

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.

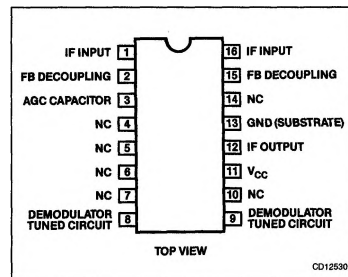
FEATURES

- 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

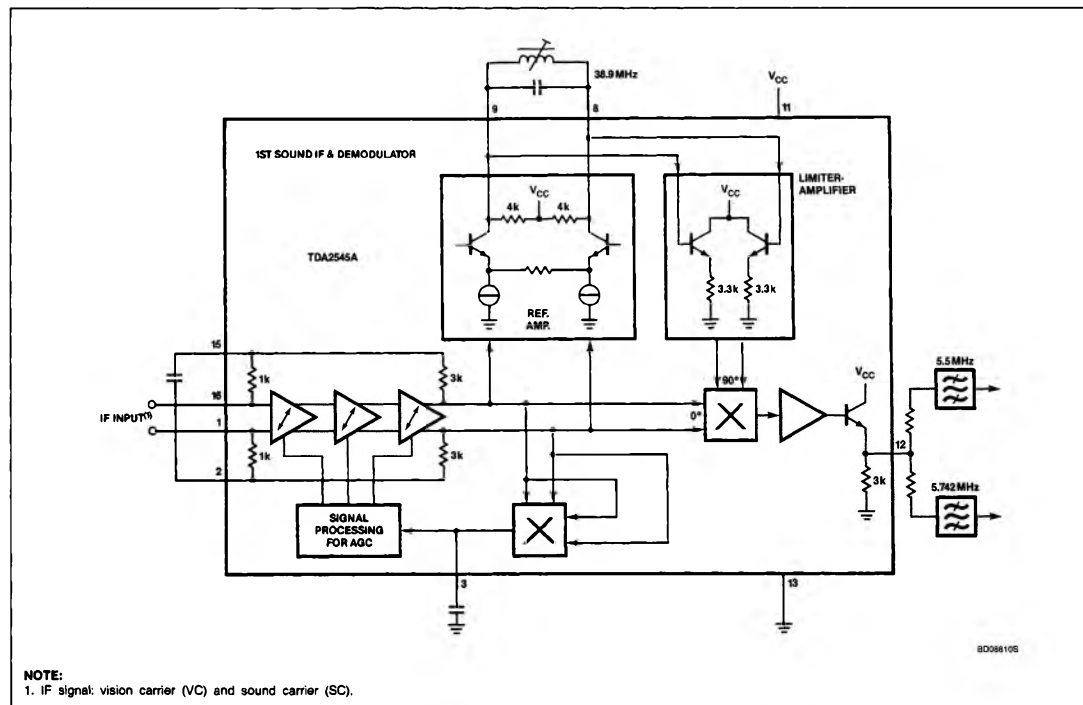
PIN CONFIGURATION



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

$V_{CC} = 12V$; $T_A = 25^\circ C$; 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 $\Delta f = \pm 30kHz$.

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 _{12 - 13(RMS)}	Output voltage; 5.5MHz (RMS value)		100		mV
V _{12 - 13(RMS)}	Output voltage; 5.742MHz (RMS value)		45		mV
V _{12 - 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 S + W/W	Signal-to-weighted-noise ratio according to CCIR 468-2, quasi-peak at 5.5MHz at 5.742MHz with black level (vision carrier modulated with sync pulses only)	53			dB
		51			dB
S + W/W S + W/W	at 5.5MHz at 5.742MHz	60			dB
		58			dB

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