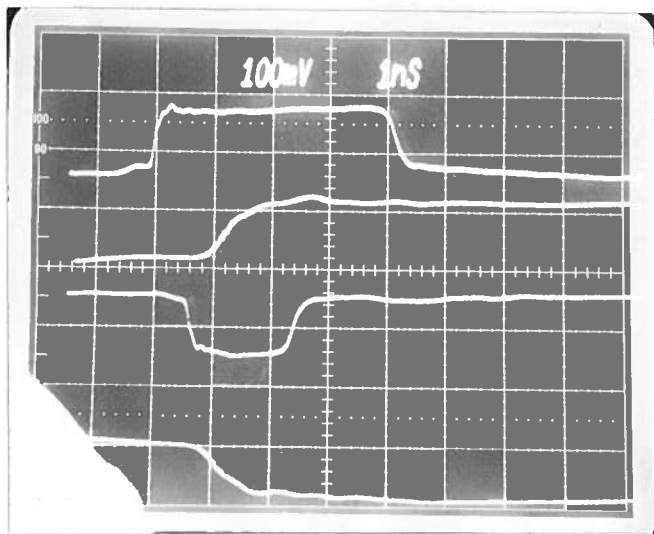


PULSE GENERATOR
PERFORMANCE CHECK

Model: *MP-AV-1-B-PN-M-0A*

S.N.: *10866*

Date: *MAR 16 2004*



40dB ATTEN - .10 VOLT/DIV

- a) Output signal amplitude:
0 TO ±10 Volts (70.50 n)
- b) Pulse width:
0.4 TO 4.0 NS
- c) Rise time:
≤ 200 pS.
- d) Fall time:
≤ 200 pS
- e) PRF:
0 TO 1.0 MHz.
- f) Jitter, stability:
OK
- g) Prime power:
100 TO 240 V
50 - 60 MHz.

①
②
③
④

- ① *Pout 1 NS/DIV*
- ② *Pout 200 pS/DIV, RISE TIME*
- ③ *Nout 1 NS/DIV*
- ④ *Nout 200 pS/DIV, RISE TIME*

PAF = 100 KHz

[Signature]



AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS
SINCE 1975

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OTTAWA, ONTARIO
CANADA K2C 3H4
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"-B" Functional Test & Calibration Certificate

Date of test:	March 17, 2004				Tester:	MJC
Programmed model name:	AVP-AV-1-B-EA-M-PN					
Programmed serial number:	10866					
Firmware revision:	2.57					
Internal trigger checked at:	1 Hz	1 kHz	10 kHz	100 kHz	1 MHz	
Actual measured output ¹ :	1.002 Hz	0.999 kHz	10.00 kHz	100.0 kHz	1.001 Mhz	
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:	0.4 ns	1 ns	2.5 ns	4 ns	100 kHz, +10V to 50Ω	
Actual measured output ² :	0.38 ns	1.05 ns	2.5 ns	4.0 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	100 Hz, +10V to 50Ω	
Actual measured output ¹ :	99.9 ns	1.004 us	10.02 us	100.1 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:	-2V	+5V	-8V	+10V	100 kHz, 2 ns PW to 50Ω	
Actual measured output ² :	-1.8V	+5.1V	-8.0V	+10.2V		
Amplitude polarity:	+/-					
Zout calibration:	N/A					
Electronic amplitude control:	OK					
External amplify mode:	N/A					
Bleeder resistors adequate:	N/A					
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					
LCD pull-ups installed:	N/A					
PCB 108G/H resistor updates:	Yes					
PN trigger pull-downs installed:	Yes					
Sync pulse width checked:	100 ns					
Circuit Boards:	PS:	158E	Main:	108H		
Overload Trigger Resistance:	Trips at:	N/A	Installed:	N/A		
DC fuses:	Main:	1A	Overload:	1A (spare)		
AC Current:	Quiescent:	0.22A @ 115V 0.16A @ 230V	Max. Load:	0.26A @ 115V 0.18A @ 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					

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