

PRELIMINARY
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 some parametric limits are subject to change.



MITSUBISHI SOUND PROCESSOR

M62494SP/FP

SOUND CONTROLLER FOR TV

SRS 3D Stereo + SRS 3D Mono 1Chip

OUTLINE

M62494 has SRS 3D STEREO and SRS 3D MONO.
 There are three modes, those are SRS 3D stereo
 SRS 3D mono and bypass.
 Each mode can be set by terminals.

FEATURE

- Each mode can be set by terminals.
- Mute Function

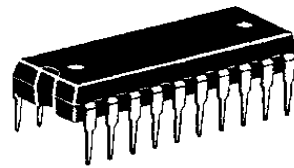
APPLICATION

- TV , Mini-Stereo , etc

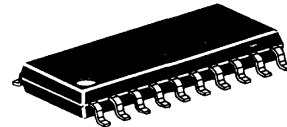
RECOMMENDED OPERATING CONDITION

- Supply voltage range 6 ~ 9.5V
- Rated supply voltage 9V

PACKAGE OUTLINE

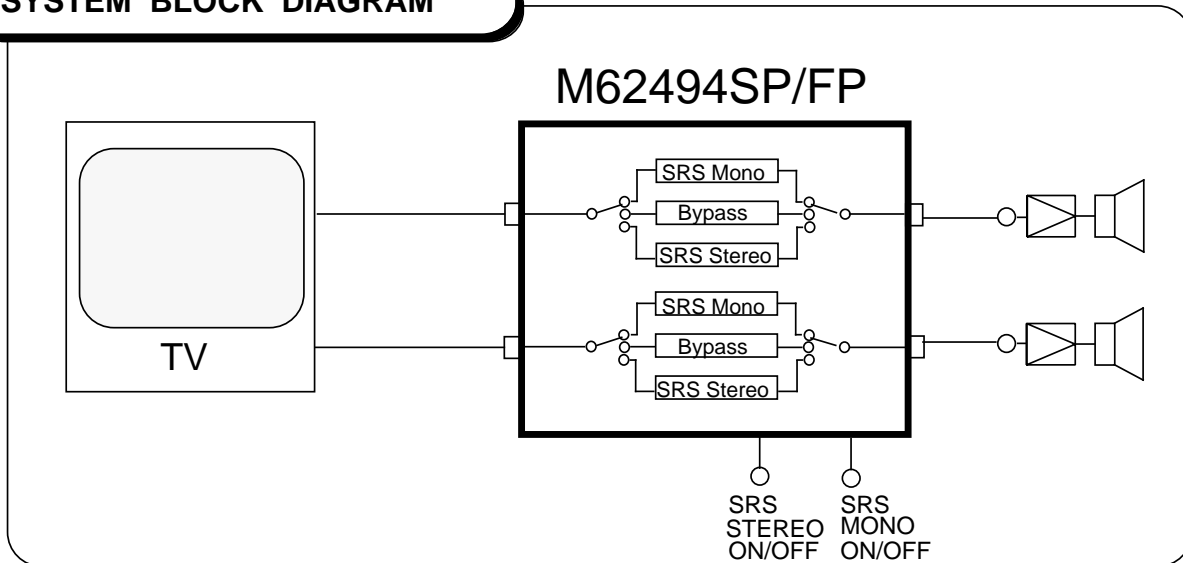


20P4B(SP)



20P2N(FP)

