



P.O. BOX 265
OGDENSBURG, NY
U.S.A. 13669-0265

TEL: 888-670-8729 (USA & Canada) or +1-613-686-6675 (Intl)
FAX: 800-561-1970 (USA & Canada) or +1-613-686-6679 (Intl)

BOX 5120, LCD MERIVALE
OTTAWA, ONTARIO
CANADA K2C 3H5

info@avtechpulse.com - http://www.avtechpulse.com/

COMPARISON OF THE AV-1010-B, AV-1011-B, AV-1015-B AND AGILENT 8114 A

Model:	AV-1010-B, AV-1011-B	AV-1015-B	Agilent 8114 A
Pulse output amplitude: ($R_L = 50 \text{ Ohms}$)	≤ 10 to 100 Volts (for $Z_{out} = 2 \Omega$) ≤ 1 to 50 Volts (for $Z_{out} = 50 \Omega$)	≤ 5 to 50 Volts (for $Z_{out} = 2 \Omega$) ≤ 1 to 25 Volts (for $Z_{out} = 50 \Omega$)	≤ 2 to 100 Volts (for "HI Z" mode) ≤ 1 to 50 Volts (for "50 Ohm" mode)
Max load current:	2 Amps (8 Amps possible with AVX-MRB6 Pulse Transformer)	1 Amp (4 Amps possible with AVX-MRB6 Pulse Transformer)	2 Amps
Pulse width (FWHM):	AV-1010-B: 20 ns to 10 ms AV-1011-B: 100 ns to 1 ms	20 ns to 10 ms	10 ns to 150 ms
Rise & fall time:	≤ 10 ns, 20%-80%		≤ 12 ns, 10%-90% (for "HI Z" mode) ≤ 7 ns, 10%-90% (for "50 Ohm" mode)
Pulse repetition rate:	1 Hz to 1 MHz	1 Hz to 10 MHz	1 Hz to 15 MHz
Maximum duty cycle:	10% into 50 Ω loads, 50% into > 1 k Ω loads	25% into 50 Ω loads, 50% into > 200 Ω loads	16% for maximum output into a 50 Ohm load in "50 Ohm" mode.
Output impedance:	$\approx 2 \Omega$ or 50 Ω , switchable		High Impedance or 50 Ω , switchable
Required load impedance:	$\geq 50 \Omega$		50 Ω is required
Output stage configuration:	Voltage source which is highly tolerant to load mismatches, providing for user-friendly operation.		Current source. A 50 Ω load is mandatory, either internally or externally. Will not operate into a high impedance due to the current-source configuration of the output.
Maximum average output power:	20 Watts	12.5 Watts	30 Watts
Output protection:	The output is protected against short and open circuits, and high duty cycles		Protected against power dissipation.
Output polarity:	Positive or negative, switchable		Positive or negative, switchable
DC offset:	0 V, fixed (0 to ± 20 V option)	0 V, fixed	Option, 25 Volts
Jitter:	$\leq \pm 35$ ps $\pm 0.015\%$ of sync delay		Not specified
Pulse aberrations:	$\leq \pm 1$ V $\pm 10\%$ of amplitude		< 5% of amplitude
Double pulse mode spacing (leading edges):	100 ns to 1 second		20 ns to 999 ms
Sync to main out delay:	0 to ± 1 second		0 to 999 ms
Sync output:	+3V, 100 ns ($R_L > 50\Omega$)		+2.5V, ~50% duty cycle ($R_L > 50\Omega$)
Gated operation:	TTL, synchronous or asynchronous, active high or low, switchable.		TTL, inhibit on edge or level
External trigger:	TTL (Low = 0V, High = +3V to +5 Volt) pulse, 50 ns or wider.		Adjustable level, +/- 50V
External trigger propagation delay:	Advance, Delay, Double Pulse: < 200 ns $PW_{IN} = PW_{OUT}$: < 120 ns		?
Burst mode	Option, 1-500 pulses (see http://www.avtech.com/options/br)		Standard, 1-65536 pulses
GPIB & RS-232 control:	Yes		Yes
Ethernet control:	Optional. See http://www.avtechpulse.com/options/tnt2 .		No
Connectors:	BNC female		BNC female
Power requirements:	100 - 240 Volts, 50 - 60 Hz		100 - 240 Volts, 50 - 60 Hz
Dimensions:	100 mm x 430 mm x 375 mm (3.9" x 17" x 14.8")		5.2" x 16.3" x 16.6"
Chassis:	Aluminum, ≤ 10 kg (22 lbs).		?, 14 kg
Temperature range:	+5°C to +40°C	+5°C to +40°C	0°C to +50°C
Optional rack-mount kit:	Yes, -R5 option	Yes, -R5 option	Yes, option 1 CM