



TDA2522/TDA2523 Color Demodulation Combinations

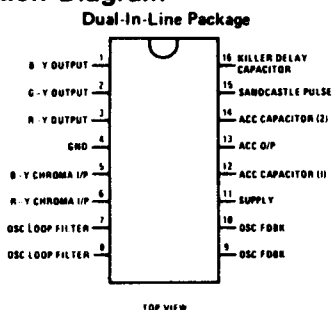
General Description

The TDA2522/TDA2523 are integrated synchronous demodulator combinations for colour television receivers incorporating the following features.

Features

- 8.8 MHz oscillator followed by a divider giving two 4.4 MHz signals used as reference signals
- Keyed burst phase comparison for optimum noise behavior
- ACC detector and amplifier
- A color killer
- Two synchronous demodulators for the (B-Y) and (R-Y) signals
- Temperature compensated emitter follower outputs
- PAL switch and PAL flip-flop with internal identification
- Integrated capacitors in the symmetrical demodulators reduce unwanted carrier-signals at the outputs

Connection Diagram



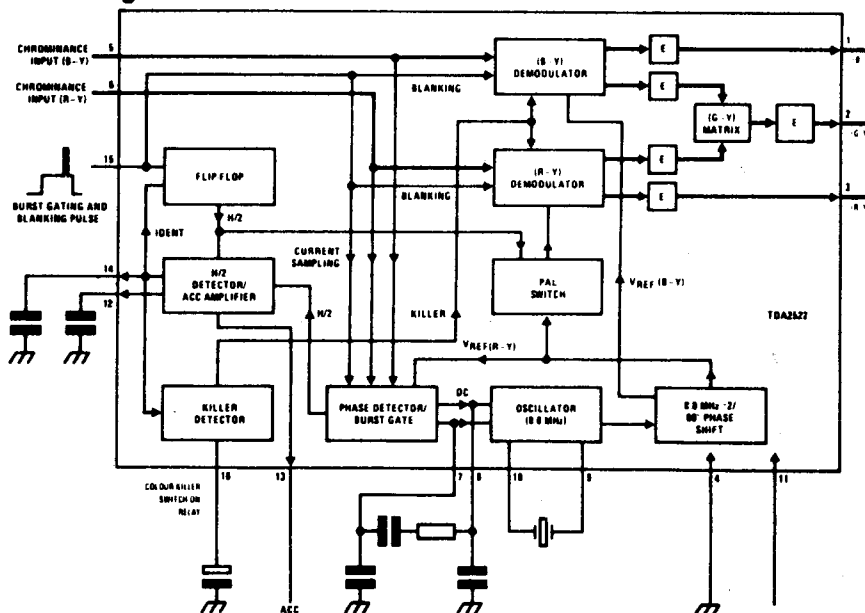
Dual-In-Line Package, Order Number TDA2522
See NS Package N16A

Quad-In-Line Package, Order Number TDA2522Q
See NS Package N16C

Dual-In-Line Package, Order Number TDA2523
See NS Package N16A

Quad-In-Line Package, Order Number TDA2523Q
See NS Package N16C

Block Diagram



NOTE: The outputs of the TDA2522 are -(B-Y), -(R-Y) and -(G-Y).
The outputs of the TDA2523 are (B-Y), (R-Y) and (G-Y).

Absolute Maximum Ratings

V ₁₁₋₄ , Supply Voltage	14V
P _{TOT} , Total Power Dissipation (Note 3)	600 mW
T _{STG} , Storage Temperature	-20°C to +125°C
T _A , Operating Ambient Temperature	-20°C to +60°C

Electrical Characteristics V₁₁₋₄ = 12V, T_A = 25°C

PARAMETER	MIN	TYP	MAX	UNITS
Supply Current		40		mA
Demodulator Section				
Ratio of Demodulator Signals		1.78		
$B-Y/R-Y, \frac{V_{1-4}}{V_{3-4}}$				
$G-Y/R-Y, \frac{V_{2-4}}{V_{3-4}}$ (Note 1)		0.85		
$G-Y/R-Y, \frac{V_{2-4}}{V_{3-4}}$ (Note 2)		0.17		
Color Difference Output Signals, Peak-to-Peak Values				
R-Y, V ₃₋₄ (p-p)	2.40			V
G-Y, V ₂₋₄ (p-p)	1.35			V
B-Y, V ₁₋₄ (p-p)	3.00			V
Impedance of Color Difference Signal Outputs				
Z ₃₋₄		250		Ω
Z ₂₋₄		250		Ω
Z ₁₋₄		250		Ω
H/2 Ripple at R-Y Output (Peak-to-Peak Value)			10	mV
Burst Keying Pulse (Positive-Going)	1.5			V
Chrominance Input Signal (Including Burst) Peak-to-Peak Value				
R-Y, V ₆₋₄		500		mV
B-Y, V ₅₋₄		350		mV
Reference Section				
Phase Difference Between Reference Burst Signals for ±400 Hz Deviation of Crystal Frequency	-5		5	Deg.
Holding Range with Typical Crystal		±500		Hz
ACC Reference Voltage		7		V
ACC Voltage with 0.5V Peak-to-Peak Burst				
V ₁₄₋₄ At Correct Phase		5.5		V
V ₁₄₋₄ With Zero Burst		7.0		V
V ₁₃₋₄ ACC Amplifier Output with 0.5V Peak-to-Peak Burst of Correct Phase			1.5	V
R _{G-F} Oscillator Input Resistance		270		Ω
R _{H-F} Oscillator Output Resistance		200		Ω

Note 1: The demodulators are driven by a chrominance signal of equal amplitude for the (R-Y) and the (B-Y) components. The phase of the (R-Y) chrominance signal equals the phase of the (R-Y) reference signal. The same holds for the (B-Y) signals.

Note 2: As under note 1, but the phase of the (R-Y) reference signal reversed.

Note 3: For operation in ambient temperatures above 25°C, the device must be derated based on a 150°C maximum junction temperature and a thermal resistance of 175°C/W junction to ambient.