

Multistandard Video-IF + Quasi Parallel Sound Processing

Description

The TDA4470 is an integrated bipolar circuit for multi-standard video/sound IF (VIF/SIF) signal processing in TV/VCR and multimedia applications. The circuit processes all TV video IF signals with negative

modulation (e.g., B/G standard), positive modulation (e.g., L standard) and the AM, FM/NICAM sound IF signals.

Features

- 5 V supply voltage; low power consumption
- Active carrier generation by FPLL principle (frequency-phase-locked-loop) for true synchronous demodulation
- Very linear video demodulation, good pulse response and excellent intermodulation figures
- VCO circuit operates at picture carrier frequency, the VCO frequency is switchable for L'-mode
- Alignment-free AFC without external reference circuit, polarity of the AFC curve is switchable
- VIF-AGC for negative modulated signals (peak sync. detection) and for positive modulation (peak white/black level detector)
- Tuner AGC with adjustable take over point
- Alignment-free quasi parallel sound (QPS) mixer for FM/NICAM sound IF signals
- Inter-carrier output signal is gain controlled (necessary for digital sound processing)
- Complete alignment-free AM demodulator with gain controlled AF output
- Separate SIF-AGC with average detection
- Two independent SIF inputs
- Parallel operation of the AM demodulator and QPS mixer (for NICAM-L stereo sound)
- Package and relevant pinning is compatible with the single standard version TDA4472, which simplifies the design of an universal IF module

Package: SDIP28, SO28, SSO28

Ordering Information

Extended Type Number	Package	Remarks
TDA4470-MSD	SDIP28	
TDA4470-MFLG3	SO28	Delivery in taped form
TDA4470-MFS	SSO28	Delivery in tubes
TDA4470-MFSG3	SSO28	Delivery in taped form

