

## MC1377

### APPLICATIONS INFORMATION

#### S-VHS

In full RGB systems (Figure 18), three information channels are provided from the signal source to the display to permit unimpaired image resolution. The detail reproduction of the system is limited only by the signal bandwidth and the capability of the color display device. Also, higher than normal sweep rates may be employed to add more lines within a vertical period and three separate projection picture tubes can be used to eliminate the "shadow mask" limitations of a conventional color CRT.

Figure 21 shows the "baseband" components of a studio NTSC signal. As in the previous example, energy is concentrated at multiples of the horizontal sweep frequency. The system is further refined by precisely locating the color subcarrier midway between luminance spectral components. This places all color spectra between luminance spectra and can be accomplished in the MC1377 only if "full interlaced" external color reference and sync are applied. The individual

components of luminance and color can then be separated by the use of a comb filter in the monitor or receiver. This technique has not been widely used in consumer products, due to cost, but it is rapidly becoming less expensive and more common. Another technique which is gaining popularity is S-VHS (Super VHS).

In S-VHS, the chroma and luma information are contained on separate channels. This allows the bandwidth of both the chroma and luma channels to be as wide as the monitors ability to reproduce the extra high frequency information. An output coupling circuit for the composite chroma using the TOKO transformer is shown in Figure 19. It is composed of the bandpass transformer and an output buffer and has the frequency performance shown in Figure 20. The composite output (Pin 9) then produces the luma information as well as composite sync and blanking.

Figure 17. Spectra of a Full RGB System

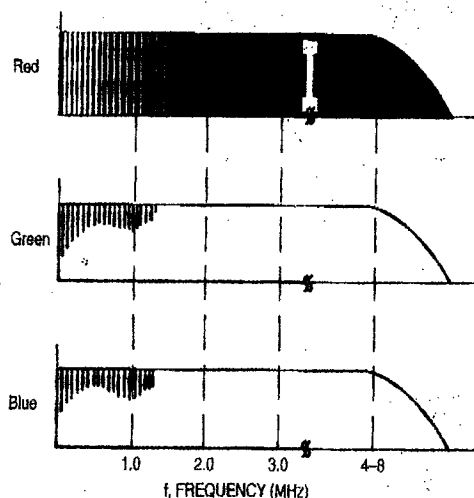
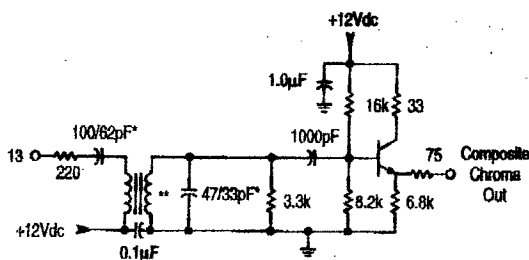


Figure 18. S-VHS Output Buffer



\*Refer to different component values used for NTSC/PAI. (3.58 MHz/4.43 MHz).

\*\*Toko 166NMF-1026AG

Figure 19. Frequency Response of Chroma Coupling Circuit

