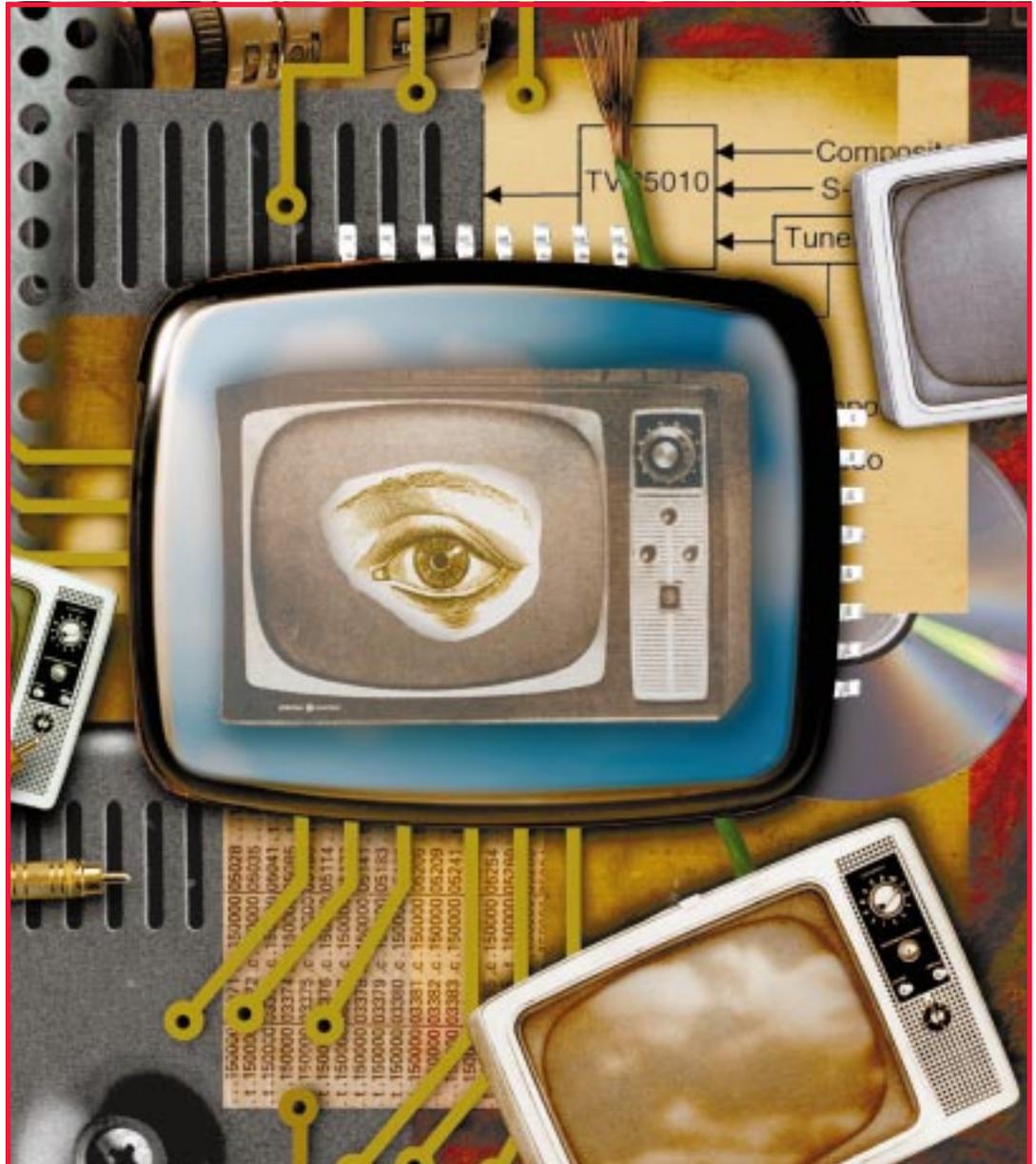


Inside

- Video solutions for PC platforms
Pages 2 and 3
- Fastest low power 10-bit, 1.25 MSPS serial ADC
Page 4
- GPLynx simplifies 1394 implementation
Page 5
- Single-chip, 900-MHz RF downconverter
Page 6
- 900-MHz RF transmit driver
Page 7
- 350-mW low-voltage audio amplifiers
Page 8
- 2-W stereo audio amplifier with depop
Page 9
- Highest-bandwidth low-voltage rail-to-rail CMOS op amp
Page 10
- High-speed wide supply voltage op amp
Page 11
- TCM38C17 Quad Combo
Page 12
- Amplifiers data book
Page 13

MIXED SIGNAL & ANALOG *Showcase*



Higher quality featured in new
video encoder/decoder

Pages 2 and 3

Product Features

- True Gen-lock Capability
- Square Pixel and ITU BT.601 Sampling Formats
- Combo Filter on Chroma and Luma Paths (TVP5010)
- Flexible Interface (TVP6000)
- Flicker Filter and Overscan Compensation (TVP6000)
- PC 97 compliant
- Characterized for operation from 0°C to 70°C

Video solutions for PC platforms

The TVP5010 NTSC/PAL decoder and TVP6000 NTSC/PAL encoder interface the analog world of video electronics to the digital domain of PCs. By combining a premier feature set with standard interfaces, these devices enable a new image quality level for video on a PC platform.

The TVP5010 is a video decoder that accepts analog video inputs, composite or S-video, in NTSC or PAL formats then digitizes them. It then separates luminance and chrominance information, and

outputs digital data in a variety of standard formats. The TVP5010 also provides adjustable contrast enhancement, brightness, saturation and hue control through the I²C bus interface.

By offering comb filtering on both the luminance and chrominance paths, the decoder reduces both cross-chroma and cross-luma artifacts while preserving maximally flat frequency response over the entire video bandwidth. This device also features gen-lock circuitry which when used with a compatible video encoder

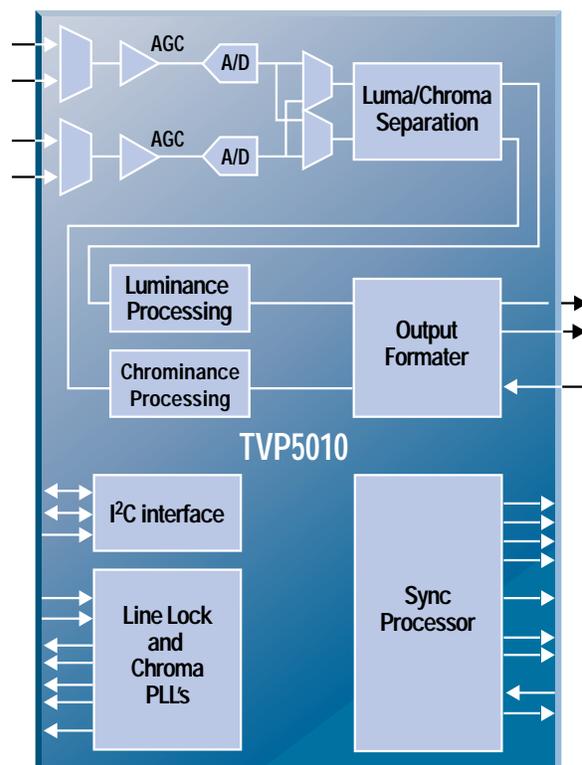
provides accurate color reproduction with nonstandard or unstable video sources such as a VCR. To provide flexible system implementation, the TVP5010 supplies multiple output formats including 8- and 16-bit 4:2:2 and ITU BT.656 format with embedded syncs.

