ADVANCE INFORMATION
All information in this data sheet is preliminary and subject to change.
8/97

MAXIM

350MHz/250MHz, 4-Channel/8-Channel Video Multiplexer-Amplifiers

General Description

The MAX4160/MAX4161/MAX4260/MAX4261 are wideband 4-channel/8-channel noninverting video amplifiers with input multiplexing, capable of driving ±2.5V signals into 50Ω or 75Ω loads. These devices are current-feedback amplifiers; gain is set by external feedback resistors. The MAX4160/MAX4161 are optimized for unity gain (0dB) with a 350MHz -3dB bandwidth. The MAX4260/MAX4261 are optimized for gains of two (6dB) or more with a 250MHz -3dB bandwidth. These devices have low (0.01%/0.01°) differential gain and phase errors and operate from ±5V supplies.

These amplifiers are ideal for use in broadcast and graphics video systems because of their low 2pF input capacitance, channel-to-channel switching time of only 20ns, and wide 130MHz 0.1dB bandwidth. In addition, the combination of ultra-high speed and low power makes them suitable for use in general-purpose, high-speed applications such as medical imaging, industrial instrumentation, and communications systems.

These parts have address latching and high-impedance output disabling, allowing them to be incorporated into large arrays. The MAX4160/MAX4260 are available in 16-pin QSOP and narrow SO packages. The MAX4161/MAX4261 are available in 28-pin SSOP and wide SO packages.

Features

- **Excellent Video Specifications:**
  0.1dB Gain Flatness to 130MHz
  0.01%/0.01° Differential Gain/Phase Error
- **High Speed:**
  350MHz -3dB Bandwidth (MAX4160/MAX4161)
  250MHz -3dB Bandwidth (MAX4260/MAX4261)
  700V/µs Slew Rate (MAX4160/MAX4161)
  1000V/µs Slew Rate (MAX4260/MAX4261)
  20ns Settling Time to 0.1%
- **Fast Switching:**
  20ns Channel-Switching Time
  <70mV Switching Transient
- **Low Power:**
  120mW (MAX4160/MAX4260)
  310mW (MAX4161/MAX4261)
- **Directly Drives 75Ω or 50Ω Cables**
- **>70mA Output Current Drive**
- **Address Latch and High-Z Output Disable**

Applications

Video Signal Multiplexing
Video Crosspoint Switches
Pixel Switching
Coaxial Cable Drivers
Workstations
High Definition TV
Broadcast Video
Multimedia Products
High-Speed Signal Processing

Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE
MAX4160ESE	-40°C to +85°C	16 Narrow SO
MAX4160EEE	-40°C to +85°C	16 QSOP
MAX4161EWI	-40°C to +85°C	28 Wide SO
MAX4161EAI	-40°C to +85°C	28 SSOP
MAX4260ESE	-40°C to +85°C	16 Narrow SO
MAX4260EEE	-40°C to +85°C	16 QSOP
MAX4261EWI	-40°C to +85°C	28 Wide SO
MAX4261EAI	-40°C to +85°C	28 SSOP

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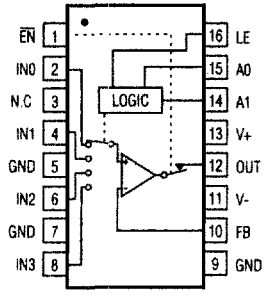
Pin Configurations/Functional Diagrams/Truth Tables

TOP VIEW

MAXIM

MAX4160/MAX4260



QSOP/SO

$\overline{EN}$	OUTPUT
0	ON
1	OFF (HI-Z)

MAX4160/MAX4260			
LE	A1	A0	INPUT
1	X	X	LAST
0	0	0	IN0
0	0	1	IN1
0	1	0	IN2
0	1	1	IN3

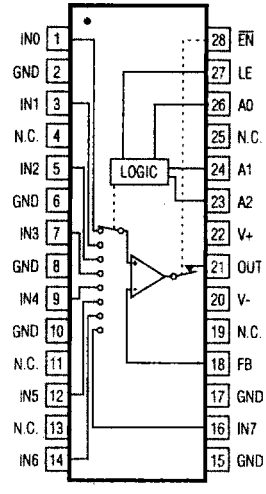
X = DON'T CARE

MAX4161/MAX4261				
LE	A2	A1	A0	INPUT
1	X	X	X	LAST
0	0	0	0	IN0
0	0	0	1	IN1
0	0	1	0	IN2
0	0	1	1	IN3
0	1	0	0	IN4
0	1	0	1	IN5
0	1	1	0	IN6
0	1	1	1	IN7

X = DON'T CARE

MAXIM

MAX4161/MAX4261



SSOP/SO

N.C. = NOT INTERNALLY CONNECTED