

RF-6000EW Microwave RF Repeater

General

Frequency Range	6.425 ~ 7.125 GHz
Linear Amplifier Gain, L1 ¹	58 dB typ., 56 dB min.
Linear Amplifier Gain, L2 ¹	63 dB typ., 61 dB min.
AGC/ALC	15 dB down, 5 dB up fade
Noise Figure ¹	5 dB at max gain
Antenna Ports	WR137 waveguide
W/G Flange	CPR137G
Return Loss	≥ 26 dB

Channel Response: High Capacity, Equalized

Amplitude	± 0.5 dB, $f_0 \pm 20$ MHz
Group Delay	5 nsec P-P, $f_0 \pm 20$ MHz

Power Requirements: Duplex, 2 Amplifiers

Nominal Voltage	+12 VDC (+24 VDC Optional)
Voltage Range	+11 ~ +16 VDC
Power Consumption, Level 1	30 W, Solar Rated
Power Consumption, Level 2	35 W, Solar Rated
Polarity	Negative Ground

Nominal Transmit Power^{1,2}

Modulation	Level 1	Level 2
FM/FSK/MSK	26.0 dBm	30.0 dBm
4QAM/QPSK/OQPSK	24.0	28.0
16QAM	20.0	24.0
32QAM	18.0	22.0
64QAM/64TCM	16.0	20.0
128QAM/128TCM	14.0	18.0
256QAM	13.0	17.0
512QAM	12.0	16.0
32TCM	17.0	21.0
256TCM	12.0	16.0

Dimensions: 1+0, 1+1 and 2+0 Configurations³

Height	36.74 in, 933 mm
Width	23.25 in, 591 mm
Depth	22.82 in, 580 mm
Weight	1+0: 99 lb, 45.0 kg
	1+1, 2+0: 120 lb, 54.5 kg
	2+0, 4-Port: 128 lb, 58.0 kg

Reliability

MTBF	85,000 hours
MTTR	30 minutes, on-site

Frequency Plan

Channel Bandwidth	40 MHz – High Capacity
T-R Spacing	100 MHz, min.
T-T Spacing*	80 MHz, min
T-T Spacing**	40 MHz, min
	* on common feeders ** on separate feeders

Environmental

Ambient Temperature	-40° C ~ +60° C
Relative Humidity	90% - Housing Internal
Altitude	100% - Housing External
Enclosure Housing	15,000 feet, 4600 meters Weathertight Aluminum

¹ : Not including branching losses, see Operations Manual.

³ : See Operations Manual for more Configurations including 2+1, 3+1.

² : See Operations Manual for more details. Modulations listed are a sample only, contact PESi for more.

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