The TVP5010 has four analog video inputs for up to 4 composite inputs or 2 S-video inputs. It also has two built-in analog signal processing channels with AGC and dual high speed 8-bit A/D converters for luminance and chrominance processing. The TVP5010 offers superior video performance to the typical lower quality decoders used in PCs. Its outstanding differential gain and phase, luma non-linearity and frequency response provides a no-compromise solution for both consumer and PC applications.

The TVP6000 NTSC/PAL video encoder provides simultaneous composite and S-video to televisions and VCRs. The TVP6000 operates in both master and slave modes with 8-bit or 16-bit video port. It accepts digital YCrCb video data in either CCIR or square pixel format and converts into NTSC/PAL analog video.

The encoder's flicker filter eliminates objectionable flicker typically generated when displaying computer graphics on an interlaced television. It also provides adjustable

TVP5010 functional block diagram



Suggested resale price

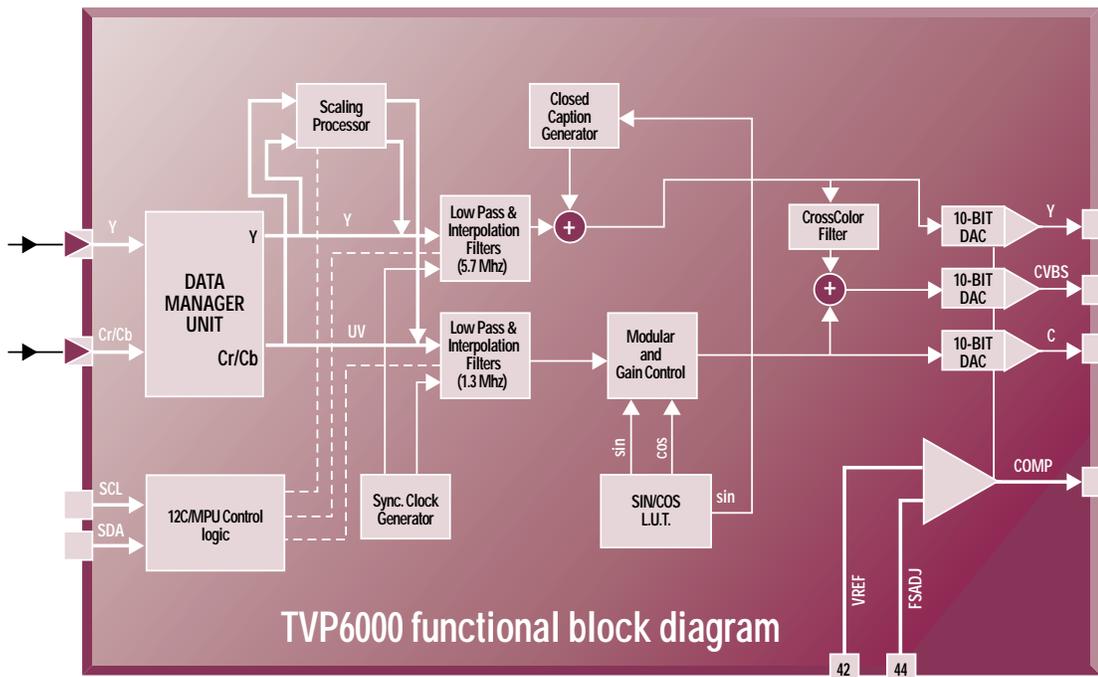
Quoted per device in quantities of 1,000

TVP5010PFP: \$10.71

TVP6000PFP: \$7.25

For technical support, call (972) 644-5580.
To order documentation, call 1-800-477-8924, ext. 3226

MEDIA



overscan compensation (0 – 12%) to ensure the entire graphics display is shown on the television output. A flicker filter and overscan compensation are essential features for reproducing high-quality graphics on a television display.

Both encoder and decoder seamlessly interface to the VMI video ports of the TVP4020 (3D Graphics Processor). Together the TVP5010 and TVP6000 offer a competitive advantage to developers of video systems.

Both the TVP5010 and TVP6000 will be available in an 80-pin TQFP package.

■ **Check box 01** for the Video Solutions product bulletin.

Key applications: TVP5010 and TVP6000 Video Solution

- | | |
|--------------------------|----------------------|
| ✓ DVD playback | W/TVP4020: |
| ✓ Video conferencing | ✓ Video editing |
| ✓ Digital TV | ✓ Video conferencing |
| ✓ All-in-one video cards | ✓ Content creation |

Read Showcase online and download datasheets at:

www.ti.com/sc/showcase

DATA CONVERTER

Product Features

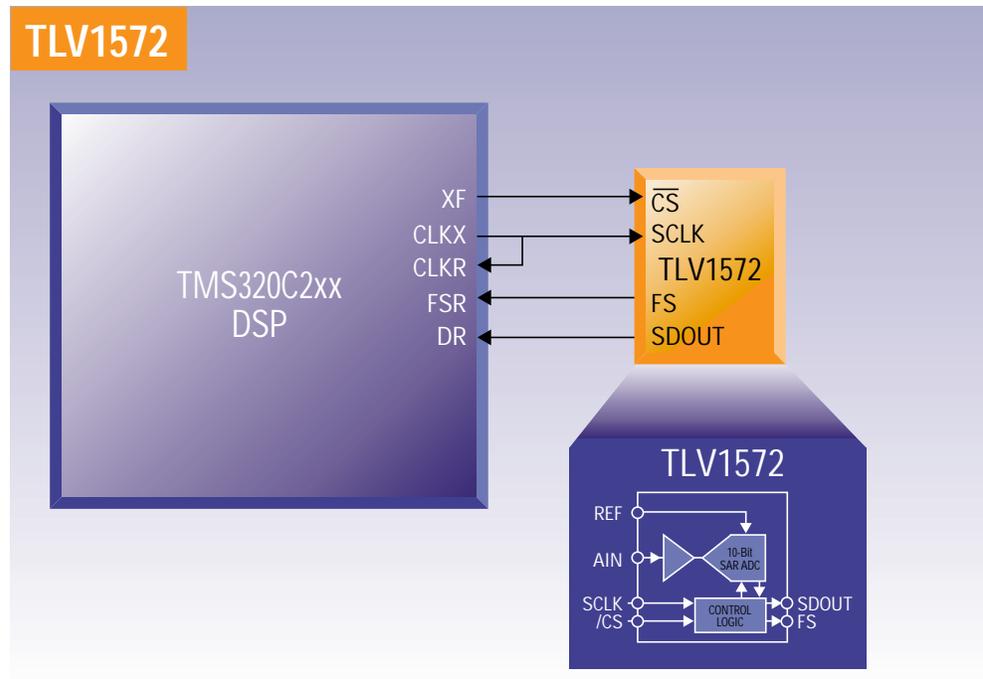
- 10-bit, 1.25 MSPS
- Glueless serial interface
- 3-V or 5-V operation
- Low power
- 8 mW at 3 V
- 25 mW at 5 V
- Auto-power-down: 10 μ A max
- Characterized for operation from 0°C to 70°C

Suggested resale price

Quoted per device in quantities of 1,000

TLV1572ID: \$4.25

Fastest low power, 10-bit, 1.25-MSPS serial ADC



The TLV1572 is the industry's first high-speed 10-bit ADC to gluelessly interface with TMS320 DSPs or (Q)SPI digital microcontrollers, while packaged in a tiny 8-pin SOIC. This device accepts an analog input range from 0 V to V_{CC} and digitizes the input at a maximum 1.25 MSPS throughput rate. Power dissipation is only 8 mW with a 3-V supply or 25 mW with a 5-V supply.

