

RF-7000E Repeater

General*

	Output Power Options*	
	Power Level 1	Power Level 2 (HP)
Frequency Range	7.1—7.9 GHz	7.1—7.9 GHz
Nominal Gain	40 dB (15 dB ALC)	40 dB (20 dB ALC)
Maximum Gain	50 dB (0 dB ALC)	55 dB (0 dB ALC)
AGC/ALC	10 dB down fade 5 dB up fade	15 dB down fade 5 dB up fade
Gain Adjust	0—20dB	0—20dB
Noise Figure	8 dB	8 dB
3rd Order Intercept	+34 dBm	+38 dBm
Antenna Ports	CPR112G	CPR112G
W/G Flange	WR112	WR112
Return Loss	>26 dB	>26 dB

Nominal Signal Levels*

	Nominal Input	Nominal Output
FM/FSK/MSK	-14.6 dBm	+25.4 dBm
4PSK/QPSK/OQPSK	-16.6	+23.4
16 QAM	-20.6	+19.4
64 QAM	-24.6	+15.4
256 QAM	-26.6	+13.4
32 TCM	-23.6	+16.4
64 TCM	-24.6	+15.4

Frequency Plan

Channel	
Bandwidth	30 MHz, 1 dB
T-R Spacing	80 MHz, min.
T-T Spacing	56 MHz, min.
(on common feeders)	

* Duplex 1+0 configuration only.

Channel Response (30 MHz Channel)

Amplitude	±0.5 dB P-P, fo ± 15 MHz
Group Delay Equalized	4 ns/P-P, fo ± 15 MHz
Group Delay Non-Equalized	0.065 nSec/(MHz) ²

Power Requirements

Nominal Voltage	+13.5 VDC
Voltage Range	+11 to +16.5 VDC
Current	2.3A (2 amplifiers and alarms)*
Polarity	Neg. Ground

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	28.5 inches (724 mm)
Width	27.5 inches (699 mm), with vent hoods
Depth	22.2 inches (564 mm)
Weight	70 lbs. (32 kg)*

Reliability

MTBF	85,000 hours
MTTR	30 minutes

Typical Configurations

Duplex
1+1 Frequency Diversity
Dual Polarized

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