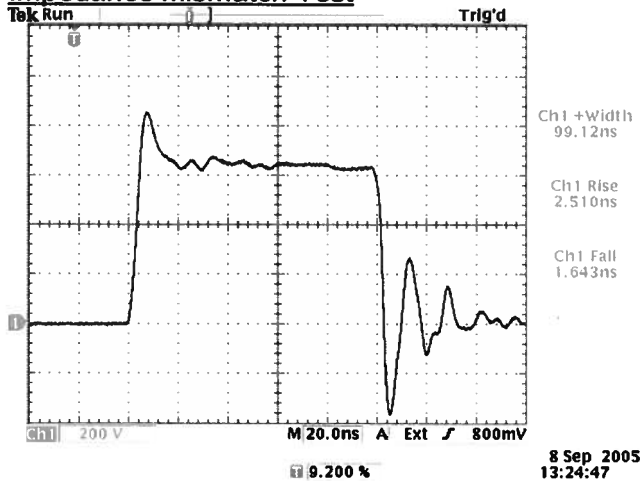
Max. Duty / Amplitude and Rise Time Test



2 kHz, 100 ns, +500V into a 50Ω load.
100 V/div, 20 ns/div.

- a) Output Signal Amplitude: 0 to +500V
- b) Pulse Width (FWHM) : 8 – 100 ns
- c) Rise Time (20%-80%): < 4 ns
- d) Fall Time (80%-20%): < 5 ns
- e) PRF: 1 Hz - 2 kHz
- f) Jitter, Stability: OK
- g) Prime Power: 100-240V AC, 50-60 Hz.

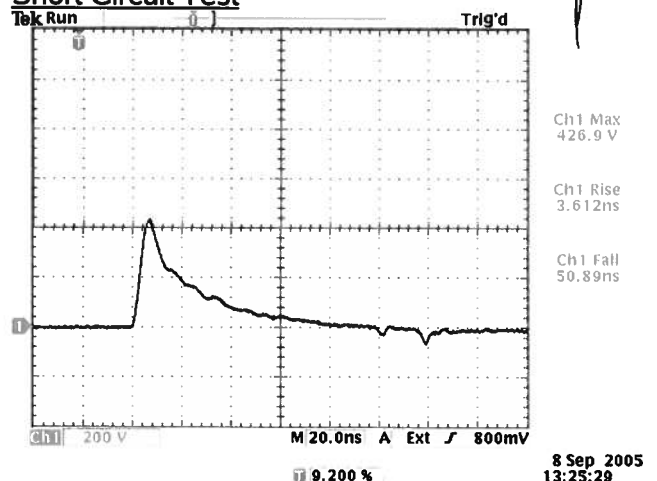
Impedance Mismatch Test



10 Hz, 100 ns, +450V into a 220Ω load.
200 V/div, 20 ns/div.

References levels: 20%, 80%.

Short Circuit Test



10 Hz, 100 ns, +450V into a 50Ω load shorted
with a 12" length of patch cord.
200 V/div, 20 ns/div.



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"-B" Functional Test & Calibration Certificate

Date of test:	September 8, 2005				Tester:	MJC
Programmed model name:	AVL-5-B-P					
Programmed serial number:	11286	MAC address:	00:90:c2:c6:c8:31			
Firmware revision:	3.31					
Internal trigger checked at:	2 Hz	20 Hz	200 Hz	2 kHz		
Actual measured output ¹ :	2.012 Hz	20.10 Hz	200.6 Hz	2.005 kHz		
External trigger checked:	Yes				Gate checked:	Yes
Manual trigger checked:	Yes					
Pulse compression checked:	N/A		Low Amplitude PW Distortion Nulled:	N/A		
Pulse width checked at:	8 ns	25 ns	50 ns	100 ns	10 Hz, +500V to 50 Ohms	
Actual measured output ² :	7.9 ns	24.8 ns	49.3 ns	100.1 ns		
PW _{in} = PW _{out} mode checked:	N/A			DC mode checked:	N/A	
Duty Cycle Limit:	N/A					
Delay nulled:	Yes					
Delay checked at:	100 ns	1 us	10 us	100 us	10 Hz, +500V to 50 Ohms	
Actual measured output ¹ :	100 ns	0.999 us	9.97 us	99.8 us		
Double pulse checked:	N/A					
Invert mode checked:	N/A					
ECL/TTL modes checked:	N/A					
Zout switch checked:	N/A					
Amplitude checked at:	+50V	+100V	+250V	+500V	10 Hz, 100 ns to 50 Ohms	
Actual measured output ² :	+50V	+100V	+251V	+501V		
Amplitude polarity:	+					
Zout calibration:	N/A					
Electronic amplitude control:	N/A					
External amplify mode:	N/A					
Bleeder resistors adequate:	Yes					
Burst mode:	N/A					
Monitor V/I Ratio:	N/A			Monitor offset nulled:		
LCD Monitor calibrated:	N/A					
Offset checked at:	N/A					
Actual measured output ² :	N/A					
Offset nulled (output on):	N/A					
Offset nulled (output off):	N/A					
RS-232 checked:	Yes				Telnet control checked:	N/A
LCD pull-ups installed:	N/A					
PCB 108H oscillator buffer resistor:	N/A		PW, delay bias (1k/820/108H or 1k/604/108M):	N/A		
PCB 108N TP14/C26 resistor:	OK					
PN trigger pull-downs installed:	N/A					
Sync pulse width checked:	100 ns nominal					
Circuit Boards:	PS:	158J	Main:	108N		
Overload Trigger Resistance:	Trips at:	7.7k	Installed:	6.98k 1000 uF		
DC fuses:	Main:	1.6A	Overload:	1.0A		
AC Current:	Quiescent:	0.21A @ 115V 0.16A @ 230V	Max. Load:	0.40A @ 115V 0.23A @ 230V		
AC fuse:	0.5A					
1.5 kV _{RMS} , 5s, switch on, Hypot Test:	OK					
25A RMS Ground Continuity Test:	OK					
Fan operational:	Yes					
Top cover vent required:	Yes					
Photographed:	Yes					

¹ Checked with: Fluke PM6681 Counter (S/N 9446 066 81016),
referred to Datum ExacTime 9390-6000 (S/N 4461) GPS Frequency Reference

² Checked with: Tektronix TDS3052 digital oscilloscope (S/N B014783) for PW ≥ 5 ns,
Tektronix 7704A/7S11/7T11/S4 sampling oscilloscope (Cal. Label 112506) for PW < 5 ns.