

plate current will therefore also be higher than with two-tone test conditions. Under typical operating conditions, peak plate current before flat-topping will be 350 ma at 800 volts, to result in an input of 280 watts, PEP. Readings of cathode current will not reflect this power input, however, because of the damping in the cathode current meter, cathode current readings under normal voice input should not average more than 100 to 120 ma.

POWER AMPLIFIER PLATE DISSIPATION

There is often a misunderstanding about the plate dissipation of tubes operated as AB1 amplifiers under voice modulation. In the Swan 270B, while in the transmit position, and with no modulation, the plate voltage will be approximately 830 volts, the plate current 30 ma, and the power input will be 25 watts.

Authorities agree that the average voice power is 10 to 20 db below peak voice power. Normally, some peak clipping in the power amplifier can be tolerated, and a peak-to-average ratio of only 6 db may sometimes occur. Under such conditions, the average power input will be 80 watts, and average plate current will be 100 ma. With power amplifier efficiency of 65 percent plate dissipation will be approximately 26 watts. The 6LQ6 is rated at 30 watts, continuous duty cycle, in normal TV service. Thus it can be seen that under normal operating conditions, the power amplifier tube in the Swan 270B is not being driven very hard. Note, however, that proper modulation level must be maintained by correct setting of Mic. Gain, and that the length of time in TUNE position must be limited to not more than 30 sec. at a time.

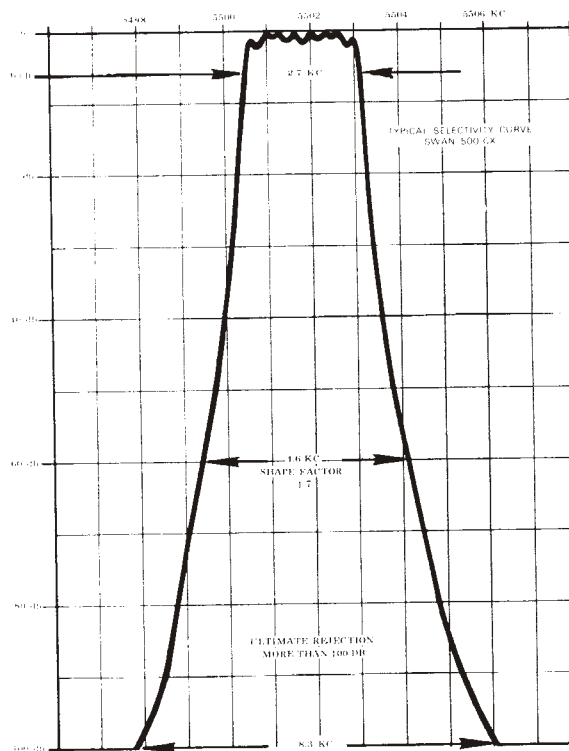


FIGURE 3. CRYSTAL FILTER CHARACTERISTICS