

STATION	W205BR	FM TRANSLATOR
LOCATION	ELMIRA, NY	
CHANNEL	FM TRANSLATOR	

CALCULATED FOR
ERP OF 10 WATTS (0.010 KW) H & V

W205BR
ELMIRA, NY
FM TRANSLATOR

COMPUTED LINE LOSSES - BASED ON MANUFACTURES TABLES AT OPERATING FREQUENCY

DESCRIPTION AND LENGTH NEAREST FOOT	SIZE/TYPE	LENGTH	EXTRA LOSS (dB) (IF ANY)	SECTION LOSS (dB)	TOTAL (dB)
JUMPER ANT	TRANSMISSION LINE		0	0.000	0.000
VERTICAL RUN	TRANSMISSION LINE	1/2" FOAM FEET 168.00	0	1.089	1.089
BLD TO TOWER	TRANSMISSION LINE	1/2" FOAM FEET 25.00	0	0.162	0.162
JUMPER TRANS	TRANSMISSION LINE		0	0.000	0.000
MISC ANT/LINE/TERMINATION CONNECTOR LOSSES	QYN	2.00	0	0.030	0.030

FM	205	CH
FREQ:	88.9	MHz

FREQUENCY SENSITIVE COMPONENTS		
	DB PER 100 FT	SYSTEM JUMPER AT ANTENNA
0.6480	DB PER 100 FT	VERTICAL RUN ON TOWER
0.6480	DB PER 100 FT	HORIZONTAL RUN TO TX BLD
	DB PER 100 FT	SYSTEM JUMPER AT TRANSMITTER
0.0149	DB PER PAIR	TERMINATING CONNECTOR LOSSES

Insertion Loss = 0.05 X sqrt (freq GHz)

TOTAL FEET (MIXED) 193.00

COMPUTED SYSTEM LOSSES

SUBTOTAL 1.280

dB Line Loss (with jumpers, line, and connector losses) from above

CLIENT PROVIDED LOSSES (IF ANY)

0.000

dB additional losses (Bandpass filter Telewave TBPC 1008-1)

0.000

dB additional losses

TOTAL

1.280

Total System Loss in dB

74.47% Transmission System Efficiency Factor = Eff (%)

COMPUTED TPO NEAREST WATT

30

0.010 kW	-20.000 dBk	STATION MAXIMUM ERP
0.441 X (Gain)	-3.556 dBd	ANTENNA GAIN PER ANT SPEC SHEET
0.023 kW	-16.444 dBk	ANTENNA INPUT
0.007 KW	1.280 dB	SYSTEM TOTAL LOSSES
0.030 kW	-15.164 dBk	TRANSMITTER POWER

ANTENNA SPECIFIED

MAKE	SWR
MODEL	FM1
BAYS	1
SPACING	1.00
MODE	NON-DA
POLARIZATION	H & V
ANT GAIN	0.441

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105%	0.032	TPO HIGH LIMIT
100%	0.030	NOMINAL
90%	0.027	TPO LOW LIMIT

Math Proof Check

TPO	X	EFF	X	ANT G	=	ERP
0.030		74.47%		0.441		0.010