SPECIFICATION SHEET
JFW MODEL 50PA-220-XX
PROGRAMMABLE ATTENUATOR ASSEMBLY

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Frequency Range	200-6000 MHz
Attenuation Range	0-95 dB in 1 dB steps
Configuration	Individually controlled solid-state programmable attenuators. Number of attenuators can be selected from 9 to 16 attenuators.
Enclosure Type	19 inch rack mount (2RU high for 9-16 attenuators w/ SMA female) (3RU high for 9-12 attenuators w/ N female) (4RU high for 13-16 attenuators w/ N female)
Impedance	50 Ohms nominal
Startup/Default States (configurable)	Attenuators to 95dB at startup (see ATTEN command) DHCP enabled (see NET command) 4 Ethernet users (see NET command) Prompts off (see PROMPT command) All of these default settings can be changed by user. Unit can be configured for up to 12 Ethernet users.
VSWR	2.0:1 maximum < 1.9:1 typical 200-700 MHz < 1.6:1 typical 700-6000 MHz
Attenuation Accuracy	± 0.50 dB 1-3 dB ± 0.75 dB 4-7 dB ± 1.00 dB 8-11 dB ± 1.25 dB or 4% 12-95 dB (whichever is greater) (guaranteed monotonic)
Insertion Loss	8.8 dB maximum 4.0 dB typical @ 200 MHz 4.5 dB typical @ 700 MHz 8.2 dB typical @ 6000 MHz
RF Input Power*	+27 dBm average +33 dBm no damage
Switching Speed	4 microseconds typical (after command is received and processed) (3 milliseconds typical processing time)
Manual Control	20-Button Keypad and LCD display (IP Address configurable via keypad) (Net mask configurable via keypad) (Gateway configurable via keypad) (Baud rate configurable via keypad)

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Remote Control	Ethernet (DHCP, TCP/IP, 10/100, up to 12 users)
	RS-232 (up to 115200 Baud)

Remote Commands

Attenuator Control Commands:
Atten, Set Attenuator, Read Attenuator, Set All Attenuators, Read All Attenuators, Read All Extended, Fade Attenuator, Variable Attenuator Handover, Block, Set Block, Read Block, Read All Blocks, Fade Block, Variable Block Handover

System Commands:
Help, Identification, Store, Recall, Pause, Net, Serial, Close, Disconnect, MOTD, Date, Message, Restrict, IDENT, Name, Show Users, Reboot, Uptime, Prompt

RF Connector	N or SMA female
Operating Temperature Range	0°C to +50°C
AC Supply	100-240 VAC @ 47-63 Hz

Outline Drawing Numbers

092-8343 (SMA female, 9-16 attenuators)
092-8383 (N female, 9-12 attenuators)
092-8384 (N female, 13-16 attenuators)

Example Model Numbers

50PA-220-09 SMA (9 attenuator)
50PA-220-10 SMA (10 attenuators)
50PA-220-11 SMA (11 attenuators)
50PA-220-12 SMA (12 attenuators)
50PA-220-13 SMA (13 attenuators)
50PA-220-14 SMA (14 attenuators)
50PA-220-15 SMA (15 attenuators)
50PA-220-16 SMA (16 attenuators)
50PA-220-09 N   (9 attenuator)
50PA-220-10 N   (10 attenuators)
50PA-220-11 N   (11 attenuators)
50PA-220-12 N   (12 attenuators)
50PA-220-13 N   (13 attenuators)
50PA-220-14 N   (14 attenuators)
50PA-220-15 N   (15 attenuators)
50PA-220-16 N   (16 attenuators)

Future Expansion

If your testing needs change, you can have your 50PA-220-XX upgraded to have additional attenuators. This model is designed to control up to a maximum of 16 attenuators.

* Units shipped before 10/5/2017 (date code 1740) are only rated at +20dBm maximum. The JFW date code is a four digit code (YYWW) that follows the six digit serial number. For example date code 1908 is the 8th week of 2019.

ECR/ECN #	DATE	REV	APPR / DATE	ECR/ECN #	DATE	REV	APPR / DATE
	07/28/2015		TRS 07/28/2015	28495	02/09/2018	C	TRS 02/09/2018
25640	08/10/2015	A	TRS 08/10/2015	29857	10/02/2019	D	TRS 10/03/2019
28159	10/05/2017	B	CLK 10/05/2017				

JFW FORM E-7-F REV F