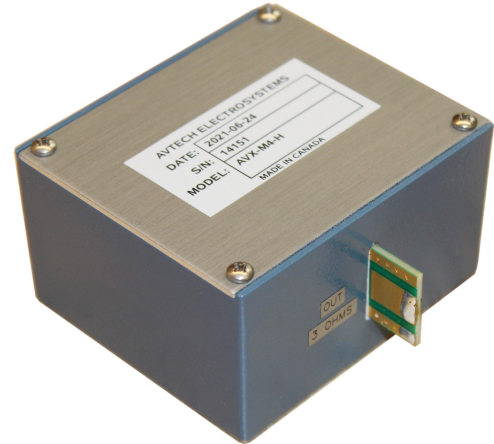


AVX-M4 HIGH CURRENT QUADRUPLERS

The AVX-M4 series will quadruple the current output of a pulser that normally intended to drive a 50Ω load (and, correspondingly, reduce the voltage output by a factor of 4).

The required load impedance is $50\Omega \div 4^2 = 3.1\Omega$.

Model:	AVX-M4	AVX-M4-H
Impedance match:	50Ω to 3.1Ω	
Basic function:	current quadrupling	
Max. voltage in	350 V	750V
Max. voltage out	87 V	188V
Max. current out	28 A	63A
Maximum pulse width:	100 ns	200 ns @ 750V 1 us @ 100V
Rise time (20%-80%):	2 ns	5 ns
Drop (max):	< 5%	
Dimensions: (H×W×D)	43×76×76mm 1.7×3×3"	
Connectors:	In: Out:	SMA Microstrip line, with ground plane bordering the output center conductor



AVX-M4-H

AVX-MR HIGH-POWER, WIDE-PULSE TRANSFORMERS

- Voltage-doubling units (to 200 Ohms)
- Output amplitudes to 800 Volts
- Current-doubling and quadrupling units
- Output amplitudes to 16 Amperes
- Pulse widths to 10 us
- 8 models

Avtech offers a wide range of high-amplitude, high-pulse width voltage-boosting (-MRA) and current-boosting matching transformers (-MRB). These models accommodate wider pulse widths than the AVX-M4 series described above.

For voltage-doubling applications, Avtech offers 3 AVX-MRA series models rated at peak input voltages of 100, 200 and 400 Volts all with maximum pulse width ratings of 5 us and rise times of less than 5 ns. Voltage-doubling transformers require a load impedance of 200 Ohms for proper operation.

For current-boosting applications, the AVX-MRB1, AVX-MRB2, and AVX-MRB4 current-doubling transformers have peak input voltage ratings of 100, 200 and 400 Volts and maximum pulse width ratings of 5 us, and require load impedances of 12.5 Ohms.

In addition, Avtech offers a current-doubling transformer (AVX-MRB5) and a current-quadrupling transformer (AVX-MRB6) specifically designed for use with the AV-1010-C, AV-1011-B and AV-1015-B pulse generators.

Lower voltage models have SMA connectors. Medium voltage models have BNC connectors. Type N output connectors are used on units providing amplitudes greater than 500 Volts. Micro-strip output terminals are used on the AVX-MRB5 and -MRB6. Both sides of the transformer are ground-referred (i.e., not floating).

The input port of the transformer includes a shunt 470Ω or 1kΩ resistance followed by a series DC blocking capacitor. As a result, the input and output ports are not reversible.

Model:	AVX-MRA1	AVX-MRB1	AVX-MRA2	AVX-MRB2	AVX-MRA4	AVX-MRB4	AVX-MRB5	AVX-MRB6	
Max. voltage in	100 V	100 V	200 V	200 V	400 V	400 V	100 V	100 V	
Max. voltage out	200 V	50 V	400 V	100 V	800 V	200 V	50 V	25 V	
Max. current out	1 A	4 A	2 A	8 A	4 A	16 A	4 A	8 A	
Function:	voltage-doubling	current-doubling	voltage-doubling	current-doubling	voltage-doubling	current-doubling	current-doubling	current-quadrupling	
Max. pulse width:	5 us						10 us		
Impedance (Ohms):	50 to 200	50 to 12.5	50 to 200	50 to 12.5	50 to 200	50 to 12.5	50 to 12.5	50 to 3	
Rise time (20%-80%):	1 ns		3 ns		5 ns		20 ns	30 ns	
Drop (max):	< 5%								
Dimensions:	mm:	43×66×109		43×76×76		43×66×109		43×76×152	
	inches:	1.7×2.6×4.3		1.7×3.0×3.0		1.7×2.6×4.3		1.67×3×6	
Connectors:	In:	SMA		BNC		BNC		BNC	
	Out:	SMA		BNC		N		BNC	
								1 cm microstrip PCB ¹	

1) If the load can not be soldered directly to the microstrip PCB, consider using AV-LZ12 or AV-LZ3 low-characteristic-impedance transmission lines.