

**SPECIFICATION SHEET**

**JFW MODEL 50P-2103**

**USB CONTROLLED SOLID STATE PROGRAMMABLE  
ATTENUATOR**

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Frequency Range	0.1-18 GHz
Impedance	50 Ohms nominal
Attenuation Range	0-63 dB in 0.5 dB steps
Attenuation Steps	0.5, 1, 2, 4, 8, 16 and 32 dB
VSWR	1.6:1 maximum 0.1-6 GHz 2.0:1 maximum 6-18 GHz
Attenuation Accuracy	± 0.25 dB 0.5-3.5 dB ± 0.50 dB 4-14.5 dB ± 0.75 dB 15-31.5 dB ± 1.00 dB or 2% 32-63 dB (whichever is greater)
Insertion Loss	7.0 dB maximum 2.0 dB typical @ 0.1 GHz 2.7 dB typical @ 3 GHz 3.2 dB typical @ 6 GHz 4.5 dB typical @ 12.4 GHz 6.4 dB typical @ 18 GHz
RF Input Power	+24 dBm (operating - Input Side) +15 dBm (operating - Output Side)  +25 dBm (no damage - Input Side) +16 dBm (no damage - Output Side)
Switching Speed	1 microsecond maximum 0.35 microseconds typical
DC Supply	+5 Vdc @ 2mA nominal
Control	USB control
Test Software (Microsoft .NET 4.0+) (Windows Vista or greater)	The included JFW software allows control of multiple USB devices. JFW managed library available for development in user made applications.
DC Connector	USB MINI-B 6' USB A to USB Mini-B Cable Included
RF Connector	SMA
Operating Temperature Range	-40°C to +85°C
Physical Size	See outline drawing 092-9407

ECR/ECN #	DATE	REV	APPR / DATE	ECR/ECN #	DATE	REV	APPR / DATE
	10/17/2019		CLK 10/17/2019				
30373	05/06/2020	A	TRS 05/06/2020				
30836	12/21/2020	B	TRS 12/21/2020				