The TLV1572 features a

10 μ A auto-power down mode which reduces power consumption whenever the conversion is not performed. Implemented with a successive approximation architecture, the TLV1572 has a typical Differential Non-Linearity (DNL) of ± 0.3 LSB and a typical Integral Non-Linearity (INL) of ± 0.5 LSB. The Signal-to-Noise Ratio + Distortion is 59 dB (typ).

The small 8-pin SOIC package, combined with an

extremely high sample rate-to-power ratio, makes this ADC the ideal choice for compact, low power, or remote high-speed systems. The TLV1572 easily adds flexibility to system design while saving board space as well as reducing board pin-count, design time and system cost.

The TLV1572 is available in an 8-pin SOIC package.

■ Check box 02 for a datasheet.

1 3 9 4

GPLynx simplifies 1394 implementation

The TSB12LV31 general purpose link-layer controller merges consumer electronics and computer peripherals by greatly simplifying the implementation of the 1394 high performance serial bus. The TSB12LV31 provides 1394 connection for peripherals with minimum support circuitry.

The device performs bi-directional asynchronous and isochronous data transfers to and from an IEEE-1394 serial bus physical layer device (PHY). Isochronous bandwidth is guaranteed on-demand to specified applications, assuring a constant flow of data for time-

critical applications. In addition, an internal 200-byte FIFO is provided on the TSB12LV31 to facilitate asynchronous and isochronous operations.

The TSB12LV31 programmable 8-/16-bit microcontroller interface offers flexibility in selection of the controller. It also features single channel data mover support for isochronous transmit from an unbuffered 8-bit port. The device is tailored and optimized for use as a peripheral link-layer controller (LLC).

Key Applications:

- Digital cameras
- Printers
- Scanners

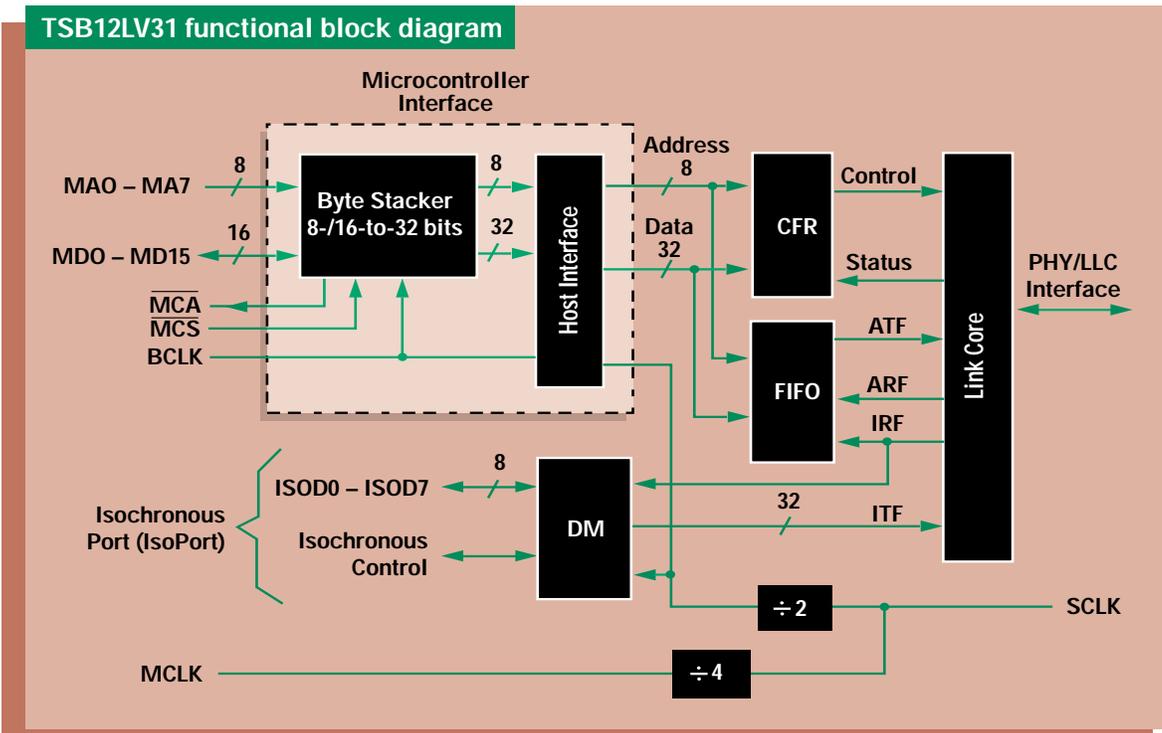
The TSB12LV31 is available in a 100-pin PZ package (TQFP).

■ **Check box 03** for a datasheet.

Product Features

- Supports IEEE – 1394-1995 standard (100 and 200 Mbps)
- Compatible with TI's TSB11LV01/TSB21LV03A PHYs
- 3.3-V operation, 5-V tolerant
- 50 MHz clock frequency
- 50-Quadlet (200 bytes) FIFO
- Characterized for operation from 0°C to 70°C

TSB12LV31 functional block diagram



Suggested resale price

Quoted per device in quantities of 1,000

TSB12LV31PZ: \$6.85

TI offers a 1394 Designer Kit featuring the TSB12LV31 link layer controller and TSB21LV03 200 Mbps, three-port physical layer device. Visit our website at <http://www.ti.com/sc/1394> for more details.

Read Showcase online and download datasheets at:

www.ti.com/sc/showcase

WIRELESS

Product Features

- Operates from 3.5- to 5.0-V supply
- 4.2 dB typ cascaded SSB noise
- 2.2 dB typ LNA noise
- Selectable on-chip or external oscillator
- Characterized for operation from -40°C to 85°C

Single-chip, 900 MHz RF downconverter

The TRF1015 is an RF downconverter suitable for 900-MHz applications. This highly integrated device combines a low noise amplifier (LNA), a buffered voltage-controlled oscillator (VCO) and an RF mixer. It converts RF signals to Intermediate Frequency (IF) signals.

Key applications include:

- Wireless LAN
- Wireless data
- Cordless phones.

The TRF1015 provides three independently selectable modes of operation for both the LNA and the mixer: extended compression, standby and low current. For applications requiring full duplex capability, the extended compression mode maintains receiver sensitivity in the presence of large

