

## LM1281

### 85 MHz RGB Video Amplifier System with On Screen Display (OSD)

#### General Description

The LM1281 is a full feature video amplifier with OSD inputs, all within a 28-pin package. This part is intended for use in monitors with resolutions up to 1024 x 768. The video section of the LM1281 features three matched video amplifiers with blanking. All of the video amplifier adjustments feature high input impedance 0V to 4V DC controls, providing easy interfacing to bus controlled alignment systems. The OSD section features three TTL inputs and a DC contrast control. The switching between the OSD and video section is controlled by a single TTL input. Although the OSD signals are TTL inputs, these signals are internally processed to match the OSD low level to within 100 mV of the video black level. When adjusting the drive controls for color balance of the video signal, the color balance of the OSD display will track these color adjustments. The LM1281 also features an internal spot killer circuit to protect the CRT when the monitor is turned off. For applications without OSD insertion please refer to the LM1205 or LM1208 data sheets.

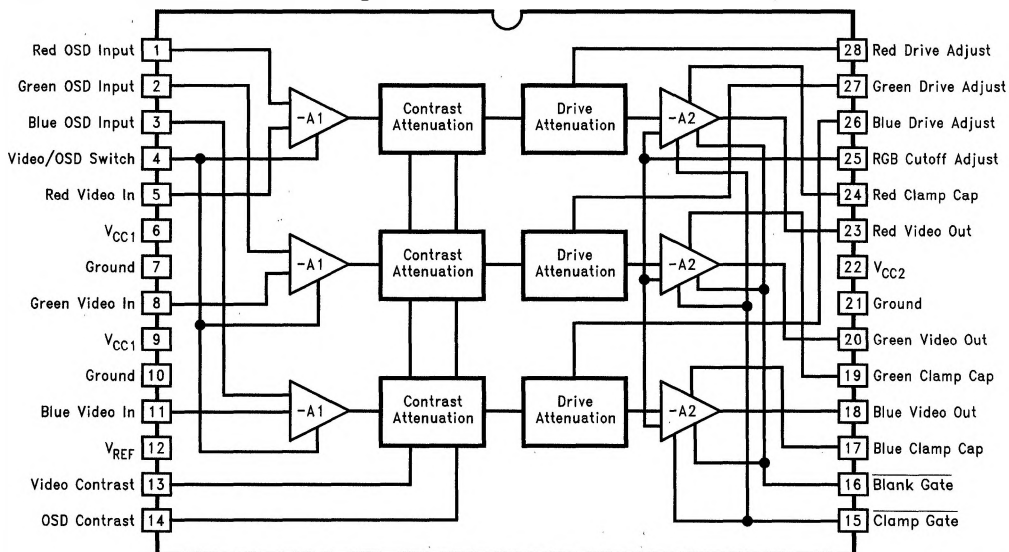
#### Features

- Three wideband video amplifiers 85 MHz @ -3 dB (4 V<sub>pp</sub> output)
- TTL OSD inputs, 50 MHz bandwidth
- On chip blanking, outputs under 0.1 V when blanked
- Video/OSD switch speed of 7 ns
- Independent drive control for each channel for color balance
- 0V to 4V, high impedance DC contrast control with over 40 dB range
- 0V to 4V, high impedance DC drive control (0 dB to -12 dB range)
- 0V to 4V, high impedance DC OSD contrast control with over 40 dB range
- Capable of 7 V<sub>pp</sub> output swing (slight reduction in bandwidth)
- Output stage directly drives most hybrid or discrete CRT drivers

#### Applications

- High resolution RGB CRT monitors requiring OSD capability

#### Block and Connection Diagram



TL/H/12355-1

**FIGURE 1. Order Number LM1281N**  
**See NS Package Number N28B**