

# ***Transceiver Test Systems***

## ***Section 3***



# Transceiver Test Systems

## Model Number Index

Please add connector type to the end of part number to complete model number (Example: 50PMA-010 N).

Single Programmable Attenuator Systems					
Model Number	Impedance	Configuration	Frequency Range	Control	Page
50PMA-010	50 Ohms	9 Port Transceiver Tester	30-400 MHz	Ethernet	3-5
50PMA-011	50 Ohms	17 Port Transceiver Tester	20-500 MHz	Ethernet/RS-232	3-7
50PMA-015	50 Ohms	4 Port Transceiver Tester	1000-2000 MHz	Ethernet	3-3

## Custom Capabilities with no NREs

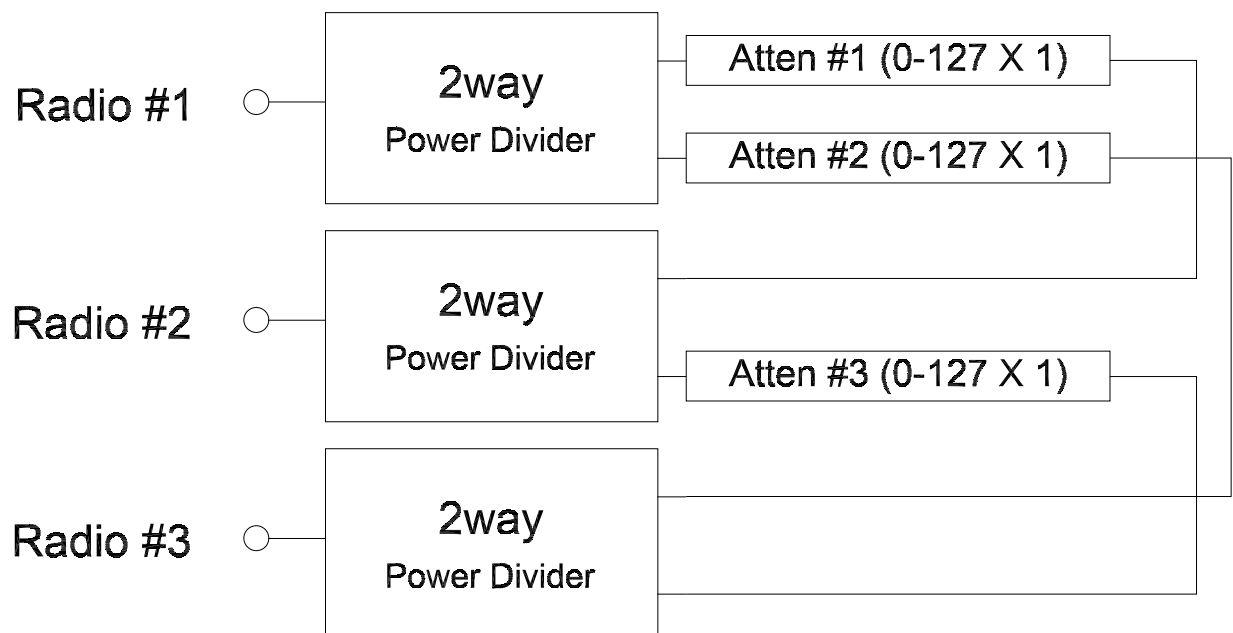
This section of the catalog showcases some standard transceiver test systems. However, most of JFW's test system business involves custom designed models. JFW does not charge NRE's for custom models. We encourage you to email us your requirement (sales@jfwindustries.com). We will respond with a ROM (rough order of magnitude) quote in 1-2 days. Please include a block diagram with your request if you already have an idea of exactly what you require.

## Available Options

- GPIB, RS-232, or Ethernet control	- Frequency ranges for GSM, UMTS, LTE, and more
- Keypad & LCD display for manual control	- Various RF connector options (BNC, TNC, SMA, N, etc.)
- 19", 23", 24" rack enclosures	- 50 Ohm and 75 Ohm impedance
- Benchtop enclosures	- GUI Test Software Provided

## 3 Port Transceiver Test System Example

The below schematic shows an example of a standard 3 port transceiver test system. Every possible path from port to port has its own programmable attenuator, so you can simulate changing distance in a network. With this configuration you can vary the attenuation between radios. With Ethernet and RS-232 control, JFW can provide you with the remote commands to simplify your test setup such as Handover, Variable Handover, Fade Attenuator, and Pause. For more remote command information, please refer to sections 6 & 7 of this catalog.



