

Home Work # 2

1. Define amplitude modulation and modulation index. Use a sketch of a sinusoidally modulated AM waveform to help explain the definition.
2. What is the basic limitation of modulated transistor amplifier? When are they used? Are there any circuits which are similar to comparable tube circuits? What appears to be the preferred transistor modulation circuit?
3. With waveforms, explain how a suitable train of current pulses fed to a tuned circuit will result in an amplitude-modulated output wave.
4. A 1000 kHz carrier is simultaneously modulated with 300 Hz, 800 Hz and 2 kHz audio sine waves. What will be the frequencies present in the output?
5. A broadcast AM transmitter radiates 50 kW of carrier power. What will be the radiated power at 85 percent modulation?