SYSTEM BLOCK DIAGRAM



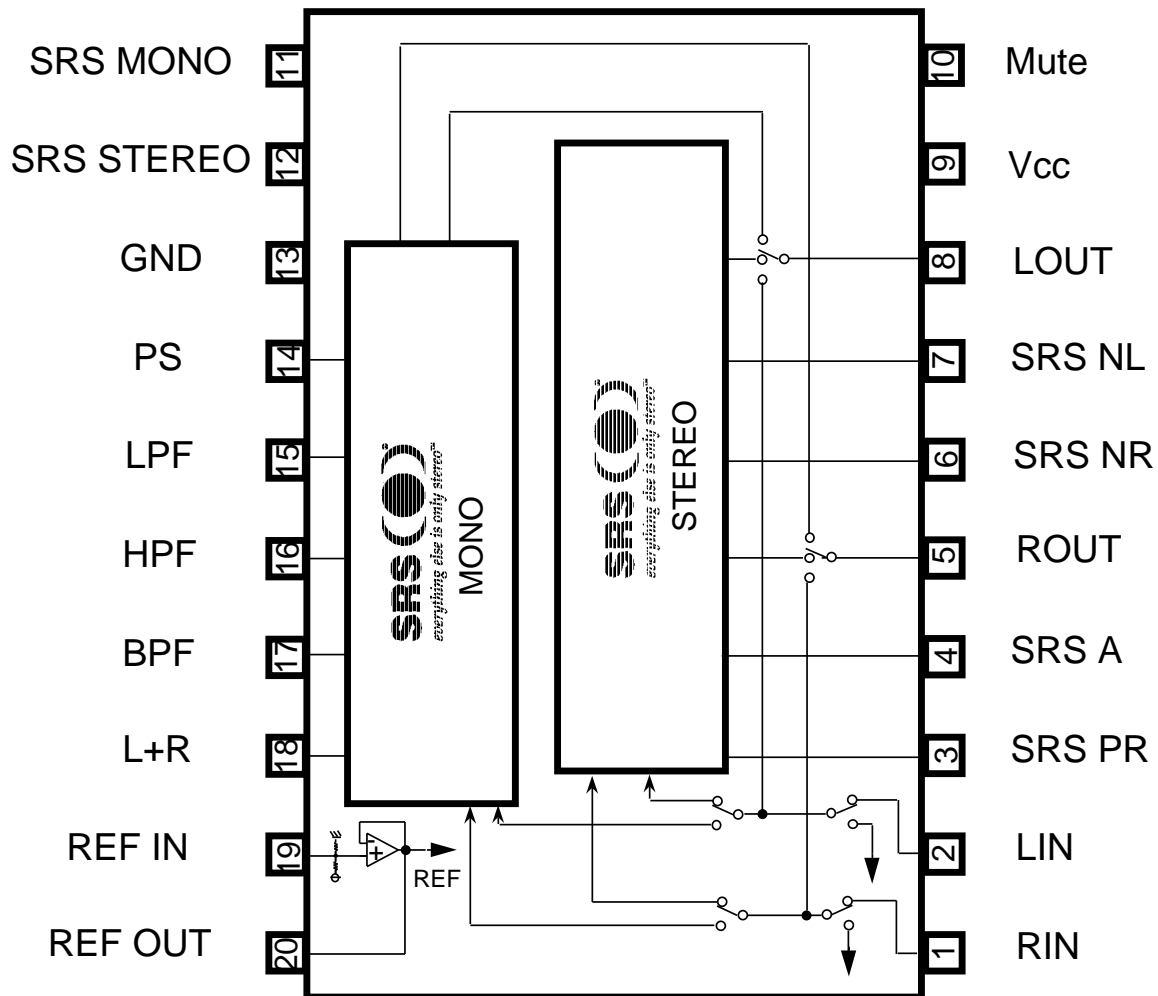
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Block Diagram



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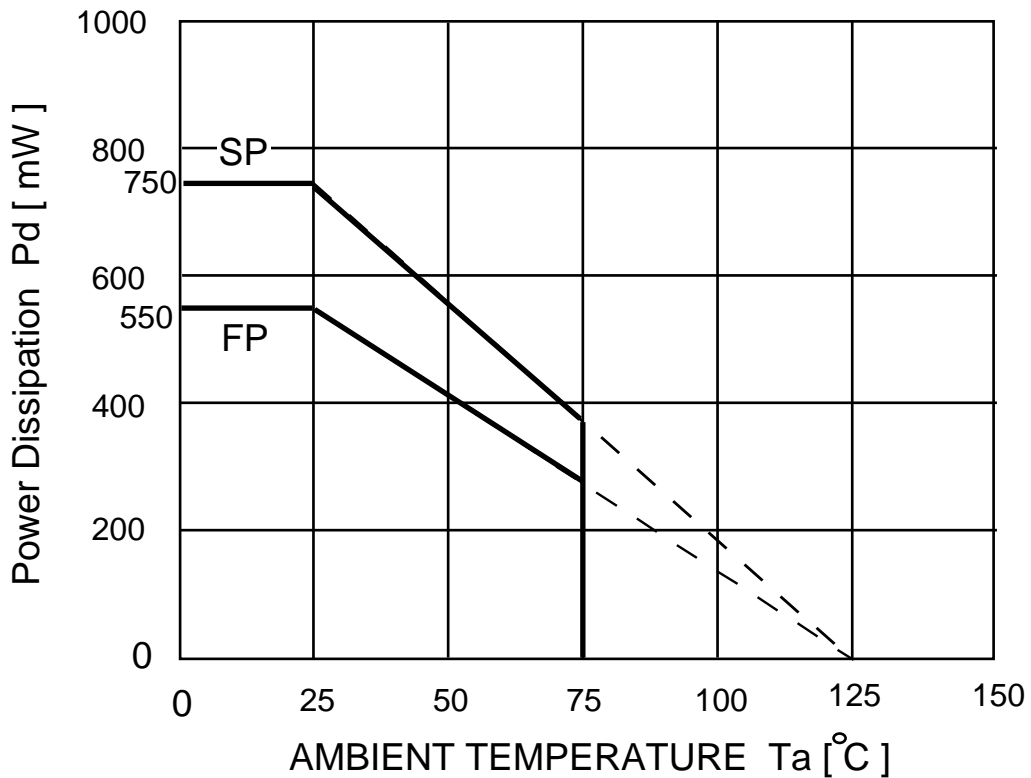
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SOUND CONTROLLER FOR TV

ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Conditions | Ratings | Unit |
|------------|-----------------------|------------|-----------------|-------|
| Vcc | Supply Voltage | | 13.0 | V |
| Pd | Power Dissipation | Ta 25 | 750(SP)/550(FP) | mW |
| K θ | Thermal Derating | Ta>25 | 7.5(SP)/5.5(FP) | mW/°C |
| Topr | Operating Temperature | | -20 ~ 75 | °C |
| Tstg | Storage Temperature | | -40 ~ 125 | °C |

Thermal Derating



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RECOMMENDED OPERATING CONDITION

| Symbol | Parameter | Conditions | Min. | Typ. | Max. | Unit |
|-----------------|--------------------------|--------------|------|------|------|------|
| Vcc | Supply Voltage | | 4.5 | 9.0 | 12.0 | V |
| V _{IH} | High Level Input Voltage | Pin-10,11,12 | 2.1 | — | Vcc | V |
| V _{IL} | Low Level Input Voltage | Pin-10,11,12 | 0 | — | 0.8 | V |

ELECTRICAL CHARACTERISTICS

(1) Power Supply Characteristics

| Symbol | Parameter | Conditions | Min. | Typ. | Max. | Unit |
|-----------------|-----------------|------------|------|------|------|------|
| I _{cc} | Circuit Current | | — | 16 | 35 | mA |

(2) -1 Input / Output Characteristics (V_{cc}=9V, T_a=25°C, V_i=500mV_{rms}, pin 10=0V)

| Symbol | Parameter | Conditions | | Conditions | Limit | | | Unit |
|-----------------|------------------------------|--|--|-----------------------------------|-------|------|-------|------------------|
| | | Input | Output | | Min. | Typ. | Max. | |
| G _{v1} | Input - Output Voltage Gain1 | pin1,2 f=1kHz | pin5,8 RL=10K | Bypass (pin11,12=0V) | -3 | 0 | +3 | dB |
| G _{v2} | Input - Output Voltage Gain2 | pin1,2 f=1kHz | pin5,8 RL=10K | SRS Stereo (pin12=5V/pin11=0V) | -0.5 | +2.5 | +5.5 | dB |
| G _{v3} | Input - Output Voltage Gain3 | pin1,2 f=100Hz | pin5,8 RL=10K | SRS Stereo (pin12=5V/pin11=0V) | +7 | +10 | +13 | dB |
| G _{v4} | Input - Output Voltage Gain4 | pin1,2 f=100Hz | pin 8 RL=10K | SRS Mono (pin12=0V/pin11=5V) | +4.5 | +7.5 | +10.5 | dB |
| G _{v5} | Input - Output Voltage Gain5 | pin1,2 f=10KHz | pin 8 RL=10K | SRS Mono (pin12=0V/pin11=5V) | +2.5 | +6 | +9.5 | dB |
| V _{OM} | Maximum Output Voltage | pin1,2 f=1kHz | pin5,8 THD=1% IHF-A filter RL=10K | Bypass (pin11,12=0V) | 1.8 | 2.2 | — | V _{rms} |
| THD | Total Harmonic Distortion | pin1,2 f=1kHz V _i =0dBm | pin5,8 DIN-A filter RL=10K | Bypass (pin11,12=0V) | — | 0.01 | 0.05 | % |
| MUTE | MUTE | pin1,2 f=1kHz V _i =0dBm | pin5,8 IHF-A filter RL=10K | Mute (pin10=5V/pin11,12=0V) | — | 55 | 45 | dB |

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(Vcc=9V, Ta=25°C, pin 10=0V)

| Symbol | Parameter | Conditions | | Conditions | Limit | | | Unit |
|--------|-----------------------|------------|--------------|-----------------------------------|-------|------|------|-------|
| | | Input | Output | | Min. | Typ. | Max. | |
| VNO1 | Output Noise Voltage1 | | IHF-A filter | Bypass (pin11,12=0V) | — | 3 | 10 | μVrms |
| VNO2 | Output Noise Voltage2 | | IHF-A filter | SRS Stereo (pin12=5V/pin11=0V) | — | 30 | 100 | μVrms |
| VNO3 | Output Noise Voltage2 | | IHF-A filter | SRS Mono (pin12=0V/pin11=5V) | — | 30 | 100 | μVrms |

Switch Condition and the Mode

| ⑩ Mute | Mute Switch |
|--------|-------------|
| ON | H |
| OFF | L |

| ⑪ SRS MONO | SRS MONO Switch |
|------------|-----------------|
| ON | H |
| OFF | L |

| ⑫ SRS STEREO | SRS ON/OFF Switch |
|--------------|-------------------|
| ON | H |
| OFF | L |

* Bypass mode can be set by both SRS STEREO switch and SRS MONO switch are set to "L".

