KLBJ-FM Austin, Texas
BMLH-20070405ABS License Application
Antenna Replacement

Transmit Antenna

This antenna and transmission line has been designed to operate the main licensed facility of either KBPA or KLBJ-FM. However there is no combiner in the system and only one station can operate at a time. Therefore, a spurious emissions report has not been conducted and is not required. The antenna installed is an ERI SHP-6AC6-SP 6 bay full wave circularly polarized antenna. A new FM Model for Windows is included with this exhibit. The licensee intends to operate KLBJ-FM from this antenna in the future.

The permittee/licensee in coordination with other users of the site agrees to reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

Transmitter Power Output

The transmitter power output is 40.025 kW. Please see the attached detailed breakout of transmission line and antenna information provided by Jeff Taylor at Electronics Research, Inc.

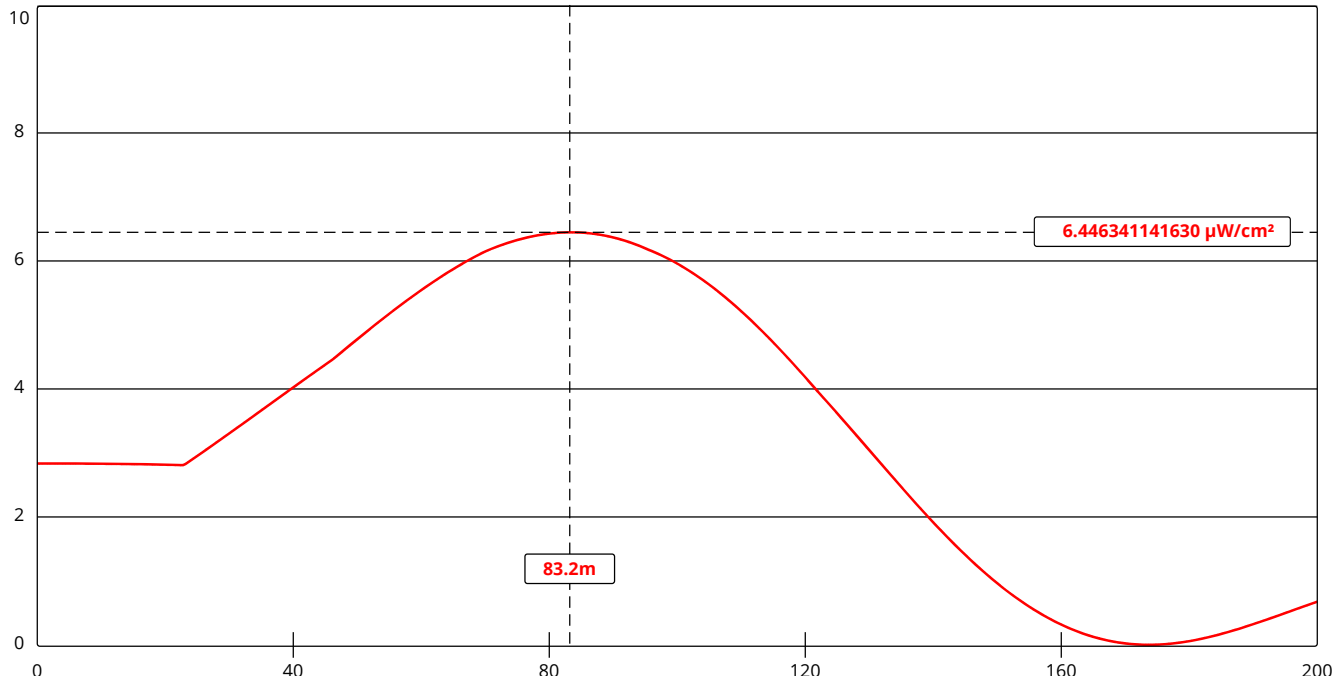
Power Analysis for 93.7

Call Letters:	KLBJ-FM, Austin, Texas		
Frequency:	93.7 MHz		
ERP:	97.000 kW	19.868 dBk	
Polarization:	Circular		
Antenna RMS Gain:	3.074 Numeric	4.877 dB	
Antenna Input Power:	31.555 kW	14.991 dBk	
Peak Voltage:	1,776 volts		
Transmission Line Type Rigid Match:	4-1/16-inch rigid line		
Rigid Match Length:	209 feet	63.7 meters	
Rigid Match Attenuation:	0.072 dB/100-feet	0.236 dB/100-meters	
Transmission Line Type - Vertical Run:	HJ8-50B 3" Flex		
Vertical Run Length:	802 feet	244.4 meters	
Vertical Run Attenuation:	0.110 dB/100-feet	0.361 dB/100-meters	
Transmission Line Type - Horizontal Run:	HJ8-50B 3" Flex		
Horizontal Run Length:	0 feet	0.0 meters	
Horizontal Run Attenuation:	0.110 dB/100-feet	0.361 dB/100-meters	
Line Loss:	-8.470 kW	1.033 dB	
Line Efficiency:	78.837%		
Power Output from Combiner:	40.025 kW	16.023 dBk	
Peak Voltage:	2,001 volts		
Combiner Losses:	0.000 kW	0.000 dB	
Transmitter Power Output:	40.025 kW	16.023 dBk	

Federal Communications Commission

FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA (http://nepis.epa.gov/Exe/ZyNET.exe/2000ED2W.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1981+Thru+1985&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A\zyfiles\Index%20Data\81thru85\Txt\00000003\2000ED2W.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h|-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p|f&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL). ▼ Show More....



View Tabular Results +

Channel Selection	Channel 234 (94.7 MHz)		
Antenna Type +	EPA Type 3: Opposed U Dipole		
Height (m)	264	Distance (m)	200
ERP-H (W)	97000	ERP-V (W)	97000
Num of Elements	6	Element Spacing (λ)	1
Num of Points	500	Apply	