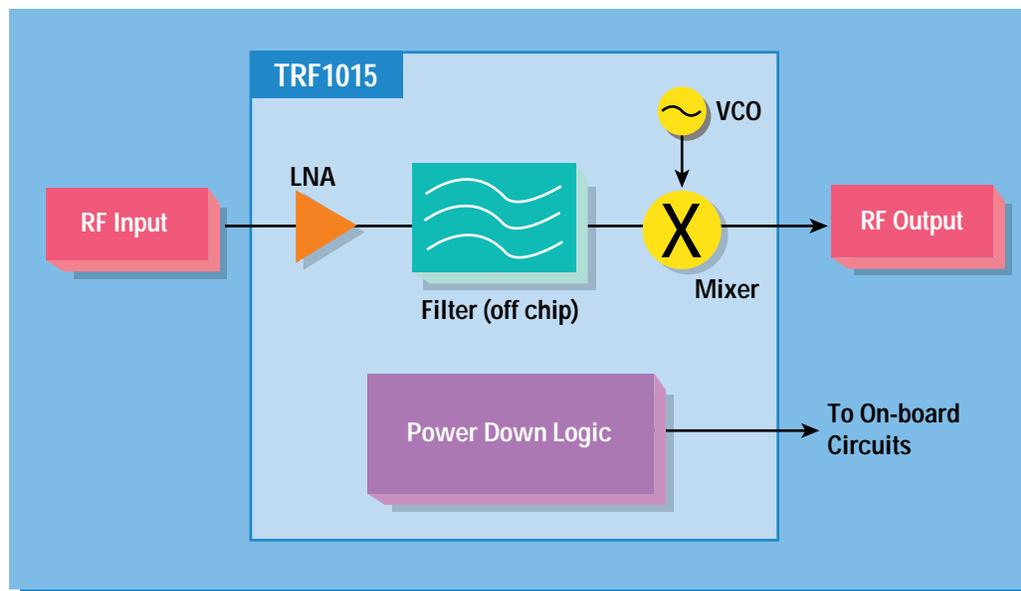
interfering signals and provides a low bit-error rate (BER) in a digital modulation system. Standby mode enhances overall device power conservation by allowing any or all of the integrated device components, including the LNA, VCO or RF mixer, to be completely shut down when they are not in use. For applications without full duplex operation, low current mode enables power advantages over the extended compression mode. In low current mode, typical dc current consumption is 2 mA for the LNA, 14 mA for the RF mixer and buffer amplifier, and 4 mA for the VCO.

The TRF1015 combines high gain and low noise to provide a powerful RF component. The LNA has a gain of 13 dB, with a noise figure of 2.2 dB. The

single balanced RF mixer features a gain of 9 dB, with a single-sideband (SSB) noise figure of 10 dB. The VCO gain and tuning range can be adjusted to meet phase-locked loop (PLL) design requirements with external shunt and feedback capacitors in series with the resonator. Competitive RF downconverter solutions provide approximately 7 dB less cascaded gain while consuming the same amount of power.

The TRF1015 is available in a 20-pin plastic shrink small outline (SSOP) package.

- **Check box 04** for a datasheet.



Suggested resale price

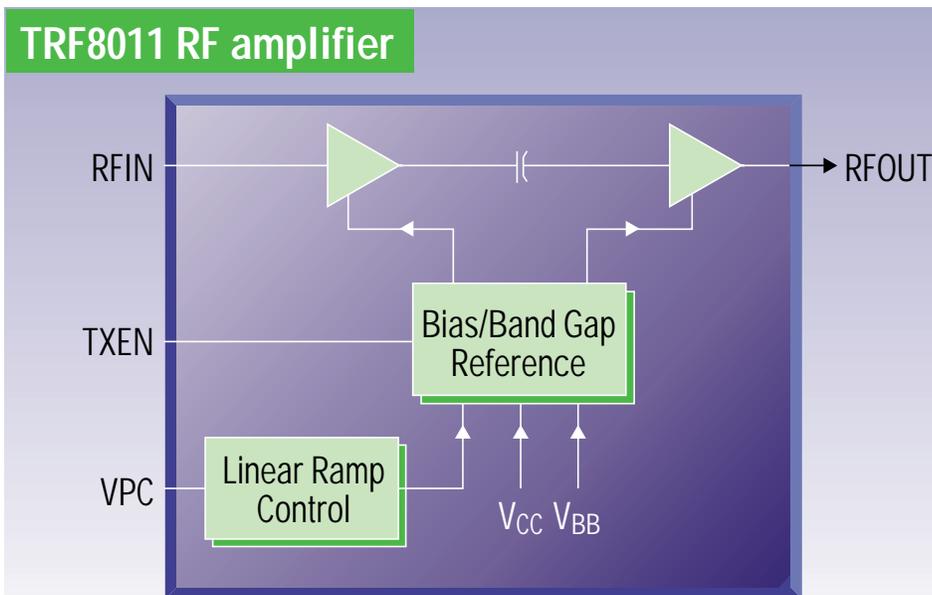
Quoted per device in quantities of 10,000

TRF1015DB: \$1.37

For technical support, call (972) 644-5580.
To order documentation, call 1-800-477-8924, ext. 3226

WIRELESS

900-MHz RF transmit driver extends system performance



The TRF8011 RF transmit driver amplifier extends the performance and integration of RF systems. Designed specifically as a driver amplifier for GSM and AMPS/NADC applications, the highly integrated device is excellent for other wireless applications in the 900-MHz ISM range, including pagers and modems. The TRF8011 can also be used as the final output stage for some 900-MHz cordless phones.

The TRF8011 integrates a two-stage amplifier with ramp capability for burst control in Time Division Multiple Access (TDMA) applications.

Functionally, the device amplifies the RF signal from the preceding modulator and upconverter stages in the RF section of a transmitter to a level sufficient to drive a final power output device. In addition, it provides important benefits such as single bias supply and transmit enable/disable control.

The TRF8011 can be enabled or disabled via a logic input. Also, a power control signal applied to the VPC input ramps the RF output power up or down to meet ramp and spurious emissions specifications in TDMA systems. This

signal causes a linear change in output power as the voltage applied to VPC varies between 0 and 3 V. The device uses a BiCMOS process and operates from a 4.8-V bias supply. Typical output power is 26 dBm, and small gain is typically 27 dB.

The TRF8011 is available in a small, surface mount, thermally enhanced TSSOP 20-pin PowerPAD™ package.

Product Features

- 800 – 1000 MHz transmit driver amplifier
- 26 dBm typ output power, 21 dB power gain
- Greater than 60-dB power control range
- Transmit enable/disable
- Characterized for operation from –40°C to 85°C

Suggested resale price

Quoted per device in quantities of 10,000

TRF8011PWP: \$1.43

■ **Check box 05** for a datasheet.

Read Showcase online and download datasheets at:

www.ti.com/sc/showcase

AUDIO POWER AMPLIFIERS

Product Features

- Fully characterized for 3.3-V and 5-V operation
- Output power @ 8 Ω :
 - 250 mW, 5.0 V, BTL
 - 250 mW, 5.0 V, SE*
 - 200 mW, 3.3 V, BTL
 - 75 mW, 3.3 V, SE*
- SE/BTL switch*
- Integrated depop circuitry
- Surface mount packaging
- Characterized for operation from 0°C to 70°C

* Only available for TPA311

350-mW low-voltage audio amplifiers

The TPA301 and TPA311 are low-voltage amplifiers designed for low-power audio applications. Each device is capable of delivering 200 mW into an 8- Ω load from a 3.3-V single supply or 350 mW from a 5-V single supply. Total Harmonic Distortion driving an 8- Ω , bridge-tied load (BTL) is less than 0.5%. These features provide power and fidelity for applications including:

- Cellular phones
- Pagers
- Personal digital assistance (PDA)
- Battery powered toys
- Point-of-sale (POS) terminals

The TPA311 features an integrated single-ended/bridge-tied load (SE/BTL) switch for end products that utilize both headphones and speakers. This switch configures the output of the TPA311 for driving headphones (SE) or speakers (BTL). For example, the

TI's Family of Audio Power Amplifiers

Device	Description
TPA301	350-mW mono, BTL
TPA311	350-mW mono, SE/BTL
TPA302	300-mW stereo, SE
TPA4860	1-W mono, BTL w/hp sense
TPA4861	1-W mono, BTL
TPA0102	1.5-W stereo, SE/BTL
TPA0202	2.0-W stereo, SE/BTL w/ depop
TPA0103	1.75-W mono, BTL stereo, SE
TPA1517	6-W stereo, SE

TPA311 would work well driving the external speaker of a cellular phone for hands-free conference calls or driving the earphone for hands-free personal calls.