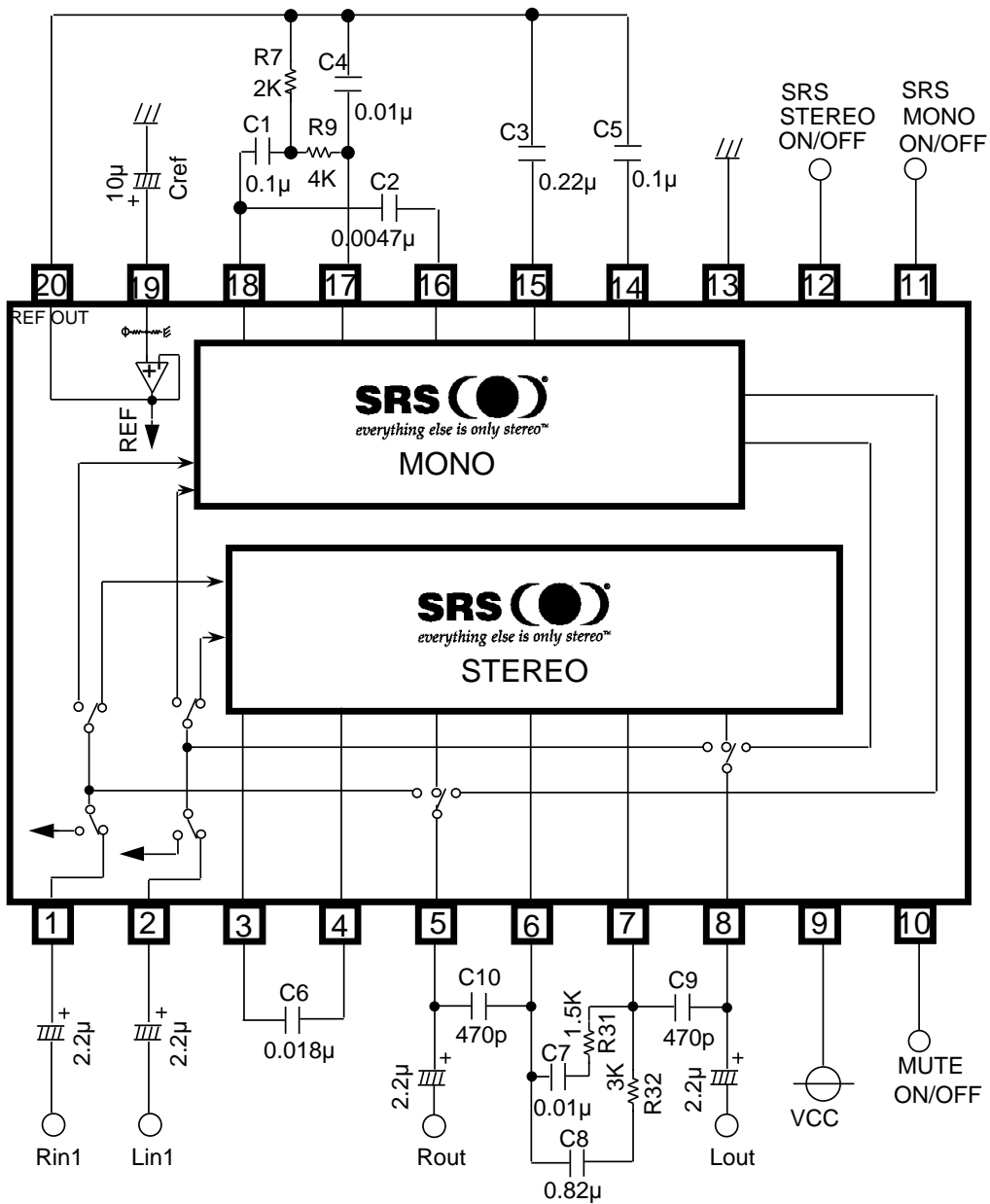
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● SRS Stereo/Mono/Bypass Version



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NOTE

Each switches (SRS ON/OFF, SRS MONO ON/OFF Switches) does not have the countermeasure for click noise, so that we recommend outside mute circuit.

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