Video Amp Triple 5.5V 20-Pin TSSOP Tube

Manufacturer:	Texas Instruments, Inc
Package/Case:	TSSOP20
Product Type:	Amplifier ICs
RoHS:	RoHS Compliant/Lead free
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

Fabricated using the new complementary silicon-germanium (SiGe) BiCom-3 process, the THS7303 is a low-power, single-supply, 2.7-V to 5-V, 3-channel integrated video buffer. It incorporates a selectable fifth-order Butterworth filter to eliminate data converter images. The 9-MHz filter is a perfect choice for SDTV video including composite (CVBS), S-Video, and 480i/576i Y'P'BP'R, and G'B'R' (R'G'B') signals. The 16-MHz filter is ideal for EDTV 480p/576p Y'P'BP'R, G'B'R', and VGA signals. The 35-MHz filter is useful for HDTV 720p/1080i Y'P'BP'R, G'B'R', and SVGA/XGA signals. For 1080p or SXGA/UXGA signals, the filter can be bypassed allowing a 190-MHz bandwidth, 300-V/μs amplifier to buffer the signal.

Each channel of the THS7303 is individually I2C configurable for all functions which makes it flexible for any application. Its rail-to-rail output stage allows for both ac and dc coupling applications. The 6-dB gain along with the built-in SAG correction allows for maximum flexibility as an output video buffer.

The 16.6-mA total quiescent current (55 mW total power) makes the THS7303 an excellent choice for USB powered or portable video applications. While fully disabled, the THS7303 consumes less than 1 μA making it ideal for energy sensitive applications.

As part of the THS7303 flexibility, the 2:1 MUX input can be selected for ac- or dc-coupled inputs. The ac-coupled modes include a sync-tip-clamp option for CVBS/Y'/G'/B'/R' with sync or a fixed bias for the C'/P'B/P'R non-sync channels. The dc input options include a dc input or a (dc + 135-mV) input offset shift to allow for a full sync dynamic range at the output with 0-V input.

Key Features

3-Video Amplifiers for CVBS, S-Video, Y'U'V', SD/ED/HD Y'P'BP'R, and G'B'R' (R'G'B')

I2C? Control of All Functions

Integrated Low-Pass Filters
5th-Order Butterworth Characteristics

Selectable Corner Frequencies of 9-MHz, 16-MHz, 35-MHz, and Bypass (190-MHz)

Selectable Input Bias Modes
AC-Coupled with Sync-Tip-Clamp

AC-Coupled with Bias

DC-Coupled with 135-mV Input Shift

DC-Coupled

2:1 Input MUX Allows Multiple Input Sources

Built-in 6-dB Gain (2 V/V)

SAG Correction Capable

2.7-V to 5-V Single Supply Operation

Low 16.6-mA (3.3 V) Total Quiscent Current

Individual Disable (< 1 μA) and Mute Control

Rail-to-Rail Output:
Output Swings within 100 mV from the Rails to Allow AC or DC Output Coupling

Supports Driving Two Lines per Channel

Low Differential Gain/Phase of 0.13%/0.55°

Set Top Box Output Video Buffering

PVR/DVDR Output Buffering

USB/Portable Low Power Video Buffering

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Recommended For You

THS3092D	THS7316DR	THS4131IDGNR
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
SOP-8	SOP-8	MSOP8

THS4011CD	THS7374IPW	THS6184RHFR
Texas Instruments, Inc	Texas Instruments, Inc	Texas Instruments, Inc
SOP	TSSOP14	QFN

THS4503IDGN

Texas Instruments, Inc

MSOP8

THS7376IPWR

Texas Instruments, Inc

TSSOP14

THS7314D

Texas Instruments, Inc

SOP8

THS4130IDGK

Texas Instruments, Inc

MSOP8

THS7353PW

Texas Instruments, Inc

TSSOP20

THS4551IRGTR

Texas Instruments, Inc

VQFN16

THS4281D

Texas Instruments, Inc

SOIC-8

THS4631D

Texas Instruments, Inc

SOP-8

THS3061DGN

Texas Instruments, Inc

MSOP8