Of course not all systems need to drive both headphones and an external speaker. The TPA301 is streamlined for BTL operation and is not capable of operating SE. The end result is a simple cost-effective way to drive a mono speaker.

Both amplifiers feature a shutdown pin to minimize power consumption. Additionally, the TPA311 features integrated depop circuitry that eliminates speaker noise when exiting shutdown mode.

The TPA301 and TPA311 are available in both 8-pin SOIC and thermally enhanced MSOP PowerPAD packages.

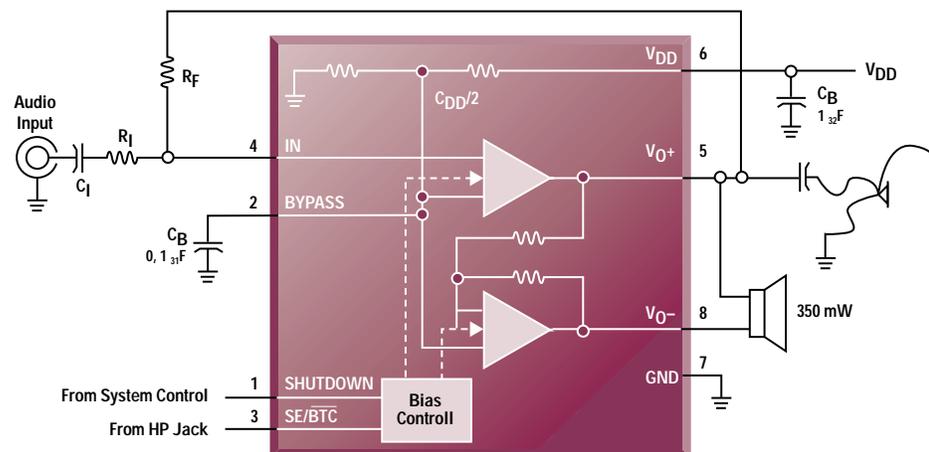
■ **Check box 06** for a datasheet and sample.

Suggested resale price

Quoted per device in quantities of 1,000

TPA301D: \$0.67

TPA311D: \$0.85



For technical support, call (972) 644-5580.
To order documentation, call 1-800-477-8924, ext. 3226

AUDIO POWER AMPLIFIERS

First 2-W stereo audio amplifier system with depop circuitry

Drives 3-Ω loads

The TPA0202 is a complete audio amplifier solution, offering both stereo speaker and headphone drive in a TSSOP PowerPAD package. Building on the success of the TPA0102, the second generation TPA0202 is bound to make some waves. This device features greater output power, integrated depop circuitry, ultra-low THD+N, and the thermally enhanced TSSOP PowerPAD package, a hallmark of TI's audio power amplifier solutions.

The TPA0202 is capable of delivering 2 W of continuous average power per channel to 3-Ω loads, 33% more than the TPA0102. This extra drive capability combined with the SE/BTL switch make this amplifier ideal for applications with low-impedance speakers in high-end notebook computers. The SE/BTL switch is a feature which allows the amplifier to operate single-ended (SE) for driving headphones, or in bridge-tied load (BTL) for driving speakers. To prolong battery life, power consumption is minimized when supply current drops to 5 μA in shutdown mode. The integrated depop circuitry makes this transition virtually transparent by eliminating unwanted speaker noise. Keeping the designer in mind, the TPA0202 has an integrated MUX which can switch the amplifier inputs

between two sets of pins. The MUX is intended to work in unison with the SE/BTL switch to provide the designer with the capability of using two different feedback networks. One network could be arranged to provide the best possible sound for headphones while the other is utilized for speakers.

The TPA0202 is available in TI's ultra-thin PowerPAD package which can disperse over 2.5 W of power with zero air flow, more than any surface mount package.

PowerPAD Technical Brief: <http://www.ti.com/sc/docs/psheets/appnote.htm>

Product Features

- High output power: 2 W @ 5 V, 3 Ω
- Depop circuitry
- THD+N: < 0.05% @ 1.5 W, 4 Ω
- Power-saving shutdown mode ($I_{DD} < 5 \mu A$)
- SE/BTL switch
- Stereo MUX
- Characterized for operation from -20°C to 85°C

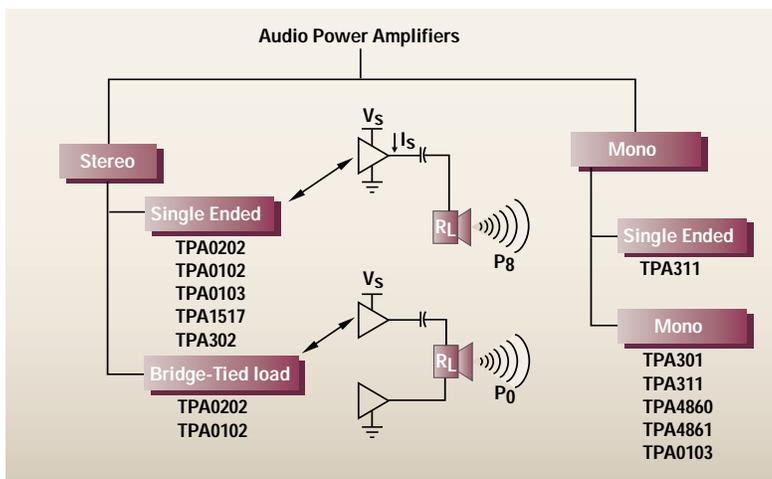


Figure 1. Texas Instruments audio power amplifier selection tree.

TPA0202 - Mini Datasheet				
$V_{DD} = 5.0 V$				
$V_{DD} = 3.3 V$				
Output Power (RMS @ 3 Ω)	SE	250	600	mW/Ch
	BTL	750	2000	mW/Ch
Supply Current (I_{DD})	SE	3.0	9.0	mA
	BTL	13.0	19.0	mA
Total Harmonic Distortion (THD+N)		1.0	1.0	%
Power Supply Ripple Rejection (PSRR)		55	60	dB

■ Check box 07 for a datasheet and PowerPAD package technical brief.

Suggested resale price

Quoted per device in quantities of 1,000

TPA0202PWPLE: \$2.83

Read Showcase online and download datasheets at:

www.ti.com/sc/showcase

OPERATIONAL AMPLIFIERS

Product Features

- Wide bandwidth: 4.9 MHz (typ)
- Fast slew rate: 9 V/ms (typ)
- Rail-to-rail output swing
- 600- Ω output drive
- Low power: $I_{DD} = 1$ mA/Ch
- Characterized for operation from -40°C to 85°C Industrial

Highest-bandwidth low-voltage rail-to-rail CMOS op amp

– BiFET performance for single-supply systems

The TLV2772 is a dual wide-bandwidth (4.9 MHz) CMOS operational amplifier. This amplifier offers the highest bandwidth and fastest slew rate (9 V/ms) of any low voltage single supply rail-to-rail CMOS amplifier.

The TLV2772 is a great solution for designs requiring the ac performance of BiFETs from a low-voltage single supply. It is ideal for driving analog-to-digital converters (ADCs).

For digital processing systems, the TLV2772 will operate from the same power supply and deliver the ac performance and rail-to-rail output drive analog-to-digital

converters require. In addition, its ability to drive 600- Ω loads makes the TLV2772 a good choice for telecommunication applications.

The TLV2772 strengthens TI's leadership position as a low-voltage single supply CMOS op amp provider.