# Transceiver Test System

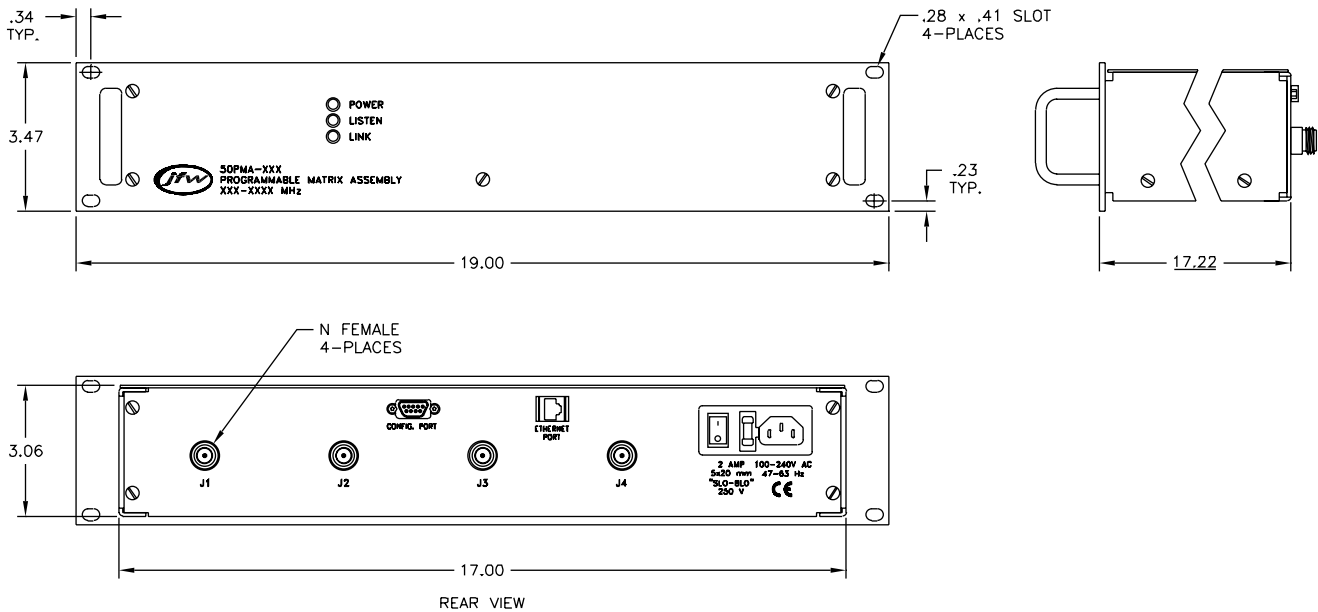
Model	Configuration	Frequency Range	Impedance (nominal)	VSWR (maximum)	Insertion Loss
50PMA-015	4 Port Transceiver Test System	1000-2000 MHz	50 Ohms	1.6:1	17.0 dB maximum 13.0 dB typical @ 1000 MHz 15.5 dB typical @ 2000 MHz

Attenuation Range	Attenuation Accuracy	Power Divider Isolation	RF Input Power (average)
0-127 dB x 1 dB	± 0.4 dB or 2%	20 dB	+24 dBm

Switching Speed (typical)	AC Supply	Control	RF Connector	Temperature Range
10 microseconds (after command is processed) (3 milliseconds typical processing time)	100-240 VAC @ 47-63 Hz	Ethernet(10/100)	SMA or N female	0°C to +50°C

