National Semiconductor

PRELIMINARY

LM1212
230 MHz Video Amplifier System with OSD Blanking

General Description

The LM1212 is a very high frequency video amplifier system intended for use in high resolution monochrome or RGB color monitor applications with OSD. In addition to the wideband video amplifier the LM1212 contains a gated differential input black level clamp comparator for brightness control, a DC controlled attenuator for contrast control and a DC controlled sub contrast attenuator for drive control. The DC control for the contrast attenuator is pinned out separately to provide a more accurate control system for RGB color monitor applications. All DC controls offer a high input impedance and operate over a 0V–4V range for easy interface to bus controlled alignment systems. During the OSD window, the output is blanked to < 0.4V. The LM1212 operates from a nominal 12V supply but can be operated with supply voltages down to 8V for applications that require reduced IC package power dissipation characteristics.

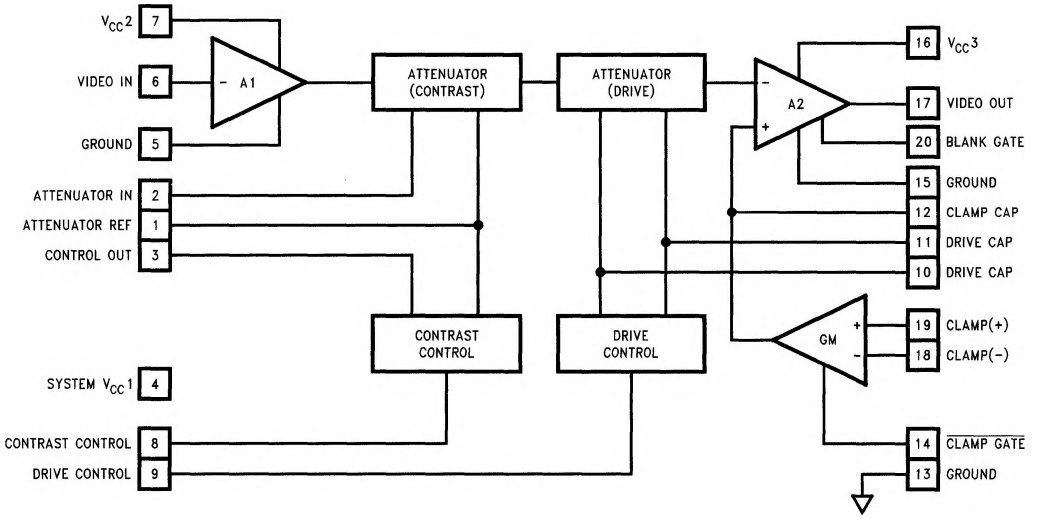
Features

- Wideband video amplifier
  ($f_{-3\,dB}$ = 230 MHz at V_O = 4 V_{PP})
- t_r, t_f = 1.5 ns at V_O = 4 V_{PP}
- Externally gated comparator for brightness control
- 0V to 4V high input impedance DC contrast control (> 40 dB range)
- 0V to 4V high input impedance DC drive control (±3 dB range)
- Ouput blanked to < 0.4V for OSD window
- Easy to parallel three LM1212s for optimum color tracking in RGB systems
- Output stage clamps to 0.65V and provides up to 9V output voltage swing
- Output stage directly drives most hybrid or discrete CRT amplifier stages

Applications

- High resolution CRT monitors with OSD
- Video switches
- Video AGC amplifier
- Wideband amplifier with gain and DC offset control

Block and Connection Diagram



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Order Number LM1212M or LM1212N
See NS Package Number M20B or N20A