



AVB1-2-C

- ◆ 200 to 900 MHz
- ◆ 50, 80 and 100 Volt models

- ◆ Fixed and tunable models
- ◆ Instrument and module versions

The AVB1 series provides peak-to-peak outputs of 50, 80 or 100 Volts, center frequencies in the range of 200 to 900 MHz, and maximum pulse repetition frequency (PRF) of 100 kHz, 200 kHz, or 500 kHz.

Model AVB1-1-C is a fixed-tuned unit with a center frequency in the range of 200 to 400 MHz and a maximum peak-to-peak amplitude of 100 Volts (non-adjustable). The PRF is variable from 0 to 100 kHz. The center frequency must be specified at the time of ordering.

Model AVB1-2-C also operates in the frequency range of 200 to 400 MHz, but the frequency is variable over the full range (using a one-turn front-panel control or by an externally applied DC control voltage in the range of 0 to +10V). The output amplitude is variable from 0 to 50 Volts peak-to-peak, using a one-turn control.

Model AVB1-3-C also provides a maximum output of 50 Volts but the frequency is tunable (by one-turn control or by an externally applied control voltage) from 400 MHz to 900 MHz.

Model AVB1-4-C center frequency may be tuned over a $\pm 20\%$ range using a one-turn control. The center of the tunable range must be specified at the time of ordering, and it must be between 250 and 833 MHz. The AVB1-4-C provides amplitude of up to 50 Volt with a pulse repetition frequency of up to 500 kHz.

Model AVB1-5-C is similar but provides a maximum peak-to-peak

output of 80 V at repetition rates up to 200 kHz.

When ordering Model AVB1-4-C or AVB1-5-C the required center frequency in the range of 250 to 833 MHz must be specified.

All models are designed for operation into 50 Ohm loads. Some of the units are available in module form (requiring +15 VDC prime power), and all are available in the -C format. The modules require a TTL-level trigger signal. The output amplitude for module units is fixed at the maximum.

The pulse repetition frequency of -C units is adjustable using the internal clock oscillator, which is controlled by a four-position decade range switch and a one-turn fine control. A delay control and a sync output are provided for sampling scope triggering purposes. The units can also be triggered externally using a TTL-level pulse. The propagation delay in the externally triggered mode is typically 50 ns. A DC offset or bias insertion option is available with most units. Units with this option include a circuit similar to Model AVX-T at the output. The required DC offset or bias is applied directly to rear-panel solder terminals. Models with the -C suffix require 100-240V, 50-60 Hz prime power.

See the AVA to AVD families for 20 Volt VHF and UHF models and the AVB2-C series for 400 and 800 Volt models.

Contact the factory (info@avtechpulse.com) with your special requirements!

Model:	AVB1-1-C ¹ AVB1-1	AVB1-2-C ¹ AVB1-2	AVB1-3-C ¹ AVB1-3	AVB1-4-C ¹	AVB1-5-C ¹
Frequency: (MHz)	200 - 400 fixed-tuned ²	200 - 400 tunes full range ³	400 - 900 tunes full range ³	250 - 833 fixed-tuned ⁴ , $\pm 20\%$	250 - 833 fixed-tuned ⁴ , $\pm 20\%$
Amplitude ⁵ : (to 50 Ohms)	$\geq 100 V_{pp}$ (fixed)	0 to 50 V_{pp}	0 to 50 V_{pp}	0 to 50 V_{pp}	0 to 80 V_{pp}
Maximum repetition rate:	100 kHz	100 kHz	100 kHz	500 kHz	200 kHz
Spurious signals: (WRT peak)	26 dB				
Propagation delay:	≤ 50 ns (Ext trig in to pulse out)				
Jitter:	± 15 ps (Ext trig in to pulse out)				
DC offset option ⁶ :	Apply required DC offset (± 50 Volts, 250 mA max) to back-panel solder terminals				
Trigger required:	Modules, and -C ext trig mode: +5 Volts, 50 to 500 ns (TTL)				
Sync delay:	Sync out to pulse out, -C units only: Variable 0 to 200 ns				
Sync output: (-C only)	+ 3 Volts, 200 ns, will drive 50 Ohm loads				
Connectors:	-C: Modules:	Out: SMA, Out: SMA,	Trig: BNC, In: SMA,	Sync (-C only): BNC Power: Solder terminals	
Power requirements:	-C: Modules:	100 - 240 Volts, 50 - 60 Hz +15 Volts, 400 mA			
Dimensions:	-C:	100 x 430 x 375 mm (3.9" x 17" x 14.8")			
(H x W x D)	Modules:	43 x 66 x 107 mm (1.7" x 2.6" x 4.2")	43 x 76 x 152 mm (1.7" x 3" x 6")	N/A	
Chassis material:	-C units: anodized aluminum, with blue plastic trim.				Modules: cast aluminum, blue enamel
Temperature range:	+5°C to +40°C				

1) -C suffix indicates stand-alone lab instrument with internal clock and line powering. No suffix indicates miniature module requiring DC power and external trigger. (See <http://www.avtechpulse.com/formats> for additional details of the basic formats).
2) Specify required frequency at time of ordering.
3) May be tuned either by front-panel one-turn control or by applying 0 to +10 Volts DC to a rear-panel BNC connector (-C units) or solder terminal (modules). Input impedance greater than 10 kilohms.

4) The required center frequency in the range of 250 MHz to 833 MHz must be specified at the time of ordering. A one-turn front-panel control allows tuning ($\pm 20\%$) around the specified center frequency.
5) The output amplitude for all module units is fixed at the maximum.
6) For DC offset option suffix model number with -OS. Avtech Model AVX-T bias tee can also be used to obtain DC offset.