## Remote Commands

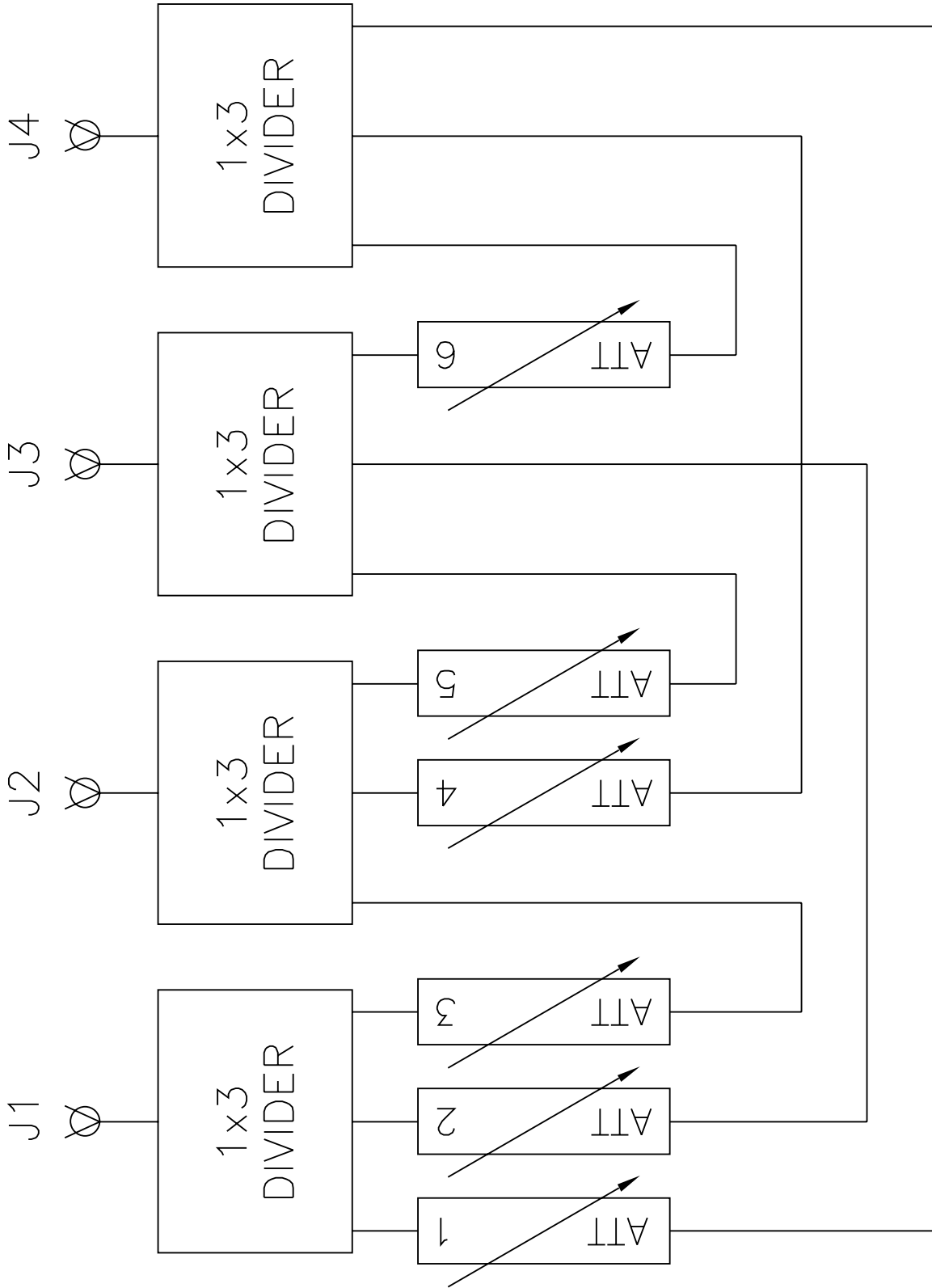
Pause, Variable Handover, Feedback Handover, Fade Attenuator, Feedback Fade, Set Attenuator, Read Attenuator, Identification



See next page for block diagram.

