

ABSOLUTE MAXIMUM RATINGS

Reference point is pin 3

| Rating | Pin | Symbol | Value | Units |
|--|-----|-----------|-------------|------------|
| Supply voltage range | 13 | V_{CC} | 10 to 15 | V |
| Low voltage stabiliser supply current | 14 | I_s | 50 | mA |
| Open loop voltage | 5 | V_5 | 15 | V |
| Video DC output current | | | | mA |
| Average positive | 12 | I_{12} | 5 | mA |
| Peak positive | 12 | I_{12} | 30 | mA |
| Average negative | 11 | I_{11} | 5 | mA |
| Peak negative | 11 | I_{11} | 30 | mA |
| White level control | 10 | V_{10} | 3.2 | V |
| Power dissipation at $T_{amb} \leq 55^\circ C$ | | P_{tot} | 700 | mW |
| Ambient temperature range | | T_{amb} | -10 to +65 | $^\circ C$ |
| Storage temperature range | | T_{stg} | -55 to +125 | $^\circ C$ |

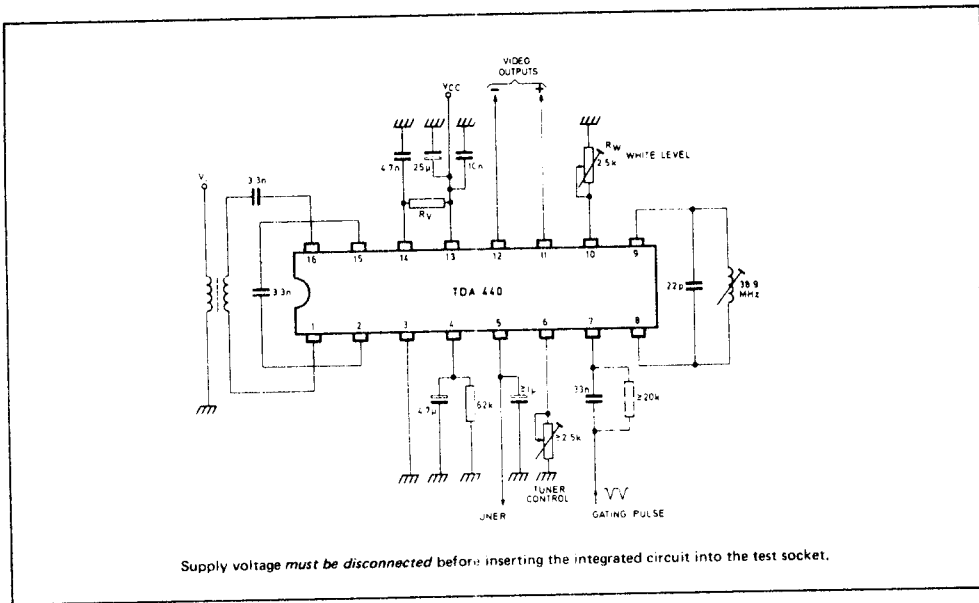


Fig. 3 Test and application circuit.

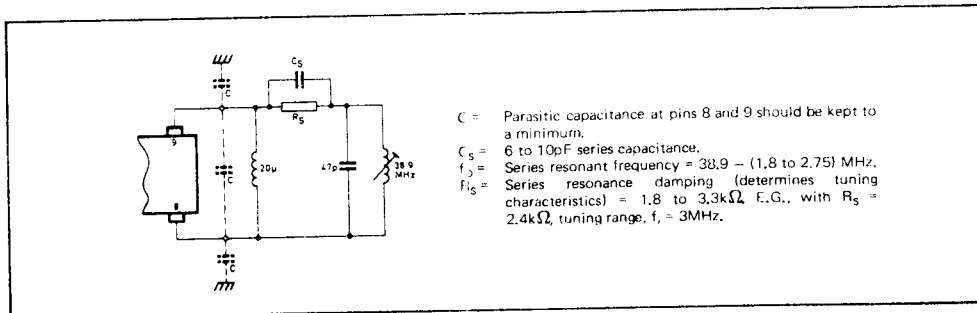


Fig. 4 Modifications to Fig. 3 for improving audio interference and cross-colour characteristics.

ELECTRICAL CHARACTERISTICS

Test Conditions (unless otherwise stated):

$T_{amb} = +25^{\circ}\text{C}$

$V_{CC} = +12\text{V}$

Reference point is pin 3

| Characteristic | Pin | Value | | | Units | Conditions |
|--|-------|-------|---------|------|----------------------------|---|
| | | Min. | Typ. | Max. | | |
| Supply voltage, V_{CC} | 13 | 10 | 12 | 15 | V | |
| Supply current, I_{13} | 13 | 15 | 19 | 25 | mA | |
| Supply voltage, stabiliser input | 14 | 5.5 | 5.8 | 6.4 | V | $I_{14} = 40\text{mA}$ |
| Positive video DC output voltage | 11 | | 5.5 | | V | |
| White level adjustment range for positive video DC output voltage | 11 | | | 4.8 | V | $R_W(\text{pin } 10) = \infty$ |
| | | 6.5 | | | V | $R_W(\text{pin } 10) = 0$ |
| Peak black clamping level for positive video DC output voltage | 11 | 1.75 | 1.9 | 2.15 | V | |
| DC output current | 11 | | 3.2 | | mA | Reference point pin 13 |
| Negative video DC output voltage | 12 | | 5.6 | | V | |
| Available tuner control current | 5 | 7 | 7.5 | | mA | 10dB after onset of tuner control action |
| Negative gating pulse | 7 | 1.5 | 3 | 5 | Vp-p | |
| Composite video output level | 11 | | 3.3 | | Vp-p | $V_{11} = 5.5\text{VDC}$ |
| | | | 4.2 | | Vp-p | $V_{11} = 6.4\text{VDC}$ |
| AGC range, ΔAGC | | 50 | 56 | | dB | |
| Video 3dB bandwidth | | 8 | 10 | | MHz | |
| Video frequency response change | | | 1.0 | 2.0 | dB | $\Delta\text{AGC} = 50\text{dB}$, video bandwidth = 0 to 5 MHz |
| Symmetrical input voltage for 3.3Vp-p output (pin 11) | 1-16 | 100 | 150 | 220 | $\mu\text{Vr.m.s}$ | |
| Maximum IF voltage level present at video outputs over the full AGC range | 11,12 | | | 30 | mV | $f = 38.9\text{MHz}$ |
| | | | | 50 | mV | $f = 77.8\text{MHz}$ (2nd harmonic) |
| Sound IF voltage level present at video outputs with selective circuit | 12 | 30 | | | mV | $f = 5.5\text{MHz}$, $\frac{\text{picture carrier level}}{\text{sound carrier level}} = 30\text{dB}$ |
| Differential gain of negative comp. video output signal for full black to white swing | | | | 15 | % | |
| Suppression of sound carrier/colour subcarrier (1.07MHz) w.r.t colour subcarrier level | | 40 | | | dB | Picture carrier = 0dB, IF colour subcarrier level = -6dB, IF sound carrier level = -24dB |
| Input impedance | 1 | | | | | Reference point pin 16 |
| AGC max. | | | 1.4/2 | | $\text{k}\Omega/\text{pF}$ | |
| AGC min. | | | 1.4/1.9 | | $\text{k}\Omega/\text{pF}$ | |