

**SPECIFICATION SHEET**

**JFW MODEL 50P-2160**

**2 CHANNEL USB CONTROLLED SOLID STATE  
PROGRAMMABLE ATTENUATOR**

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Frequency Range	400-8400 MHz
Impedance	50 Ohms nominal
Attenuation Range	0-95 dB in 1 dB steps
Attenuation Steps	1, 2, 4, 8, 16, 32 and 32 dB
VSWR	<1.8:1 typical / 2.2:1 maximum
Insertion Loss	4.0 dB typical @ 400 MHz 5.0 dB typical @ 2000 MHz 5.2 dB typical @ 4000 MHz 6.2 dB typical @ 6000 MHz 6.7 dB typical @ 8400 MHz 7.5 dB maximum 400-8400 MHz
Attenuation Accuracy (guaranteed monotonic)	± 0.70 dB maximum (1-5 dB) ± 1.00 dB maximum (6-13 dB) ± 1.25 dB maximum (14-21 dB) ± 1.50 or 6% maximum (22-95 dB) (whichever is greater)
Isolation (channel-to-channel)	> 105dB typical
RF Input Power	+24 dBm (operating) +28 dBm (no damage)
Switching Speed	4 microseconds maximum (after command is received and processed) (1 millisecond typical processing time)
DC Supply	+5 Vdc @ 400mA typical (Powered via USB)
Control	USB control (CDC-ACM Serial Device)
Test Software (Microsoft .NET 4.0+) (Windows Vista or greater)	The included JFW software allows control of multiple USB devices.  Unit is also compatible with Python, C#, PuTTY (any development tool with COM Port interfacing).
DC Connector	USB-C 2 meter USB A Male to USB-C Cable Included
RF Connector	SMA female
Operating Temperature Range	-40°C to +85°C
Physical Size	See outline drawings 092-10317

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