# Transceiver Test System

JFW Model 50PMA-015 Block Diagram



# Transceiver Test System

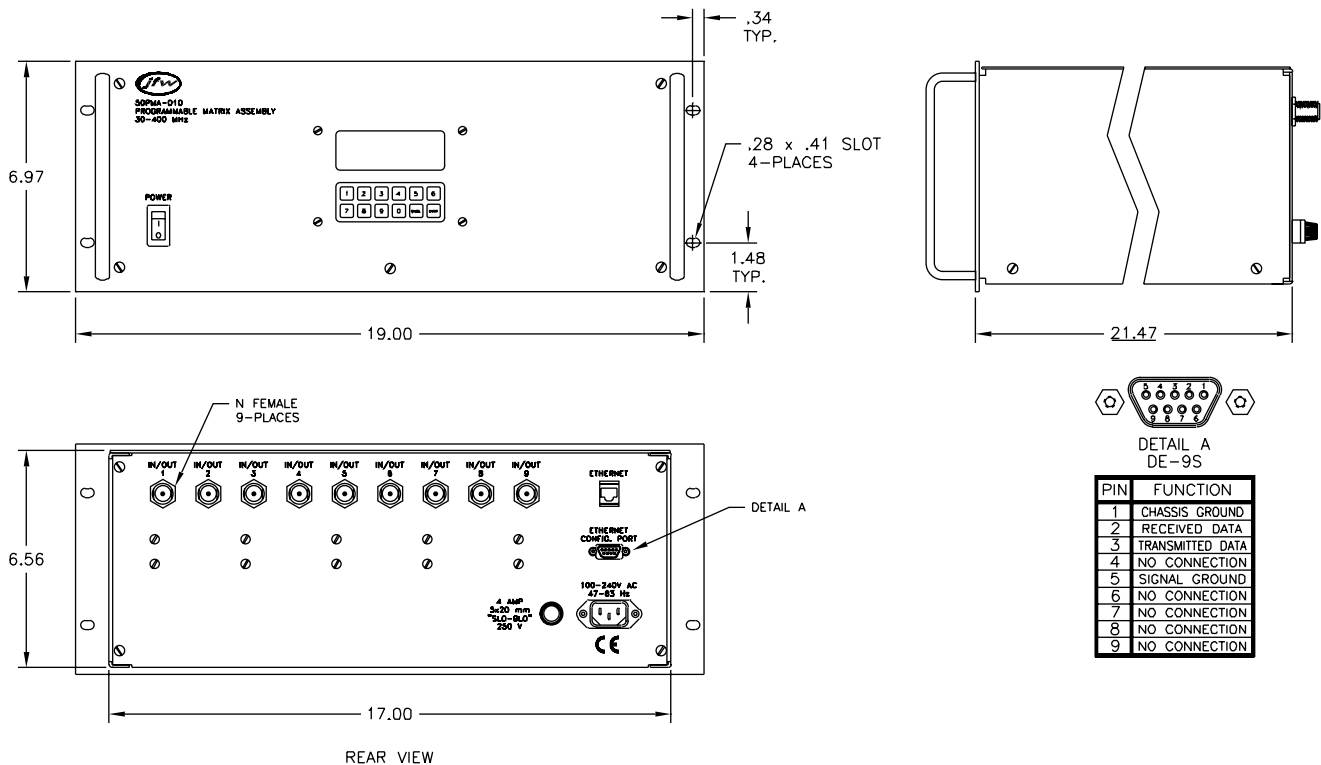
Model	Configuration	Frequency Range	Impedance (nominal)	VSWR (maximum)	Insertion Loss (nominal)
50PMA-010	9 Port Transceiver Test System	30-400 MHz	50 Ohms	1.5:1	24 dB

Attenuation Range	Attenuation Accuracy	Power Divider Isolation	RF Input Power (average)
0-127 dB x 1 dB	± 0.4 dB or 2%	30 dB	+14 dBm

Switching Speed (typical)	AC Supply	Control	RF Connector	Temperature Range
10 microseconds (after command is processed) (3 milliseconds typical processing time)	100-240 VAC @ 47-63 Hz	Ethernet(10/100)	SMA or N female	0°C to +70°C

