



TDA1190P TDA3190P

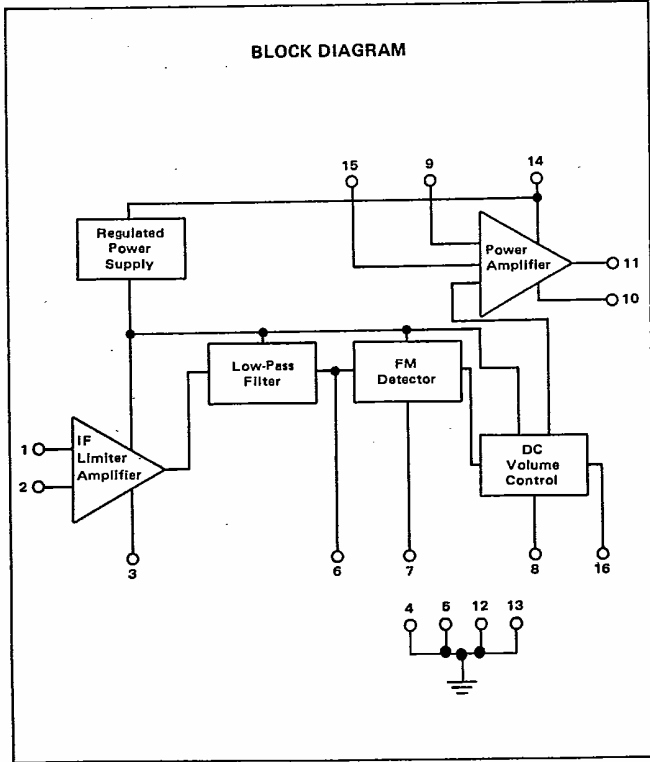
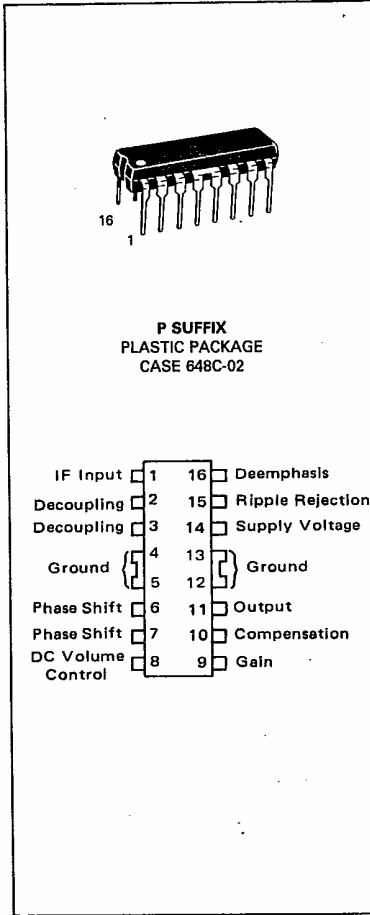
TV SOUND SYSTEM

The TDA3190P 4.2-watt sound system is designed for television and related applications. The TDA1190P is a low-power version. Functions performed by these devices include: IF limiting, IF amplifier, low pass filter, FM detector, DC volume control, audio preamplifier, and audio power amplifier.

- 4.2 Watts Output Power — TDA3190P
($V_{CC} = 24\text{ V}$, $R_L = 16\ \Omega$)
- 1.3 Watts Output Power — TDA1190P
($V_{CC} = 18\text{ V}$, $R_L = 32\ \Omega$)
- Linear Volume Control
- High AM Rejection
- Low Harmonic Distortion
- High Sensitivity

