

RF-4000 Repeater

General*

Frequency Range	3.4—4.2 GHz
Nominal Gain	45 dB (15 dB ALC)
Maximum Gain	60 dB (0 dB ALC)
AGC/ALC	15 dB down fade 5 dB up fade
Noise Figure	7 dB
3rd Order Intercept	+35 dBm
Antenna Ports	WR229
W/G Flange	WR229G, Choke, Gasket
Return Loss	>26 dB

Nominal Signal Levels*

	Nominal Input	Nominal Output
FM/FSK/MSK	-20 dBm	+25 dBm
4PSK/QPSK/OQPSK	-22	+23
16 QAM	-26	+19
64 QAM	-30	+15
256 QAM	-32	+13
QPR3/9QPRS	-25	+20
QPR7/49QPRS	-26	+19

Frequency Plan

Channel	
Bandwidth	40 MHz, 1 dB
T-R Spacing	80 MHz, min.
T-T Spacing	80 MHz, min.
(on common feeders)	

Channel Response

Amplitude	± 0.5 P-P, fo ± 20 MHz
Group Delay (Equalized)	4 ns/P-P, fo ± 20 MHz

Power Requirements

Nominal Voltage	+13.5 VDC
Voltage Range	+11 to +16.5 VDC
Current	2.5 A*

Environmental

Housing	Weathertight Aluminum
Ambient Temp.	-40°C to +60°C
Relative Humidity	90% (housing internal) 100% (housing external)
Altitude	15,000 feet (4600 meters)

Dimensions

Height	34.4 inches (874 mm)
Width	27.5 inches (699 mm), with vent hoods
Depth	15.3 inches (389 mm)
Weight	90 lbs. (41 kg)

Reliability

MTBF	85,000 hours
MTTR	30 minutes

Typical Configurations

Duplex, 1+1
Frequency Diversity

* Duplex 1+0 configuration only.

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