



AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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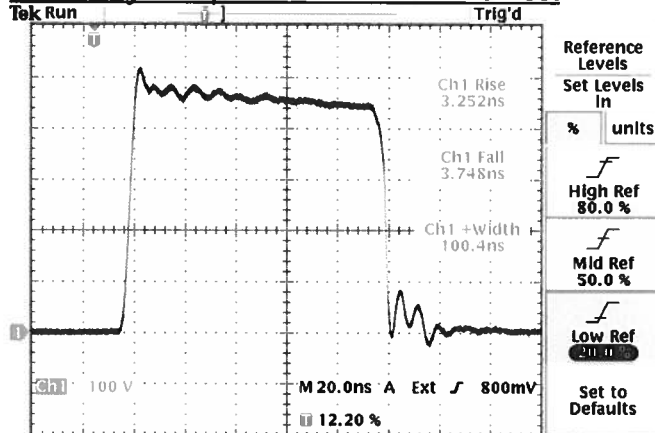
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BOX 5120, LCD MERIVALE
OTTAWA, ONTARIO
CANADA K2C 3H4
TEL: (613) 226-5772
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PERFORMANCE CHECKSHEET

Model: AVL-5-B-P
S.N.: 11364
Date: December 2, 2005

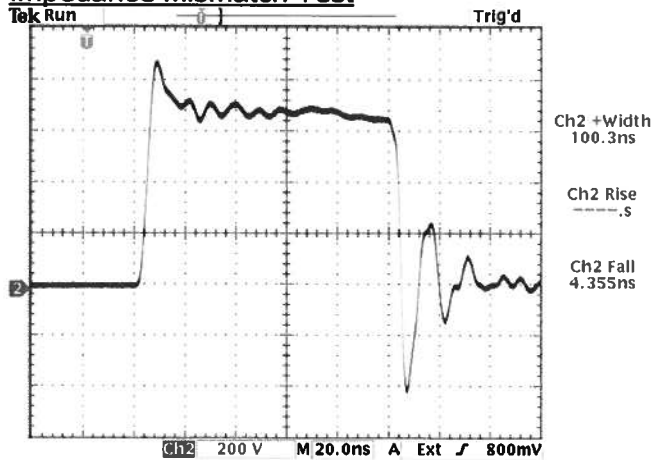
Max. Duty / Amplitude and Rise Time Test



- a) Output Signal Amplitude: 0 to +450V
- 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.

Select Measrmt for Ch1 Remove Measrmt Gating Off High-Low Setup Auto Reference Levels
2 kHz, 100 ns, +450V into a 50Ω load.
100 V/div, 20 ns/div.

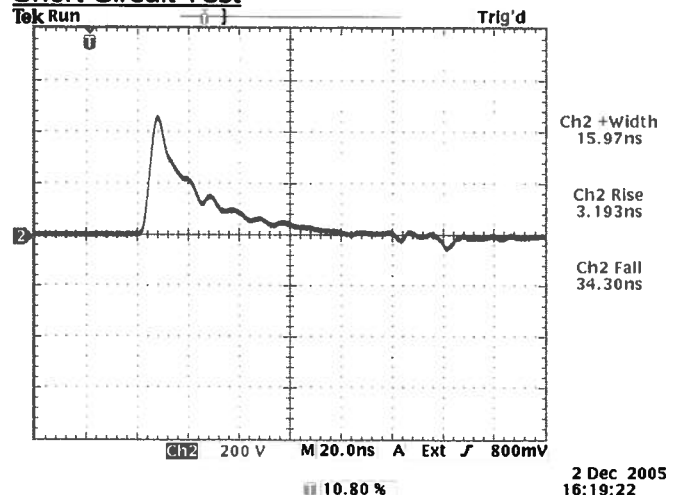
Impedance Mismatch Test



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:	December 2, 2005				Tester:	MJC	
Programmed model name:	AVL-5-B-P						
Programmed serial number:	11364	MAC address:	00:90:c2:c6:a0:e8				
Firmware revision:	3.37						
Internal trigger checked at:	2 Hz	20 Hz	200 Hz	2000 Hz			
Actual measured output ¹ :	2.00 Hz	19.98 Hz	199.8 Hz	1996 Hz			
External trigger checked:	Yes					Gate checked:	Yes
Manual trigger checked:	Yes						
Pulse compression checked:	Yes	Low Amplitude PW Distortion Nulled:				N/A	
Pulse width checked at:	8 ns	25 ns	50 ns	100 ns	10 Hz, +450V to		
Actual measured output ² :	8.1 ns	25.3 ns	50.5 ns	101 ns	50 Ohms		
PWin = PWout 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, +450V to		
Actual measured output ¹ :	100 ns	1.007 us	10.06 us	100.1 us	50 Ohms		
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	+450V	10 Hz, 100 ns		
Actual measured output ² :	+52V	+103V	+252V	+450V	to 50 Ohms		
Amplitude polarity:	+						
Zout calibration:	N/A						
Electronic amplitude control (+ and -):	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				Amplitude-dependent offset nulled:		
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:	Yes						
PN trigger pull-downs installed:	N/A						
Sync pulse width checked:	100 ns nominal						
Circuit Boards:	PS:	158K	Main:	108N			
Overload Trigger Resistance:	Trips at:	8.8k	Installed:	8.2k 1000 uF			
DC fuses:	Main:	1.6A	Overload:	0.8A			
AC Current:	Quiescent:	0.20A @ 115V	Max. Load:	0.38A @ 115V			
		0.16A @ 230V		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:	No						
Photographed:	Yes						

¹ Checked with: Fluke PM6681 Counter (S/N 9446 066 81016), referenced 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.