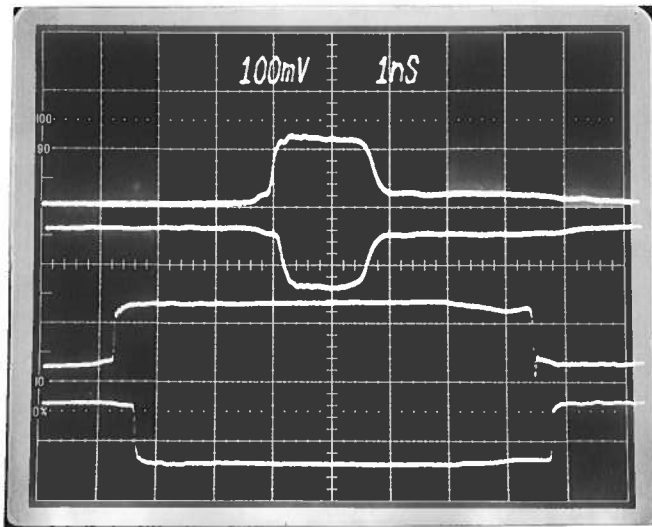


PULSE GENERATOR
PERFORMANCE CHECK

Model: *MUPP-1-B-PN*

S.N.: *10732*

Date: *OCT 10 2003*



40 dB ATTN ∴ 10 V/DIV

- 1) 2 ns PW, 1 ns/DIV, +10V*
- 2) 2 ns PW, 1 ns/DIV, -10V*
- 3) 35 ns PW, 5 ns/DIV, +10V*
- 4) 35 ns PW, 5 ns/DIV, -10V*

PRF = 100 KHz

- a) Output signal amplitude:
0 to ±10 Volts (to 50Ω)
- b) Pulse width:
0.2 - 100 ns
- c) Rise time:
≤ 200 ps for PW ≤ 5 ns
≤ 100 ps for PW ≥ 5 ns
- d) Fall time:
≤ 200 ps for PW ≤ 5 ns
≤ 135 ps for PW ≥ 5 ns
- e) PRF:
0 to 1 MHz
- f) Jitter, stability:
OK
- g) Prime power:

100 V ± 10V
50-60 dB



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:	October 9, 2003				Tester:	MJC	
Programmed model name:	AVPP-1-B-P-PN						
Programmed serial number:	10732						
Firmware revision:	2.53						
Internal trigger checked at:	1 Hz	100 Hz	1 kHz	10 kHz	1 MHz		
Actual measured output ¹ :	0.99 Hz	99.0 Hz	0.992 kHz	10.00 kHz	1.03 MHz		
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:	1 ns	4 ns	20 ns	100 ns	10 kHz, +10V to 50Ω		
Actual measured output ² :	0.95 ns	3.9 ns	20 ns	102 ns			
PWin = PWout mode checked:	N/A		DC mode checked:				N/A
Duty Cycle Limit:	10%						
Delay nulled:	Yes						
Delay checked at:	100 ns	200 ns	500 ns	10kHz, 100ns, +10V to 50Ω			
Actual measured output ¹ :	99.9 ns	204 ns	507 ns				
Double pulse checked:	N/A						
Invert mode checked:	N/A						
ECL/TTL modes checked:	N/A						
Zout switch checked:	N/A						
Amplitude checked at:	-10 V, 2 ns	-10V, 50 ns	+10V, 2 ns	+10V, 50 ns			
Actual measured output ² :	-10.0V	-10.0 V	+10.2V	+10.0V			
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:	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:	Yes						
PN trigger pull-downs installed:	Yes						
Sync pulse width checked:	200 ns nominal						
Circuit Boards:	PS:	93	Main:	108G			
Overload Trigger Resistance:	Trips at:	N/A	Installed:	N/A			
DC fuses:	Positive:	N/A	Negative:	N/A			
AC Current:	Quiescent:	0.39A @ 100V	Max. Load:	0.41A @ 115V			
		0.22A @ 230V		0.23A @ 230V			
AC fuse:	1A						
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 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.