

APPLICATION NOTE 3728

# Single SCART Video Driver

*Abstract: This circuit provides a simple and complete TV video solution for a single SCART application. The design uses four MAX9502G video amplifiers as the video driver and lowpass reconstruction filter. It also implements the fast blanking and slow switching functions by using just four transistors.*

In many set-top boxes and DVD players, there is only one SCART connector output. In these situations a single SCART video-driver circuit is required. **Figure 1** is a simple, single, TV SCART video-driver circuit that uses four 2.5V [MAX9502](#) video amplifiers to filter and drive the video signals (CVBS and RGB) after the video DAC. The MAX9502 is a low-cost, small (5-pin SC70 or 6-pin  $\mu$ DFN packages), and single-supply video line driver with integrated 4-pole reconstruction filter. The sampling frequency of the video encoder DAC is normally 27MHz for standard-definition analog video. The video signals from the video DAC need to be lowpass filtered to reject images at multiples of 27MHz. The MAX9502 has 55dB attenuation at 27MHz, which greatly improves the video quality.

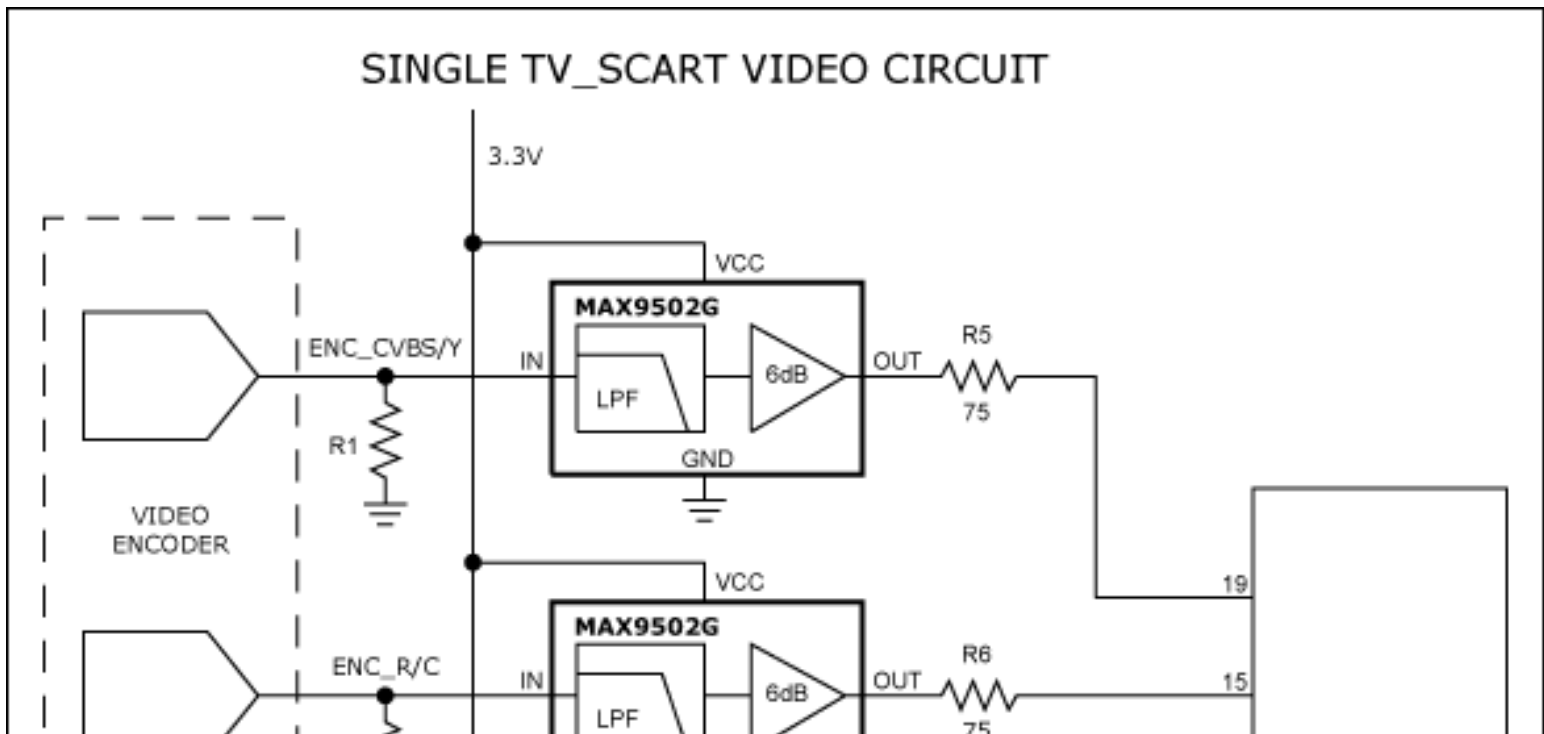
The R1, R2, R3, and R4 set the video signal amplitudes coming from the video DAC. The MAX9502G filters out the high-frequency noise of the video signal and amplifies the video signal by 6dB to drive the 150 $\Omega$  video load output.