For other applications that require rail-to-rail output without the high bandwidth and slew rate, consider the TLC2272 or TLV2442. The TLC2272 has the lowest noise floor in the industry and the TLV2442 offers superb common mode input range.

The TLV2772 is available in 8-pin packages: SOIC, MSOP, and PDIP.

Applications

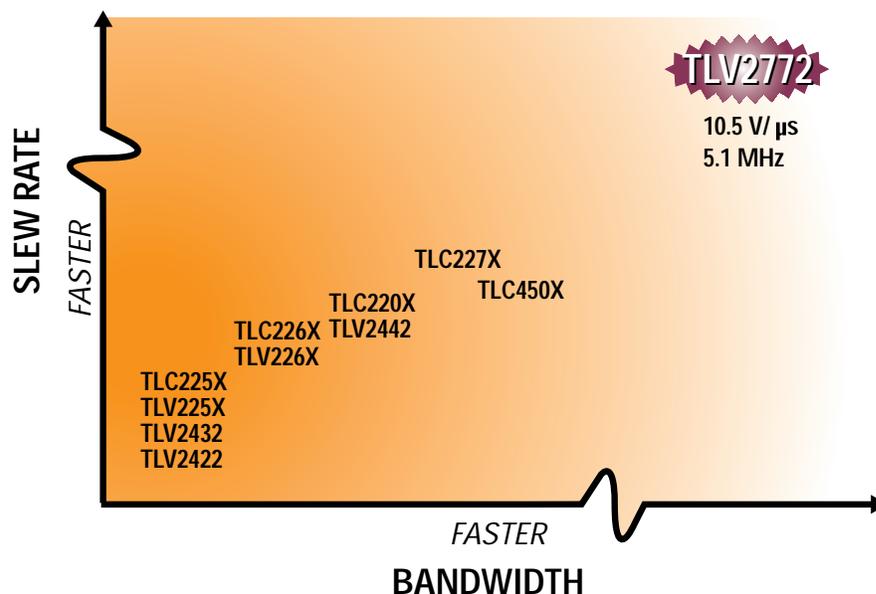
- ✓ ADC driver
- ✓ Telecommunications
- ✓ Signal conditioning
- ✓ Test equipment
- ✓ Battery powered applications

■ **Check box 08** for a datasheet and a sample.

Suggested resale price

Quoted per device in quantities of 1,000

TLV2772ID: \$1.27



For technical support, call (972) 644-5580.
To order documentation, call 1-800-477-8924, ext. 3226

OPERATIONAL AMPLIFIERS

High-speed wide supply voltage op amp

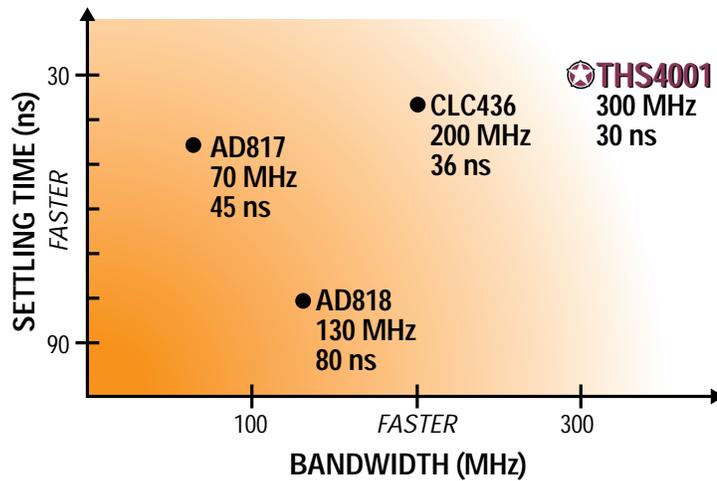
The THS4001 is a versatile high-speed op amp. Its wide bandwidth (300 MHz), fast slew rate (400 V/μs), and quick settling time (30 μs) make this amplifier ideal for a broad range of applications, including video. In fact, when considering bandwidth, slew rate, and settling time combined, the THS4001 is the best in its class. Its wide range of supply voltages, fully characterized at ±15-, ±5-, and 5-V single supply, position this amplifier in a variety of applications requiring high ac performance.

For example, the THS4001 is an excellent amplifier for test equipment operating from ±5-V or even 5-V single supply. And the 60-mA output drive makes the THS4001 a great preamp for high speed ADCs. For video applications, this device features a unique combination of 0.01% differential gain, 0.08° phase margin, and exceptional ac performance.

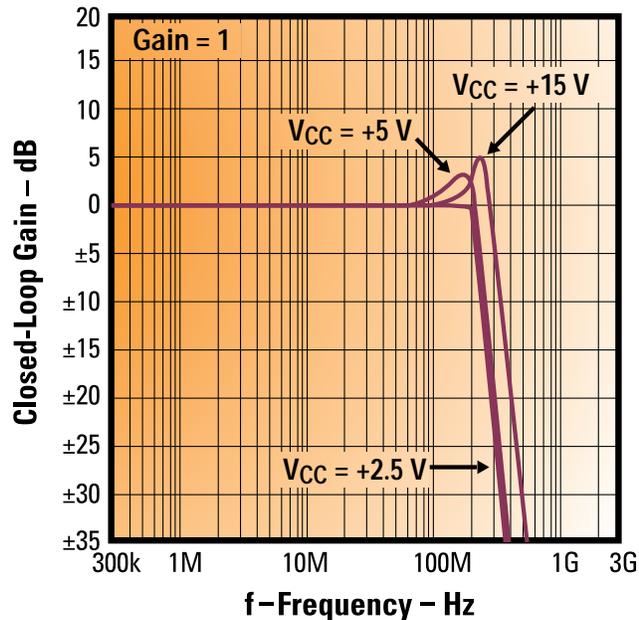
The THS4001 is available in an 8-pin SOIC package.

Applications

- ✓ High-Speed ADC Preamp
- ✓ Test Equipment
- ✓ Scanners
- ✓ Set-top-boxes
- ✓ Signal conditioning of ultra sound or broadcast
- ✓ High-definition TV
- ✓ Medical Systems



Closed-Loop Gain vs Frequency



■ Check box 09 for a datasheet and sample.

Product Features

- Wide supply voltage: $V_{DD} = \pm 15\text{-V}$ to 5-V single supply
- High speed: bandwidth = 300 MHz
slew rate = 400 V/μs
settling time = 30 μs (0.1%)
- Low Distortion
- Unity gain stable
- 0°C to 70°C and -40°C to 85°C temperature grades

Suggested resale price

Quoted per device in quantities of 1,000

THS4001ID: \$1.35

Read Showcase online and download datasheets at:

www.ti.com/sc/showcase

B R O A D B A N D

Product Features

- Four channels on one device
- Differential output and wide voltage swing
- Industry-leading idle-channel noise and crosstalk reduction
- Power down mode (3 mW/channel)
- Pin selectable μ -law and A-law companding
- Single +5-V power supply
- Characterized for operation from -40°C to 85°C

Suggested resale price

Quoted per device in quantities of 10,000

TCM38C17IDL: \$7.00

TCM38C17 QCombo Quad-Channel PCM Codec/Filter Combo

Texas Instruments has released the TCM38C17 QCombo, a quad-channel, pulse-code modulated (PCM) codec/filter combo solution for voiceband applications.