## Remote Commands

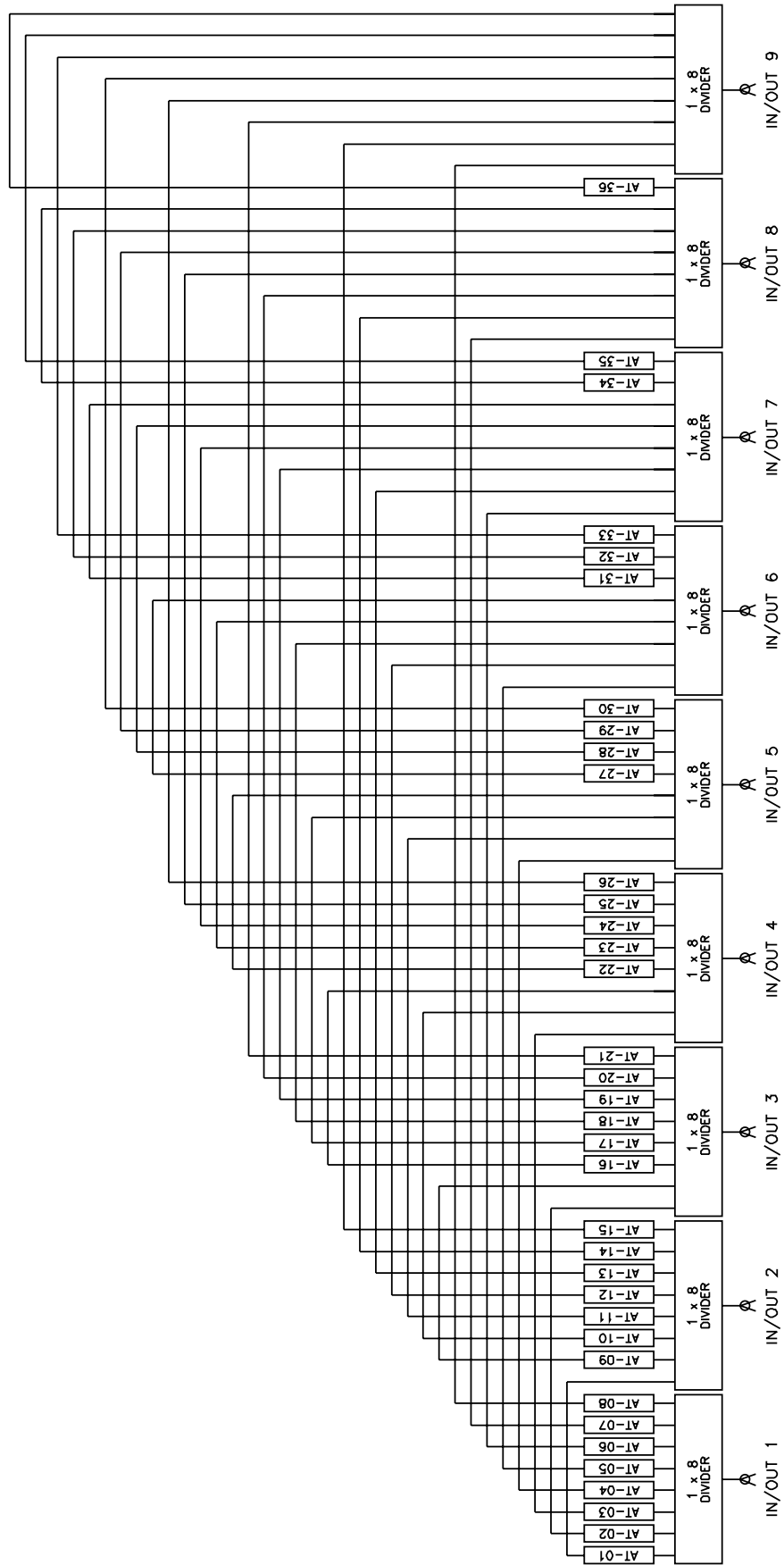
Fade Attenuator, Set Attenuator, Read Attenuator, Identification



See next page for block diagram.