Block Diagram

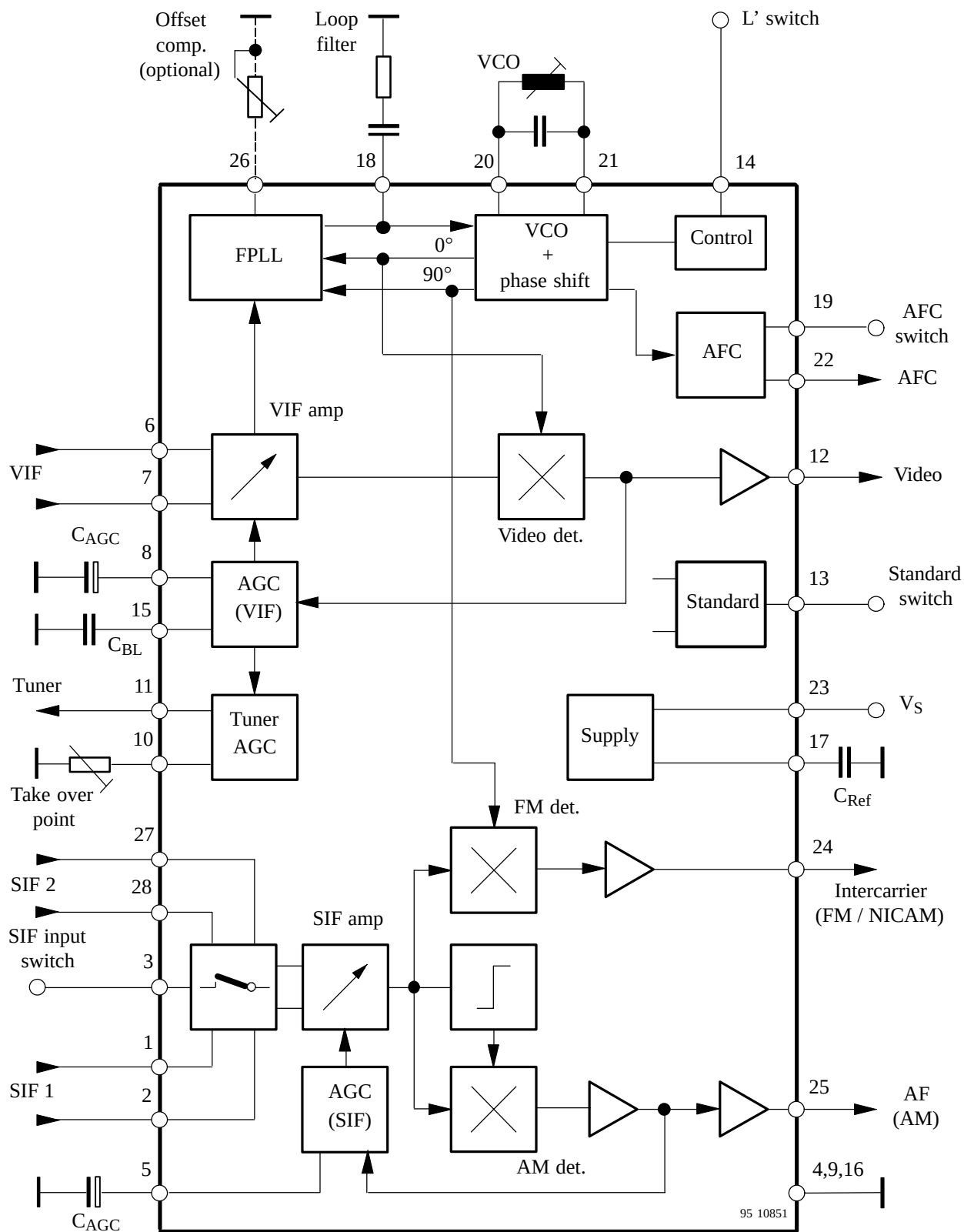


Figure 1. Block diagram

Pin Description

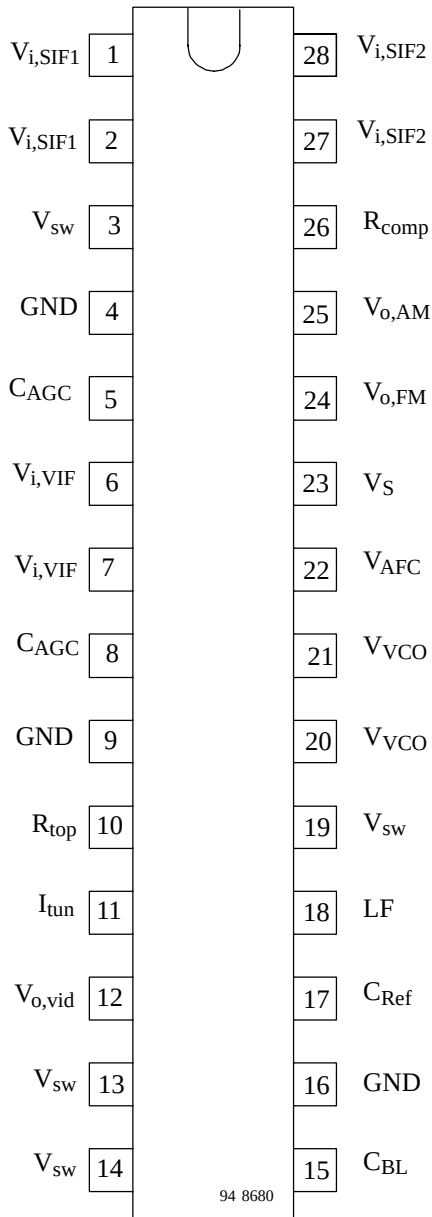


Figure 2. Pinning

Pin	Symbol	Function
1, 2	$V_{i, SIF1}$	SIF1 input (symmetrical)
3	V_{sw}	Input selector switch
4, 9, 16	GND	Ground
5	C_{AGC}	SIF-AGC (time constant)
6, 7	$V_{i, VIF}$	VIF input (symmetrical)
8	C_{AGC}	VIF-AGC (time constant)
10	R_{top}	Take over point, tuner AGC
11	I_{tun}	Tuner AGC output current
12	$V_{o, vid}$	Video output
13	V_{SW}	Standard switch
14	V_{SW}	L' switch
15	C_{bl}	Black level capacitor
17	C_{ref}	Internal reference voltage
18	LF	Loop filter
19	V_{sw}	AFC switch
20, 21	V_{VCO}	VCO circuit
22	V_{AFC}	AFC output
23	V_S	Supply voltage
24	$V_{O, FM}$	Intercarrier output
25	$V_{O, AM}$	AF output – AM sound
26	R_{comp}	Offset compensation
27, 28	$V_{i, SIF2}$	SIF 2 input (symmetrical)