

25MHz, BiMOS Analog Video Switch and Amplifier

November 1996

Features

- 5 Multiplex Video Channels
 - 1 Independent Channel
 - 4 Channels with Enable
- 4 LED Channel Indicator Outputs
- Wideband Video Amplifier25MHz Unity Gain
- Adjustable Video Amplifier Gain
- High Signal-Drive Capability

Applications

- Video Multiplex Switch
- 75Ω Video Amplifier/Line Driver
- Video Signal-Level Control
- Monitor Switching Control
- TV/CATV Audio/Video Switch
- Video Signal Adder/Fader Control

Ordering Information

PART NUMBER	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
CA3256E	-40 to 85	18 Ld PDIP	E18.3
CA3256M	-40 to 85	20 Ld SOIC	M20.3

Description

The CA3256 BiMOS analog video switch has five channels of CMOS multiplex switching for general-purpose video-signal control. One of four CMOS channels may be selected in parallel with channel 5. The CMOS switches are inputs to the video amplifier but may be used in bilateral switching between channels 1 to 4 and channel 5. The analog switches of channels 1 to 4 are digitally controlled with logic level conversion and binary decoding to select 1 of 4 channels. The enable function controls channels 1 to 4 but does not affect channel 5. LED output drivers are selected with the channel 1-to-4 switch selection to indicate the ON-channel. Channel 5 may be used as a monitor output for data or signal information on channels 1 to 4. The transmission gate switches shown in the block diagram of the CA3256 are configured in a "T" design to minimize feedthrough. When the switch is off, the shunt or center of the "T" is grounded.

The amplifier has high input impedance to minimize the R_{ON} transmission gate insertion loss. The amplifier output impedance is typically 5Ω in a complementary symmetry output. The amplifier can directly drive a nominal 75Ω coaxial cable to provide line-to-line video switching. The gain of the amplifier is programmable by different feedback resistor values between pins 8 and 9. Compensation may also be used between these pins for an optimally flat frequency response. An internal regulated 5V bias reference with temperature compensation permits stable direct-coupled output drive and minimizes DC offset during signal switching.

Pinouts

