



# REDUNDANT AMPLIFIER SYSTEM

70  $\pm$ 20 MHz

140  $\pm$ 40 MHz

UP TO 1 WATT OUTPUT



## FEATURES

- Fully redundant power supplies
- Local or remote control via RS485
- Automatic or manual control from both local and remote mode
- Remote status
- Off-line output

## OPTIONS

- Remote contact closure, RS422, IEEE-488 or RS232
- 30 dBm power output, 1 dB compression point

The Redundant Amplifier System ensures continuous operation by incorporating two gain-matched, low-noise, IF line drivers and a current sensing circuit to provide automatic switchover if a fault should occur. Two power supplies are used to provide full redundancy.

The Redundant Amplifier System is available in either 70 MHz or 140 MHz center frequencies, and either 50 ohm or 75 ohm impedances.

## SPECIFICATIONS

MODEL NUMBER	FREQUENCY (MHz)	IMPEDANCE (OHMS)
RAU-70/75S	70 ±20	75
RAU-70/50S	70 ±20	50
RAU-140/75S	140 ±40	75
RAU-140/50S	140 ±40	50

SPECIFICATION	70 ±20 MHz	140 ±40 MHz
Gain	26 dB minimum	24 dB minimum
Noise figure	9 dB maximum	10 dB maximum
Power output (1 dB compression)	+18 dBm minimum*	+16 dB minimum*
Return loss (input/output)	18 dB minimum	16 dB minimum
Gain flatness	0.6 dB	0.75 dB
Channel-to-channel gain match	±1 dB	±1 dB

\*+30 dBm power output (1 dB compression point) with Option 11.

### PRIME POWER REQUIREMENTS

Voltage .....	90–250 VAC
Frequency .....	47–63 Hz
Power consumption .....	25 W typical, steady state, 75 W peak during switchover

### SWITCH SPECIFICATIONS

Switch type.....	Coaxial, four-port transfer
Switch contacts .....	Break-before-make, wiping
Switch drive.....	Latching, sector motor
Switching speed .....	150 ms. maximum

### PHYSICAL

Weight .....	15 pounds
Overall dimensions.....	19" x 1.75" panel height x 22" maximum (chassis depth 20" excluding protrusions)
Signal connectors.....	BNC female
Remote interface connectors .....	DE-9S for RS485 and RS422, DB-25P for RS232, DB-25S for contact closure, IEEE-488 receptacle for IEEE-488
DC voltage test point .....	Jack receptacle (interior)

### ENVIRONMENTAL

Operating	
Ambient temperature .....	0 to 50°C
Relative humidity.....	Up to 95% at 30°C
Atmospheric pressure.....	Up to 10,000 feet
Nonoperating	
Ambient temperature .....	-50 to +70°C
Relative humidity.....	Up to 95% at 40°C
Atmospheric pressure.....	Up to 40,000 feet
Shock and vibration.....	Normal handling by commercial carriers

## SPECIFICATIONS (CONT.)

### MODES OF OPERATION

Local mode: Commands are received from the keys on the front panel.

Remote mode: Commands are received from a remote system controller via the remote interface connector.

All front panel keys are disabled with the exception of local/remote mode selection.

Automatic mode: Switchover occurs if a fault is detected in the on-line unit.

Manual mode: Switchover may be executed either via the front panel keys (local mode) or the remote interface (remote mode).

### FRONT PANEL FUNCTIONS

Commands: Amplifier A: On line/standby  
Amplifier B: On line/standby

Mode selection: Local/remote  
Auto/manual

### ALARMS (LED INDICATORS)

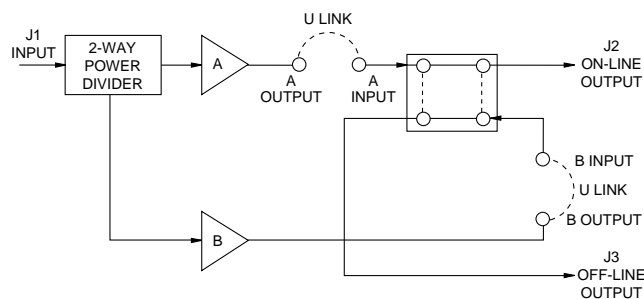
Amplifier A  
Amplifier B  
Power supply A  
Power supply B  
System

### REMOTE

Commands: Amplifier A: On line  
Amplifier B: On line  
Auto  
Manual

Status: Amplifier A: On line  
Amplifier A: Standby  
Amplifier B: On line  
Amplifier B: Standby  
Remote  
Local  
Auto  
Manual  
System: Normal  
System: Fail  
Amplifier A: Normal  
Amplifier A: Fail  
Amplifier B: Normal  
Amplifier B: Fail

## FUNCTIONAL BLOCK DIAGRAM



# REDUNDANT AMPLIFIER SYSTEM

## 70 ±20 MHz, 140 ±40 MHz

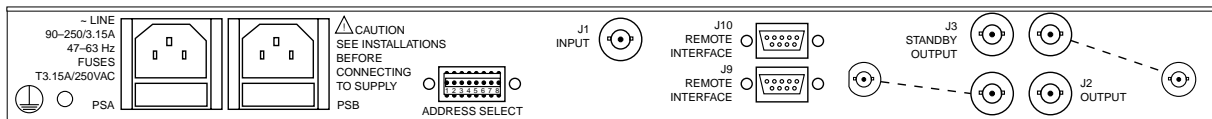
### UP TO 1 WATT OUTPUT

#### OPTIONS

- 11.** +30 dBm minimum power output (1 dB compression point). Output return loss specification: 15 dB minimum.
- 17.** Remote control.
- A.** RS422.
  - B.** RS485 (standard).
  - C.** RS232.
  - D.** Contact closure.
  - F.** IEEE 488.

Note: Missing option numbers are not applicable for this system.

#### REAR PANEL VIEW



Note: For literature describing local control (front panel) and remote control (bus protocols), refer to MITEQ's Technical Note 25T034.



100 Davids Drive, Hauppauge, NY 11788  
TEL.: (631) 436-7400 • FAX: (631) 436-7431/436-7430  
www.miteq.com