TI combos are highly integrated, single-chip PCM voiceband codecs with on-board filters. They are developed using advanced analog processes to provide a complete high-performance, low-noise solution to interface an analog voice circuit with a digital time-division-multiplexed (TDM) system. The QCombo adds multiple channel capability to TI's existing line of easy-to-use broadband connectivity solutions, helping to provide increased voice and data communications over the existing telecommunications infrastructure. The increased channel capacity will be a key factor for future voice and data transmission protocols.

The QCombo consists of four pairs of transmit and receive channels. On the transmit side of each channel pair, the device converts the analog input to a coded digital signal and multiplexes it to a PCM line. On the receive side, the device separates the digital signal from the PCM line, decodes it and returns it to analog. In addition, one PCM input and one PCM output feed the digital side, and

independent frame synchronization pulses provide flexibility in time slot assignment.

Signal conversion is accomplished using sigma-delta ($\Sigma\Delta$) conversion techniques, which provides higher signal-to-noise ratio, higher dynamic range, and reduced system cost due to a simplified anti-aliasing filter. As a result, the QCombo has industry-leading idle-channel noise for improved system performance.

The QCombo is a single rail device requiring only a 5-V power supply, contributing to low power dissipation consumed per channel. The device also features a power down mode that can be configured for each channel separately.

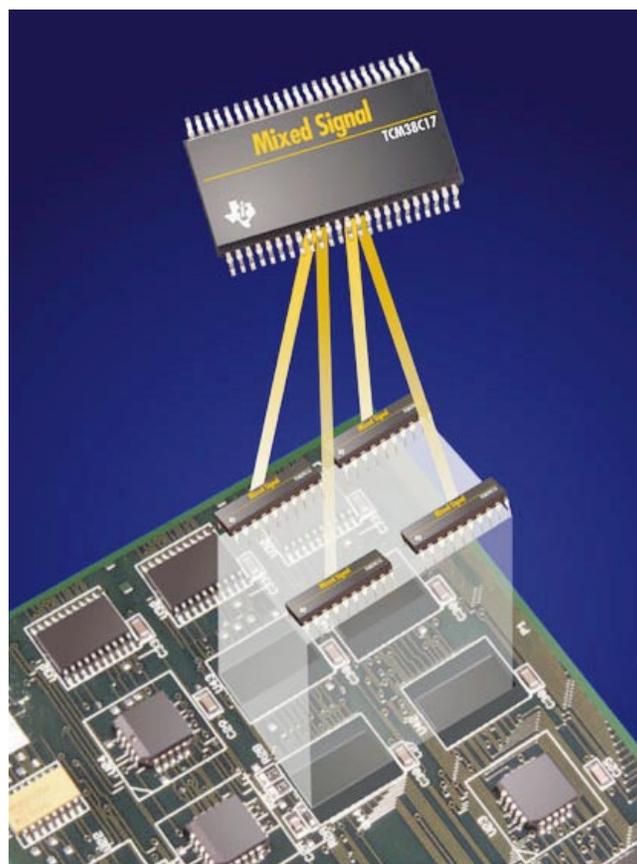
Due to its differential output,

the QCombo also provides the widest voltage swing of any single rail codec, with 8 volts peak-to-peak. This output is also capable of directly driving a transformer load. Other features include auto-zero and sample-and-hold functions, an internal voltage reference, and single-ended operation.

QCombo also provides pin-selectable μ -Law and A-Law companding for interoperability among industry standards for central office voiceband applications.

The TCM38C17 is available in a 48-pin plastic DGG TSSOP package.

■ **Check box 10** for a datasheet.



For technical support, call (972) 644-5580.
To order documentation, call 1-800-477-8924, ext. 3226

OPERATIONAL AMPLIFIERS

New amplifiers data book now available

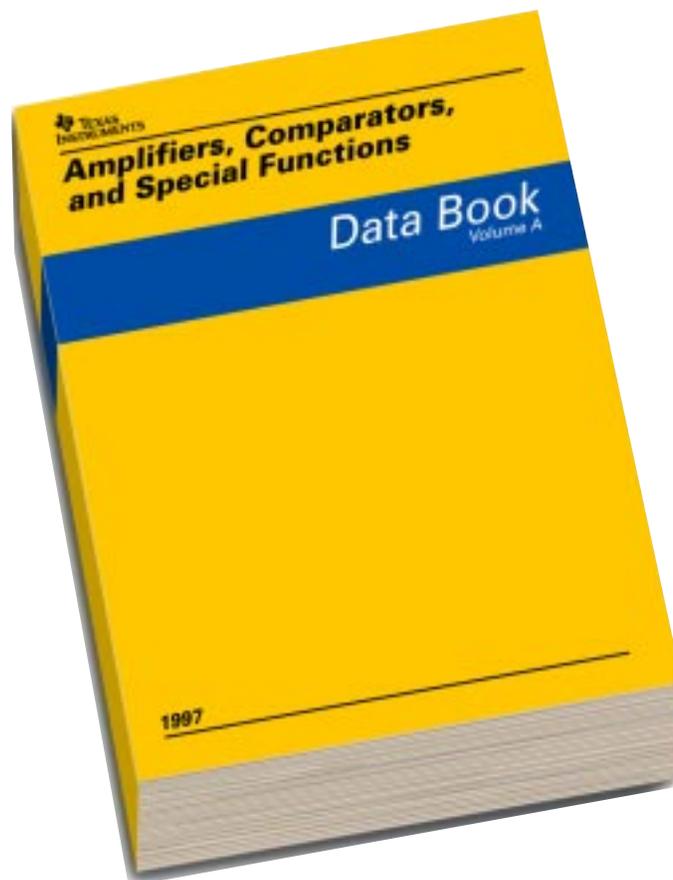
Texas Instruments has published a 2-volume set of its “Amplifiers, Comparators and Special Functions” databook. These books contain all the current data sheets for its full line of operational amplifiers, audio power amplifiers, comparators and associated devices.

Of major interest will be sections containing data on:

- New line of Audio power amplifiers (TPAxxx) – this new product line features the most up-to-date power amplifiers for stereo and mono applications
- New rail-to-rail op amps – this includes the newest products in our low-noise, high output drive CMOS rail-to-rail output devices
- SOT-23 – we show a listing of our devices, both amplifiers and comparators, which are now available in the ultra-small SOT-23 package
- Precision self-calibrating (Self-Cal™) amplifier products
- Our new family of ultra-fast, low-power comparators
- Expanded listing of product characterization over supply voltage and temperature ranges
- Complete mechanical applications section in each volume

To order, see the check box information below.

■ **Check Box 11** for a copy of the data book.

