

## TDA2555 Dual TV Sound Demodulator Circuit

### Product Specification

#### Linear Products

#### DESCRIPTION

The TDA2555 incorporates two FM demodulator systems to perform the demodulator functions required in a dual sound carrier TV system for demodulating the sound carriers.

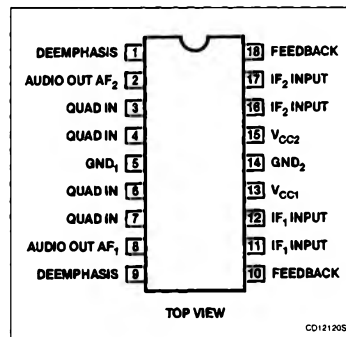
#### FEATURES

- Eight-stage limiting amplifier
- Quadrature demodulator for FM detection
- De-emphasis stage
- Output amplifier

#### APPLICATIONS

- Black-and-white/color receivers
- Video cassette recorders (VCR)
- Satellite receivers
- CATV converters

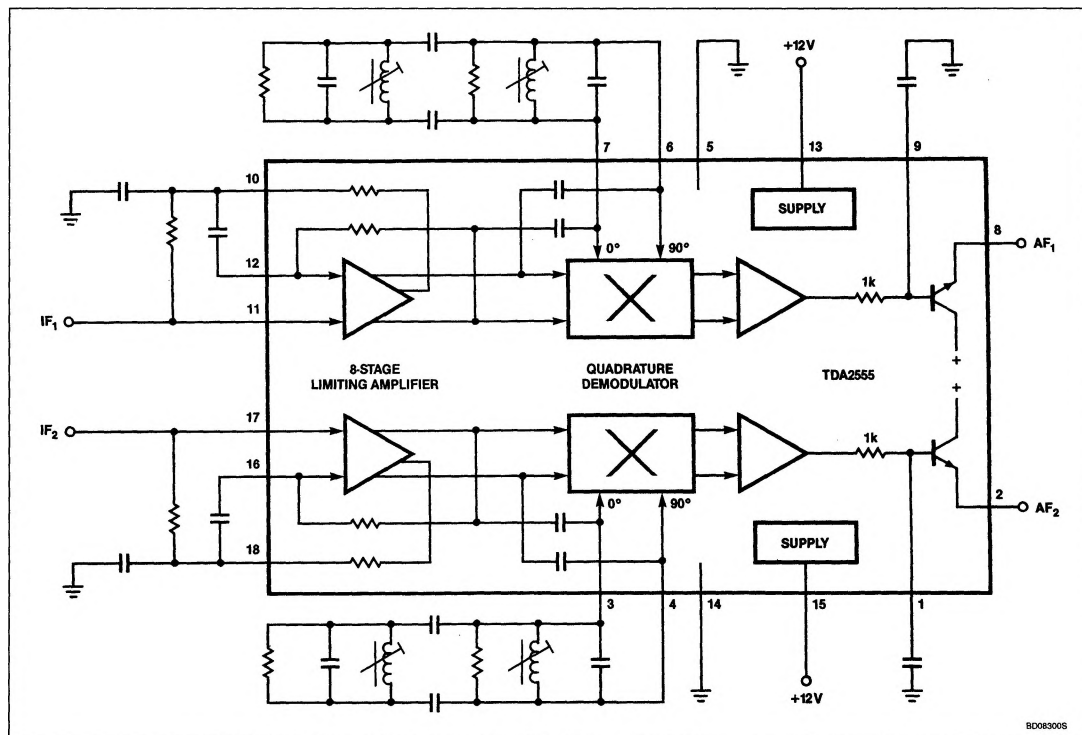
#### PIN CONFIGURATION



#### ORDERING INFORMATION

| DESCRIPTION                    | TEMPERATURE RANGE | ORDER CODE |
|--------------------------------|-------------------|------------|
| 18-Pin Plastic DIP (SOT-102HE) | 0 to +70°C        | TDA2555N   |

