

KTPK-FM Topeka, TX

TPO Exhibit

ALPHA MEDIA, LLC

CH 295C – 106.9 MHz – 100.0 KW

October 12, 2020

KTPK TRANSMISSION SYSTEM CALCULATION

Effective Radiated Power:	100 kilowatts (50 dBW) H & V
Antenna	ERI, SHPX-10AC6-SP SERIAL/JOB #: 35662 10 BAY Custom Spaced Circular Polarization
Antenna Gain	4.765 (6.781 dB)
Transmission Line 1	ERI, MACX-450 (4 1/16" Rigid) Attenuation: 0.077 dB/100' Length, 1239 feet
Transmission Line 2	ERI, 3 1/8" Rigid Attenuation: 0.099 dB/100' Length, 37 feet
Coax Switch	Dielectric, DC 60000-300 Attenuation: 0.1 dB
Other Losses	12 Mated Connections Attenuation: 0.01 dB / Connection Combiner/Filter: 0.185 dB

TPO = ERP – Antenna Gain + Line Losses + Switch Loss + Other Losses

TPO = 40 - 6.781 + 1239(0.077) + 0.37(0.099) + 0.1 + 12(0.01) + 0.185

TPO = 44.615 dBW = 28,937 Watts or **28.9 kW**