

Ultra-low-power video buffer

TSH122 unlocks extra battery life for mobile video products



The TSH122 is a single-channel video-line driver. It is optimized for driving CVBS signals from battery-powered applications to the TV via a 75-ohm line without any additional external components. It integrates a 6 dB-gain buffer, a 6th-order internal reconstruction filter to attenuate the parasitic frequency of 27 MHz from the clock of the video DAC, a rail-to-rail output, an internal input DC shift to drive the video signal without any effect on the synchronization tip, a SAG correction to reduce the size of the output capacitor and a power-down function to allow switching to a sleep mode with ultra-low consumption. The TSH122 operates from 2.25 V to 5 V single power supplies and is tested at 2.5 V and 3.3 V.

Key features

- Very low operating consumption: 1.7 mA
- Ultra low standby current: 4 nA typ., 500 nA max.
- 6th-order filtering: 47 dB @ 27 MHz attenuation (36 dB min. guaranteed by test)
- Excellent video performances
 - Differential gain 0.5%
 - Differential phase 0.10°
 - Group delay of 10 ns
- Very low internal DC shift
- Very small package: tiny SC70 for space saving

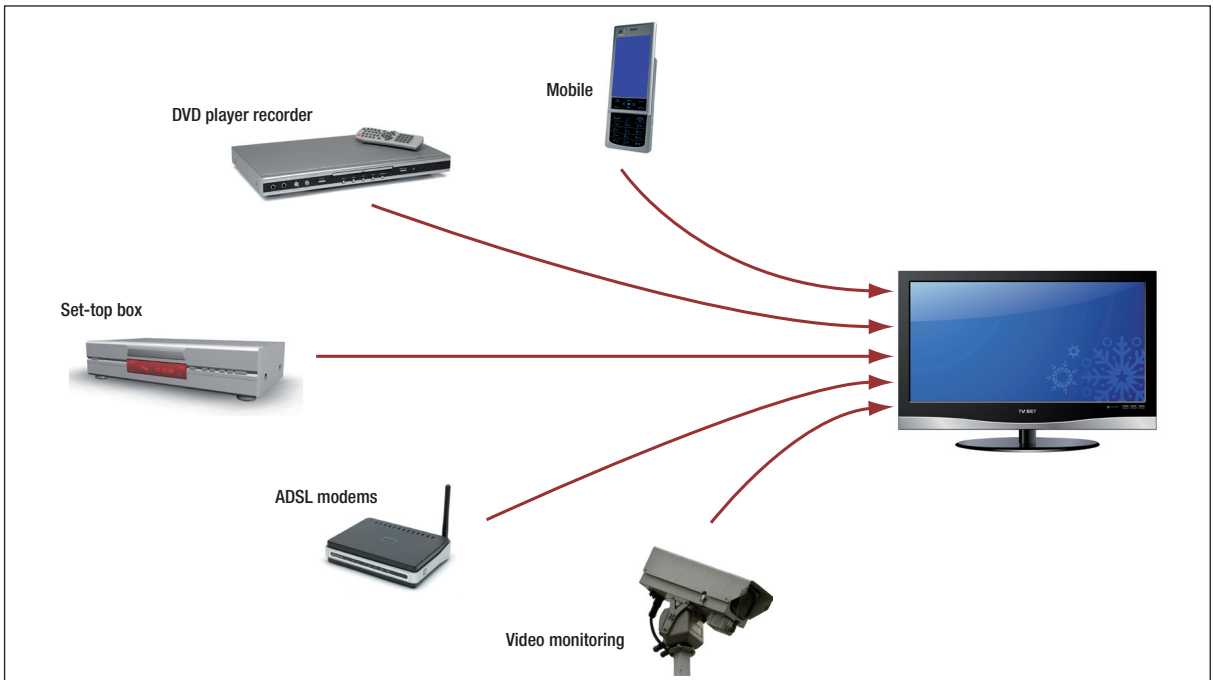
Key benefits

- Ultra low consumption
- Guaranteed parameters by test

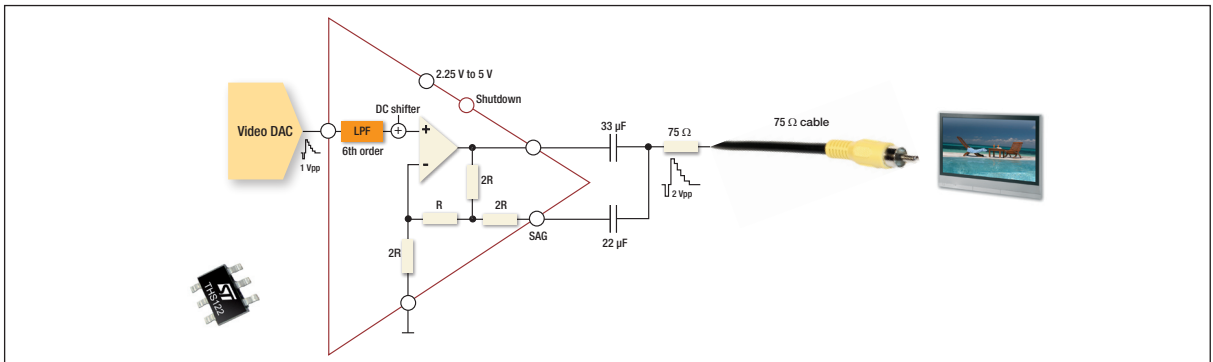
Targeted applications

- Mobile phones
- Digital still cameras
- Digital video cameras
- Portable DVD players

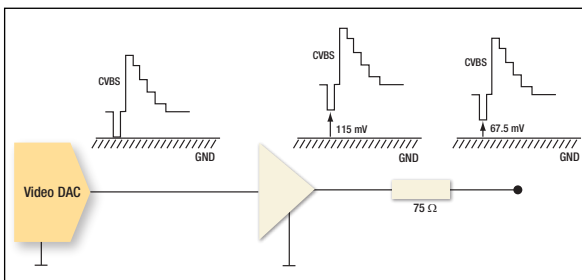
Main applications



Architecture



Internal DC-shift



Main parameters

Filter order	-1 dB BW (MHz)		27 MHz attenuation (dB)		I _{cc} (mA)		I _{standby} (nA)		Tested supply (V)
	min.	typ.	min.	typ.	typ.	max.	typ.	max.	
6th	5.4	7.2	36	47	1.7	2.1	4	500	2.5 / 3.3



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