

STATION	K287BT	FM
LOCATION	SANDPOINT, IDAHO	
CHANNEL	FM TRANSLATOR	287

CALCULATED FOR
ERP OF 0.20 KILOWATTS H & V

K287BT
SANDPOINT, IDAHO
FM TRANSLATOR

COMPUTED LINE LOSSES - BASED ON MANUFACTURES DATA 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	FEET		0.000	0.000
VERTICAL RUN	TRANSMISSION LINE	7/8" FOAM AVA5-50J	193.00	0.680	0.680
BLD TO TOWER	TRANSMISSION LINE	7/8" FOAM AVA5-50J	68.00	0.240	0.240
JUMPER TRANS	TRANSMISSION LINE			0.000	0.000
MISC ANT/LINE/TERMINATION CONNECTOR LOSSES		QYN	2.00	0.068	0.100

FM	287	CH
FREQ:	105.3	MHz
FREQUENCY SENSITIVE COMPONENTS		
	DB PER 100 FT	SYSTEM JUMPER AT ANTENNA
0.3524	DB PER 100 FT	VERTICAL RUN ON TOWER
0.3524	DB PER 100 FT	HORIZONTAL RUN TO TX BLD
	DB PER 100 FT	SYSTEM JUMPER AT TRANSMITTER
0.0162	DB PER PAIR	TERMINATING CONNECTOR LOSSES
		<i>Insertion Loss = 0.05 X sqrt (freq GHz)</i>

TOTAL FEET (MIXED)	261.00	COMPUTED SYSTEM LOSSES
		SUBTOTAL
		1.020
		0.200
		0.000
		TOTAL
		1.220

dB Line Loss (with jumpers, line, and connector losses) from above
dB additional losses (Bandpass filter if used, example Telewave TBPC 1008-2)
dB additional losses (example Kintronic AM isolation coil)
Total System Loss in dB

75.51% Transmission System Efficiency Factor = Eff (%)

COMPUTED TPO NEAREST WATT

576

0.200 kW	-6.990	dBk	STATION MAXIMUM ERP
0.460 X (Gain)	-3.372	dBd	ANTENNA GAIN PER ANT SPEC SHEET
0.435 kW	-3.618	dBk	ANTENNA INPUT
0.141 kW	1.220	dB	SYSTEM TOTAL LOSSES
0.576 kW	-2.398	dBk	TRANSMITTER POWER

ANTENNA SPECIFIED	
MAKE	NIC
MODEL	BKG77
BAYS	1
SPACING	1.00
MODE	OMNI
CIRCULAR	H & V
ANT GAIN	0.460

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105%	0.605	TPO HIGH LIMIT
100%	0.576	NOMINAL
90%	0.518	TPO LOW LIMIT

Math Proof Check

TPO	X	EFF	X	ANT G	=	ERP
0.576		75.51%		0.460		0.200