

PULSE GENERATOR  
PERFORMANCE CHECK

Model: *AU-109B-4-B-F*

S.N.: *10943*

Date: *JULY 29 2004*

- a) Output signal amplitude:  
*0 TO +100 AMP (TO  
0 TO +5V)*
- b) Pulse width:  
*10US - 1 SEC (+DC)*
- c) Rise time:  
*≤ 7 us*
- d) Fall time:  
*≤ 7 us*
- e) PRF:  
*0 TO 1 KHz*
- f) Jitter, stability:  
*OK*
- g) Prime power:
  - a) *100 → 240V  
50 → 60 Hz*
  - b) *+10V, 100 AMP  
LAB PS*

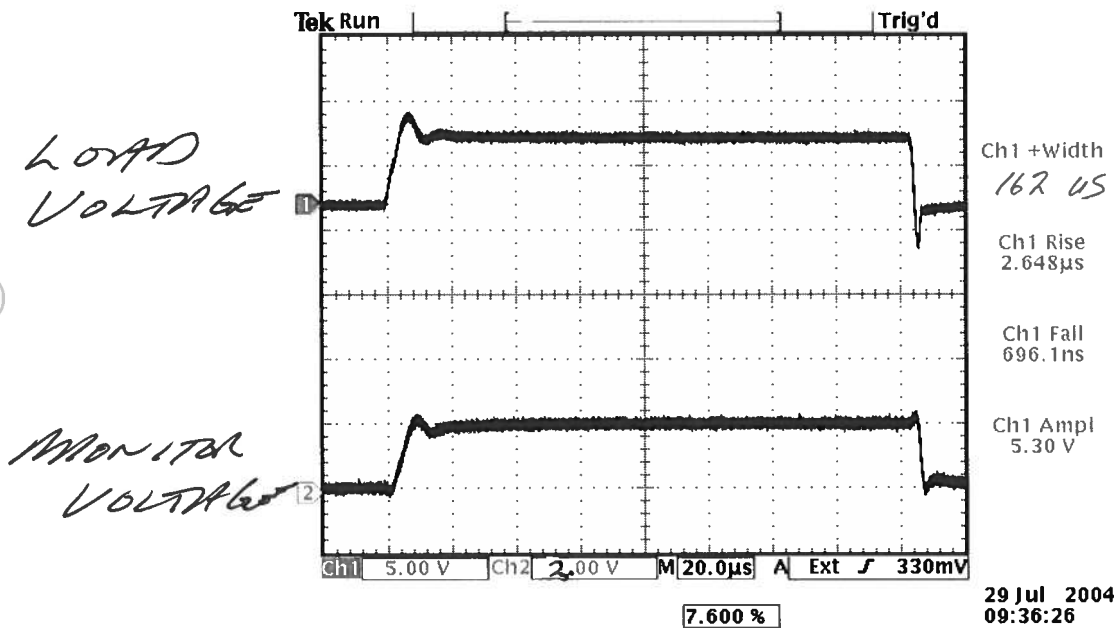


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10943

NARROW PULSE, LOW DUTY CYCLE

$R_L = 0.05 \Omega$ , (LOW  
INDUCTANCE  
50 WATT)