#### BLOCK DIAGRAM



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TDA2555

## ABSOLUTE MAXIMUM RATINGS

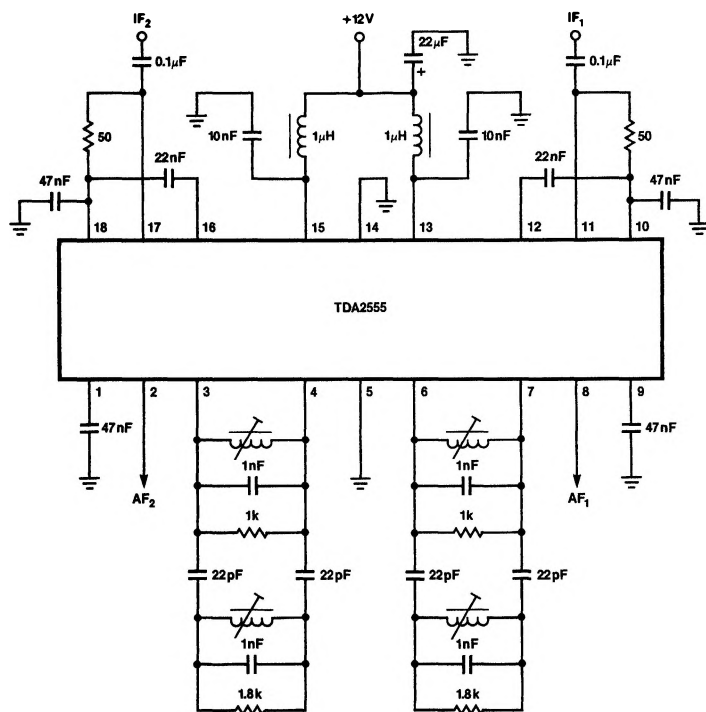
| SYMBOL    | PARAMETER                       | RATING      | UNIT |
|-----------|---------------------------------|-------------|------|
| $V_{CC}$  | Supply voltage (Pins 13 and 15) | 13.2        | V    |
| $P_{TOT}$ | Total power dissipation         | 400         | mW   |
| $T_{STG}$ | Storage temperature range       | -65 to +150 | °C   |
| $T_A$     | Operating ambient temperature   | 0 to +70    | °C   |

**DC ELECTRICAL CHARACTERISTICS**  $V_{CC} = V_{13, 15-14} = 12V$ ;  $T_A = 25^\circ C$ ;  $f = 5.5MHz$ ;  $f_{M1} = 1kHz$ ;  $\Delta f = \pm 30kHz$ ;  
 $V_I (RMS) = 5mV$ , see Test Circuit Figure 1, voltages with respect to ground (Pin 14),  
 unless otherwise specified.

| SYMBOL            | PARAMETER                                                                                        | LIMITS |      |      | UNIT      |
|-------------------|--------------------------------------------------------------------------------------------------|--------|------|------|-----------|
|                   |                                                                                                  | Min    | Typ  | Max  |           |
| $V_{CC}$          | Supply voltage (Pins 13 and 15)                                                                  | 10.8   | 12.0 | 13.2 | V         |
| $I_{13, 15}$      | Supply current                                                                                   |        | 24.5 |      | mA        |
| $V_{12, 17(RMS)}$ | Input voltage (RMS value) for start of limiting                                                  |        |      | 100  | $\mu V$   |
| $V_{12, 17-14}$   | Maximum input voltage                                                                            |        | 200  |      | mV        |
| $V_I$             | DC voltage at inputs-Pins 10, 11, 12, 16, 17, and 18 to 14                                       |        | 2.0  |      | V         |
| AMS               | AM suppression<br>$f_{M(FM)} = 70Hz$ ; $\Delta f = \pm 30kHz$<br>$f_{M(AM)} = 1kHz$ ; $m = 30\%$ | 50     |      |      | dB        |
| $V_{2, 8-14}$     | AF output voltage RMS value                                                                      | 350    |      |      | mV        |
| $V_{2, 8-14}$     | DC voltage at outputs Pins 2 and 8                                                               |        | 3.7  |      | V         |
| $R_L$             | Output load resistance Pins 2 and 8                                                              | 10     |      |      | $k\Omega$ |
| THD               | Total harmonic distortion                                                                        |        |      | 0.1  | %         |
| $R_I$             | Internal de-emphasis resistance Pins 1 and 9                                                     |        | 1.0  |      | $k\Omega$ |
| $\alpha$          | Channel separation                                                                               | 60     |      |      | dB        |

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**Figure 1. Test Circuit**

TC19881S