

STATION	W212CO	FM TRANSLATOR
LOCATION	KANKAKEE, IL	
CHANNEL	FM TRANSLATOR	

CALCULATED FOR
ERP OF 27 WATTS (0.027 KW) VERTICAL ONLY

W212CO
KANKAKEE, IL
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 250.00	0	1.625	1.625
BLD TO TOWER	TRANSMISSION LINE	1/2" FOAM FEET 25.00	0	0.163	0.163
JUMPER TRANS	TRANSMISSION LINE		0	0.000	0.000
MISC ANT/LINE/TERMINATION CONNECTOR LOSSES	QYN	4.00	0	0.060	0.060

FM	212	CH
FREQ:	90.3	MHz

FREQUENCY SENSITIVE COMPONENTS

DB PER 100 FT	SYSTEM JUMPER AT ANTENNA
0.6500	DB PER 100 FT VERTICAL RUN ON TOWER
0.6500	DB PER 100 FT HORIZONTAL RUN TO TX BLD
DB PER 100 FT	SYSTEM JUMPER AT TRANSMITTER
0.0150	DB PER PAIR TERMINATING CONNECTOR LOSSES

Insertion Loss = 0.05 X sqrt (freq GHz)

TOTAL FEET (MIXED) **275.00**

COMPUTED SYSTEM LOSSES

SUBTOTAL **1.848**

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

CLIENT PROVIDED LOSSES (IF ANY)

1.000

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

0.000

dB additional losses

TOTAL

2.848

Total System Loss in dB

51.91% Transmission System Efficiency Factor = Eff (%)

COMPUTED TPO NEAREST WATT

118

0.027 kW	-15.686 dBk	STATION MAXIMUM ERP
0.441 X (Gain)	-3.556 dBd	ANTENNA GAIN PER ANT SPEC SHEET
0.061 kW	-12.130 dBk	ANTENNA INPUT
0.057 KW	2.848 dB	SYSTEM TOTAL LOSSES
0.118 kW	-9.282 dBk	TRANSMITTER POWER

ANTENNA SPECIFIED

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

T Z SAWYER TECHNICAL CONSULTANTS

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December 17, 2020



105%	0.124	TPO HIGH LIMIT
100%	0.118	NOMINAL
90%	0.106	TPO LOW LIMIT

Math Proof Check

TPO	X	EFF	X	ANT G	=	ERP
0.118		51.91%		0.441		0.027