⑬

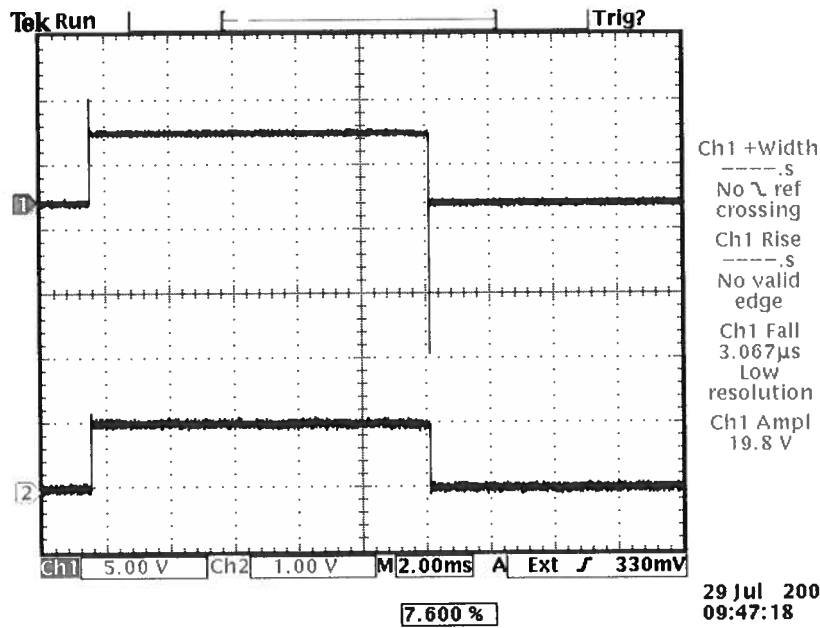
10943

WIDE PULSE, HIGH DUTY CYCLE

$R_{lc} = 0.05 \Omega$ , HIGH INDUCTANCE,  
500 WATT.

LOAD  
VOLTAGE

MONITOR  
VOLTAGE  
(TO 50  $\Omega$ )





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## "-B" Functional Test & Calibration Certificate

Date of test:	July 29, 2004				Tester:	MJC
Programmed model name:	AV-109B-4-B-R5-P					
Programmed serial number:	10943		MAC address:	N/A		
Firmware revision:	2.58					
Internal trigger checked at:	1 Hz	10 Hz	100 Hz	1000 Hz		
Actual measured output <sup>1</sup> :	0.997 Hz	9.94 Hz	99.3 Hz	995 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:	10 us	100 us			1 Hz, 100A to 0.05Ω	
Actual measured output <sup>2</sup> :	9.0 us	100.7 us				
PW <sub>in</sub> = PW <sub>out</sub> mode checked:	Yes			DC mode checked:	Yes	
Duty Cycle Limit:	N/A					
Delay nulled:	Yes (at trigger point)					
Delay checked at:	10 us	100 us	1 ms	10 ms	Measured at trigger point	
Actual measured output <sup>1</sup> :	10.0 us	100.2 us	1.004 ms	10.05 ms		
Double pulse checked:	N/A					
Invert mode checked:	N/A					
ECL/TTL modes checked:	N/A					
Zout switch checked:	N/A					
Amplitude checked at:	+3 A	+10A	+30A	+100A	5 Hz, 300 us, into 0.50Ω, measured with Pearson 101.	
Actual measured output <sup>2</sup> :	+3.00 A	+10.0A	+29.9A	+100.8A		
Amplitude polarity:	+					
Zout calibration:	N/A					
Electronic amplitude control:	N/A					
External amplify mode:	N/A					
Bleeder resistors adequate:	N/A					
Burst mode:	N/A					
Monitor V/I Ratio:	2V / 100A		Monitor offset nulled:		Yes	
LCD Monitor calibrated:	Yes					
Offset checked at:	N/A					
Actual measured output <sup>2</sup> :	N/A					
Offset nulled (output on):	N/A			Amplitude-dependent offset nulled:		
Offset nulled (output off):	N/A					
RS-232 checked:	Yes					
LCD pull-ups installed:	N/A					
PCB 108G/H resistor updates:	N/A					
PN trigger pull-downs installed:	N/A					
Sync pulse width checked:	100 ns nominal					
Circuit Boards:	PS:	158E	Main:	108H		
Overload Trigger Resistance:	Trips at:	N/A	Installed:	N/A		
DC fuses:	Main:	1.6A	Overload:	N/A		
AC Current:	Quiescent:	0.30A @ 115V	Max. Load:	N/A @ 115V		
		0.19A @ 230V		N/A @ 230V		
AC fuse:	0.5A					
1.5 kV RMS, 5 second Hypot Test:	OK					
25A RMS Ground Continuity Test:	OK					
Fan operational:	Yes					
Photographed:	Yes					

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

<sup>2</sup> 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.