# Transceiver Test System

## JFW Model 50PMA-010 Block Diagram



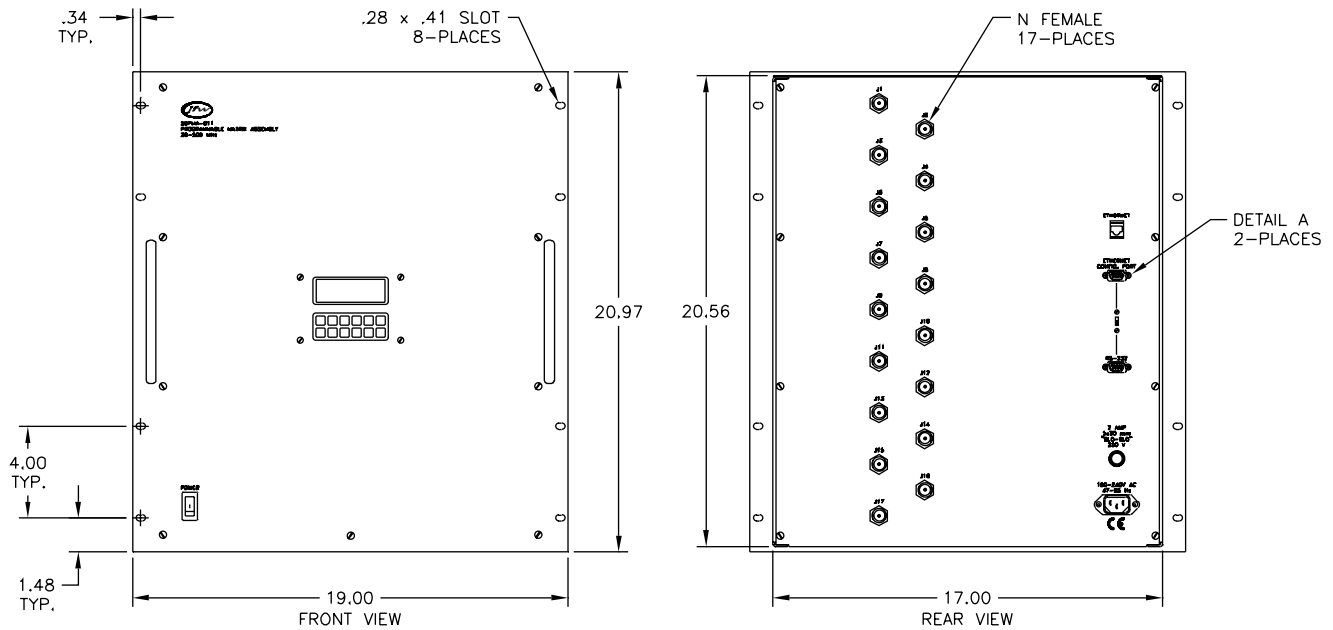
# Transceiver Test System

Model	Configuration	Frequency Range	Impedance (nominal)	VSWR (maximum)	Insertion Loss (nominal)
50PMA-011	17 Port Transceiver Test System	20-500 MHz	50 Ohms	1.5:1	30 dB

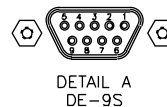
Attenuation Range	Attenuation Accuracy	Power Divider Isolation	RF Input Power (average)
0-63 dB x 1 dB	± 0.3 dB or 2%	25 dB	+17 dBm

Switching Speed (typical)	AC Supply	Control	RF Connector
10 microseconds (after command is processed) (3 milliseconds typical processing time)	100-240 VAC @ 47-63 Hz	Ethernet(10/100)/RS-232/Manual	SMA or N female

Temperature Range	Remote Commands
0°C to +70°C	Pause, Variable Handover, Feedback Handover, Fade Attenuator, Feedback Fade, Set Attenuator, Read Attenuator, Change Baud Rate, Identification



CHASSIS DEPTH = 21.47



PIN	FUNCTION
1	CHASSIS GROUND
2	RECEIVED DATA
3	TRANSMITTED DATA
4	NO CONNECTION
5	SIGNAL GROUND
6	NO CONNECTION
7	NO CONNECTION
8	NO CONNECTION
9	NO CONNECTION

See next page for block diagram.

# Transceiver Test System

## JFW Model 50PMA-011 Block Diagram