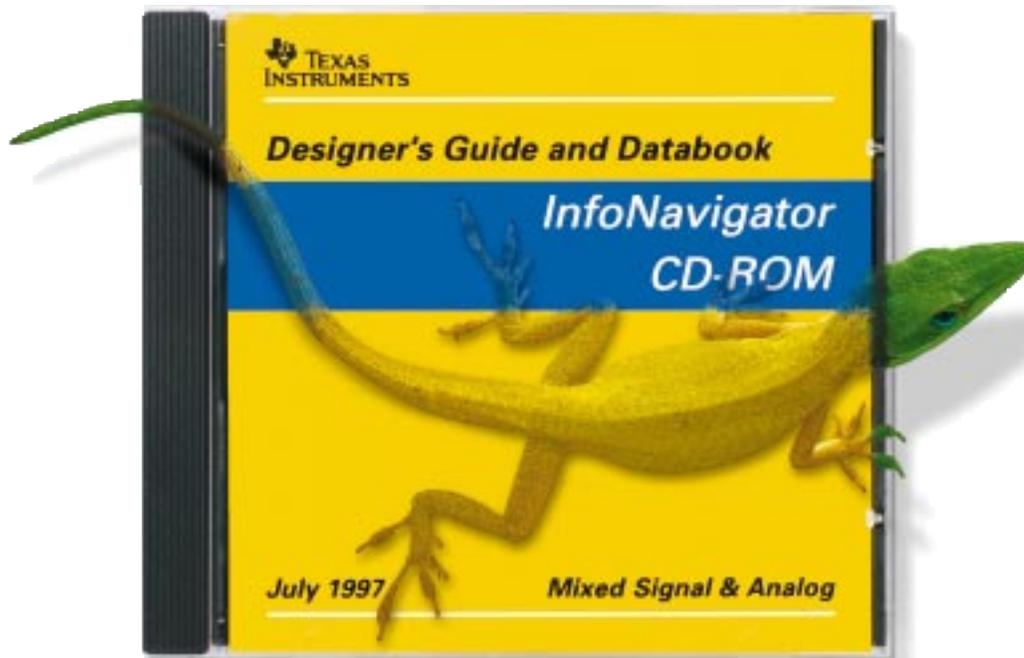


Read Showcase online and download datasheets at:

www.ti.com/sc/showcase

CD NOW STANDS FOR CHANGING DATA.

ANNOUNCING DOWNLOADABLE UPDATES FROM TI.



www.ti.com/sc/5047

Now mixed-signal and analog product updates are just a few mouse clicks away. Introducing TI's InfoNavigator CD, the industry's only Web-updateable CD-based Designer's Guide. Use its parametric search engine to identify the right device for your application. Or access more than 15,000 pages of support, training and technical documentation. Best of all, use it to download product updates directly from our Web site.

© 1997 TI

And when you're away from your PC, use our book-form Designer's Guide and Databook. This easy-to-use companion helps you identify devices quickly. So for complete information on mixed-signal and analog products, look to TI for the support documentation you want. Any way you want it.



For your free InfoNavigator CD-based Designer's Guide or a hard copy of our Designer's Guide and Databook, contact us at 1-800-477-8924, ext. 5047, or visit us on the Internet.

1830-96

■ **Check box 12** for the CD-based Designer's Guide and Databook

E V M K I T S

Each EVM kit contains a fully-assembled evaluation board, data sheet, and a User's Guide for the evaluation board. Some kits also include applications notes, plus necessary software, cables and connectors.

To order any of the EVM kits listed, please call our toll-free order desk number 1-800-477-8924 x 5800.

TIR2000	High-speed IrDA controller	\$99.00
TLC320AD50	16-bit sigma delta AIC	\$75.00
TLC320AD55	16-bit sigma delta AIC	\$75.00
TLC320AD56	16-bit sigma delta AIC	\$75.00
TLC320AD75C	ADA for digital audio applications	\$500.00
TPS9104	Cellphone P/S with audio PAs	\$50.00
TPS6735	5 V, 200 mA inverting dc-dc converter	\$50.00
TLC5510	8-bit, 20 MSPS ADC	\$50.00
TLC5540	8-bit, 40 MSPS ADC	\$50.00
TLC2543	5 V, 12-bit ADC	\$75.00
TLV2543	3 V, 12-bit ADC	\$75.00
TLC2932	50 MHz Phase Lock Loop	\$85.00
TSL230	Light-to-frequency converter	\$89.95
PC404-13 (TSL213)	200 DPI linear array	\$124.95
TSL215	200 DPI linear array	\$127.95
PC404-401 (TSL401)	400 DPI linear array	\$124.95
PC404-1401 (TSL1401)	400 DPI linear array	\$124.95
PC404-1402 (TSL1402)	400 DPI linear array	\$127.95
Audio amps	Audio power amp Plug-n-Play (basekit)	\$150.00
TMS320C5x	C5xDSP DSK	\$99.00
TSBKBACKPL	Backplane card	\$2000.00
TSBKPCITST	PCILynx™ and 200 Mbps phy – feature rich board	\$1000.00
TSBKPCI	PCILynx™ and 200 Mbps phy – value board	\$275.00
TSBKGPCILYNX	TSB12LV31/TSB21LV03 peripheral kit	\$1000.00
TSBKPRPHRL	Peripheral Card	\$1000.00
TUSBK4HUB	4-Port stand-alone hub kit	\$349.00



Read Showcase online and download datasheets at:

www.ti.com/sc/showcase

TI Worldwide Technical Support

Internet

TI Semiconductor Home Page

<http://www.ti.com/sc>

TI Distributors

<http://www.ti.com/sc/docs/distmenu.htm>

Product Information Centers

Americas

Phone+1(972) 644-5580

Fax+1(972) 480-7800

Emailsc-infomaster@ti.com

Europe, Middle East, and Africa

Phone

Deutsch+49-8161 80 3311

English+44-1604 66 3399

Francais+33-1-30 70 11 64

Italiano+33-1-30 70 11 67

Fax+33-1-30-70 10 32

Emailepic@ti.com

Japan

Phone

International+81-3-3457-0972

Domestic+0120-81-0026

Fax

International+81-3-3457-1259

Domestic+0120-81-0036

Emailpic-japan@ti.com

Korea

Phone+82-2-551-2804

Fax+82-2-551-2828

Emailkor@msg.ti.com

Taiwan

Phone+886-2-3771450

Fax+886-2-3772718

Emailtwcn@msg.ti.com

For support in the following countries, please contact the sales offices listed below:

Sales Offices

Australia/New Zealand

Melbourne

Phone+61-31-9696-1211

Fax+61-3-9696-1249

Sydney

Phone+61-2-910-3100

Fax+61-2-878-2489

Hong Kong

Phone+852-2956-7288

Fax+852-2956-2200

Mainland China

Beijing

Phone+86-10-6500-2255

Ext. 3750/3751/3752

Fax+86-10-6500-2705

Shanghai

Phone+86-21-6350-9566

Fax+86-21-6350-9583

Malaysia

Phone+603-4502230

Fax+603-4525595

MIXED-SIGNAL & ANALOG

Showcase

Editor Jean Sullivan

Art Director Nancy S. Waters

Editorial Board
David Slatter
Charles Wray
Rob Saunier
Angela Bailey

Mixed-Signal & Analog Products Showcase is a publication of Texas Instruments.

© 1998 Texas Instruments Incorporated

PowerPAD is a trademark of Texas Instruments Incorporated.

Philippines

Phone+63-2-636-0980

Fax+63-2-631-7702

Singapore, India, Indonesia, and Thailand

Phone+65-390-7128

Fax+65-390-7062

Important Notice: Texas Instruments (TI) reserves the right to make changes to or to discontinue any product or service identified in this publication without notice. TI advises its customers to obtain the latest version of the relevant information to verify, before placing orders, that the information being relied upon is current.

Please be advised that TI warrants its semiconductor products and related software to the specifications applicable at the time of sale in accordance with TI's standard warranty. TI assumes no liability for applications assistance, software performance, or third-party product information, or for infringement of patents or services described in this publication. TI assumes no responsibility for customers' applications or product designs.

Printed in the U.S.A.

B052297

Texas Instruments Incorporated

P.O. Box 172228

Denver, Colorado 80217-9271

Forwarding and return

postage guaranteed.

Address correction requested.

BULK RATE
U.S. POSTAGE
PAID
DALLAS, TEXAS
PERMIT NO. 2758

SLYM030

MIXED SIGNAL & ANALOG

 **TEXAS
INSTRUMENTS**