TV SOUND SYSTEM

**SILICON MONOLITHIC
INTEGRATED CIRCUIT**



ORDERING INFORMATION

Device	Temperature Range	Package
Both Devices	0 to +75°C	Plastic

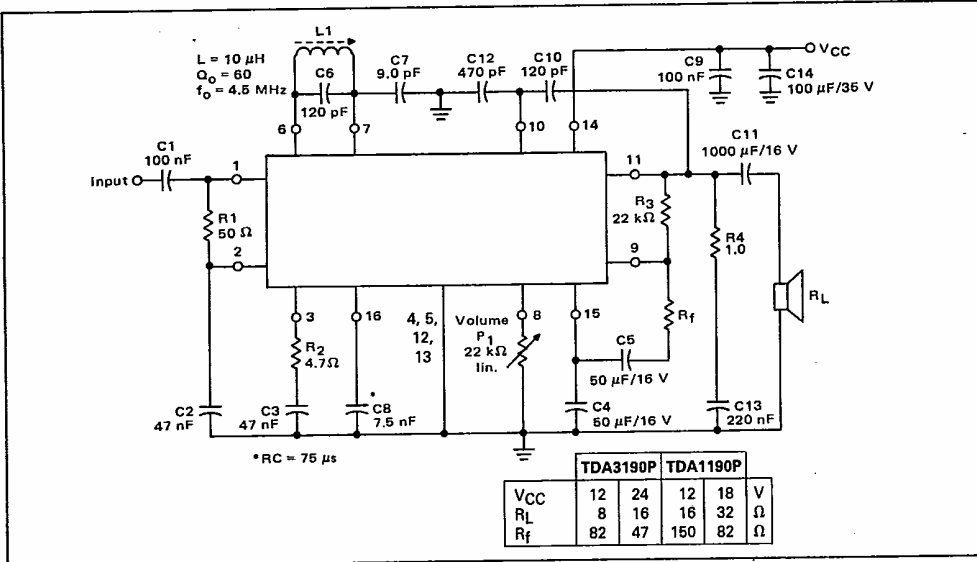
MAXIMUM RATINGS

Rating	Symbol	TDA3190P	TDA1190P	Unit
Supply Voltage Range	V _{CC}	9.0 to 28	9.0 to 22	V
Output Peak Current (Nonrepetitive) (Repetitive)	I _o	2.0 1.5	1.5 1.0	A
Input Signal Voltage	V _I	1.0		V
Operating Temperature Range	T _A	0 to +75		°C
Junction Temperature	T _J	150		°C

ELECTRICAL CHARACTERISTICS (V_{CC} = 24 V, f_o = 4.5 MHz, Δf = ±25 kHz, T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
Quiescent Output Voltage (Pin 11) V _{CC} = 24 V V _{CC} = 18 V V _{CC} = 12 V	V _O TDA3190P TDA1190P Both	11 8.0 5.1	12 9.0 6.0	13 10 6.9	V
Quiescent Drain Current (P1 = 22 kΩ) V _{CC} = 24 V V _{CC} = 18 V V _{CC} = 12 V	I _D TDA3190P TDA1190P Both	11 11 —	22 22 19	35 35 —	mA
Output Power (d = 10%, f _m = 400 Hz) V _{CC} = 24 V, R _L = 16 Ω V _{CC} = 12 V, R _L = 8.0 Ω V _{CC} = 18 V, R _L = 32 Ω V _{CC} = 12 V, R _L = 16 Ω (d = 2%, f _m = 400 Hz) V _{CC} = 24 V, R _L = 16 Ω V _{CC} = 12 V, R _L = 8.0 Ω V _{CC} = 18 V, R _L = 32 Ω V _{CC} = 12 V, R _L = 16 Ω	P _O TDA3190P TDA3190P TDA1190P TDA1190P TDA3190P TDA3190P TDA1190P TDA1190P	— — 1.0 0.7 — — — —	4.2 1.5 1.3 0.9 3.5 1.4 1.0 0.7	— — — — — — — —	W
Input Limiting Threshold Volts (−3.0 dB) at Pin 1 Δf = ±7.5 kHz, f _m = 400 Hz, Set P1 for 2.0 V _{rms} on Pin 11	V _I TDA3190P TDA1190P	— —	40 60	100 100	μV
Distortion (P _O = 50 mW, f _m = 400 Hz, Δf = ±7.5 kHz) V _{CC} = 24 V, R _L = 16 Ω V _{CC} = 18 V, R _L = 32 Ω V _{CC} = 12 V, R _L = 16 Ω	TDA3190P TDA1190P Both	— — —	0.75 1.0 1.0	— — —	%
Frequency Response of Audio Amplifier (−3.0 dB) (R _L = 16 Ω, C ₁₀ = 120 pF, C ₁₂ = 470 pF, P ₁ = 22 kΩ) R _f = 82 Ω R _f = 47 Ω	B	— —	70 to 12 k 70 to 7.0 k	— —	Hz
Recovered Audio Voltage (Pin 16) (V _I ≥ 1.0 mV, f _m = 400 Hz, Δf = ±7.5 kHz, P ₁ = 0)	V _O	—	120	—	mV
Amplitude Modulation Rejection (V _I ≥ 1.0 mV, f _m = 400 Hz, m = 30%)	AMR	—	55	—	dB
Signal and Noise to Noise Ratio (V _I ≥ 1.0 mV, V _O = 4.0 V, f _m = 400 Hz)	$\frac{S+N}{N}$	50	65	—	dB
Input Resistance (Pin 1) (V _I = 1.0 mV)	r _i	—	30	—	kΩ
Input Capacitance (Pin 1) (V _I = 1.0 mV)	C _i	—	5.0	—	pF
DC Volume Control Attenuation (P1 = 12 kΩ)	—	—	90	—	dB

TEST CIRCUIT



TYPICAL CIRCUIT CONFIGURATION