The ENC fast-switching signal path is a simple, single PNP transistor and acts as an inverter. For ENC\_FB = 0V, FB\_\_OUT = 3.1V. For ENC\_FB = 3.3, FB\_\_OUT = 0V.

The slow switching circuit is implemented by three NPN transistors with resistors. See **Table 1**.

**Table 1. Slow Switching Operation**

| SLOW_SWITCHING ON/OFF (V) | ENC_SWITCHING (V) | SS_OUT (V) |
|---------------------------|-------------------|------------|
| 0                         | 0                 | 11.3       |
| 0                         | 3.3               | 5.3        |
| 3.3                       | 0                 | 0          |
| 3.3                       | 3.3               | 0          |



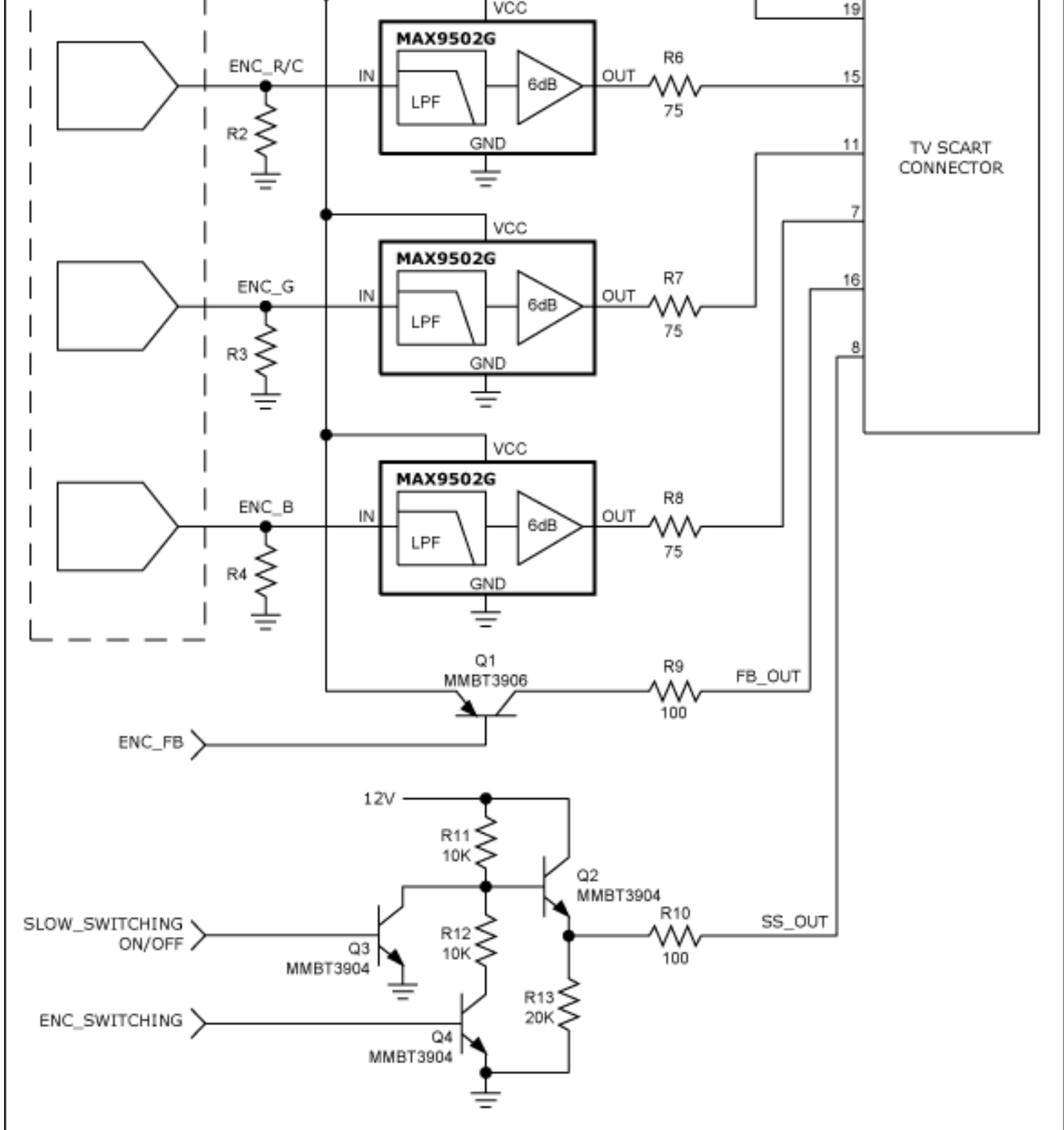


Figure 1. Simple, low-cost circuit for a single TV SCART video driver.

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