

TDA2545A

Quasi-Split-Sound Circuit

Product Specification

Linear Products

DESCRIPTION

The TDA2545A is a monolithic integrated circuit for quasi-split-sound processing in television receivers.

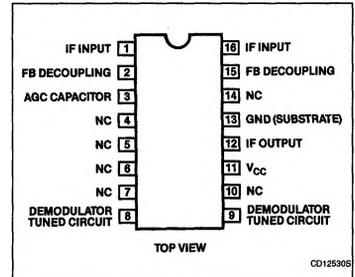
FEATURES

- 3-stage gain-controlled IF amplifier
- AGC circuit
- Reference amplifier and limiter amplifier for vision carrier processing
- Linear multiplier for quadrature demodulation

APPLICATIONS

- Stereo MTS television receiver
- Video cassette recorder with MTS
- CATV converters

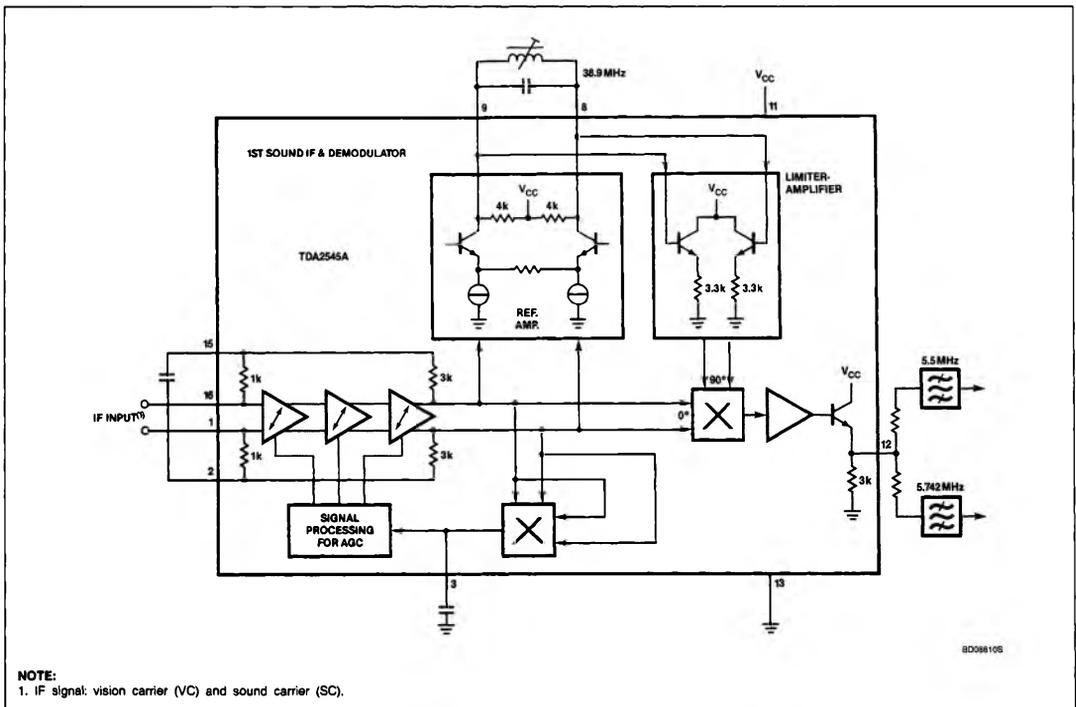
PIN CONFIGURATION



ORDERING INFORMATION

DESCRIPTION	TEMPERATURE RANGE	ORDER CODE
16-Pin Plastic DIP (SOT-38)	0 to +70°C	TDA2545AN

BLOCK DIAGRAM



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ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER	RATING	UNIT
V _{CC}	Supply voltage (Pin 11)	13.2	V
T _{STG}	Storage temperature range	-65 to +150	°C
T _A	Operating ambient temperature range	0 to +70	°C

DC ELECTRICAL CHARACTERISTICS

V_{CC} = 12V; T_A = 25°C; measured at f_{VC} = 38.9MHz, f_{SC1} = 33.4MHz, f_{SC2} = 33.158MHz;

Vision carrier (VC) modulated with 2T/20T pulses, line-for-line alternating with white bars; modulation depth 100% (proportional to 10% residual carrier).

Sound carriers (SC1, SC2) modulated with f = 1kHz and Δf = ±30kHz.

Vision-to-sound carrier ratios are VCSC1 = 13dB and VCSC2 = 20dB.

Vision carrier amplitude (RMS value) is V_{VC} = 10mV.

For measuring circuit see Figure 1, unless otherwise specified.

SYMBOL	PARAMETER	LIMITS			UNIT
		Min	Typ	Max	
Supply (Pin 11)					
V _{CC}	Supply voltage	10.8	12	13.2	V
I _{CC} = I ₁₁	Supply current		42		mA
IF amplifier					
V _{VC1-16(RMS)}	Minimum input voltage (RMS value) (intercarrier signals -3dB)		50		μV
V _{VC1-16(RMS)}	Maximum input voltage (RMS value) (intercarrier signals +1dB)		100		mV
ΔG _V	IF control range	66			dB
V ₃₋₁₃	Control voltage range	4		9	V
R ₁₋₁₆	Input resistance		2		kΩ
C ₁₋₁₆	Input capacitance		2		pF
Intercarrier generation					
V _{V12-13(RMS)}	Output voltage; 5.5MHz (RMS value)		100		mV
V _{V12-13(RMS)}	Output voltage; 5.742MHz (RMS value)		45		mV
V _{V12-13}	DC output voltage		5.9		V
R ₁₂₋₁₃	Allowable load resistance at the output	7			kΩ
-I ₁₂	Allowable output current			1	mA
Intercarrier signal-to-noise (measured behind the FM demodulators)					
S + W/W	Signal-to-weighted-noise ratio according to CCIR 468-2, quasi-peak at 5.5MHz	53			dB
S + W/W		51			dB
S + W/W	with black level (vision carrier modulated with sync pulses only) at 5.5MHz	60			dB
S + W/W		58			dB

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