

PRELIMINARY
 Notice ; This is not a final specification.
 some parametric limits are subject to change.



MITSUBISHI SOUND PROCESSOR

M62459P/FP

SOUND CONTROLLER FOR TV

SRS 3D Stereo + SRS 3D Mono 1Chip

OUTLINE

M62459 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.
- 2- input selectors for TV and AUX.

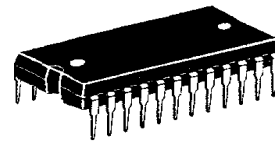
APPLICATION

- TV , Mini-Stereo , etc

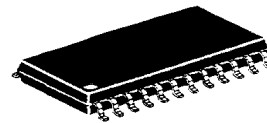
RECOMMENDED OPERATING CONDITION

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

PACKAGE OUTLINE

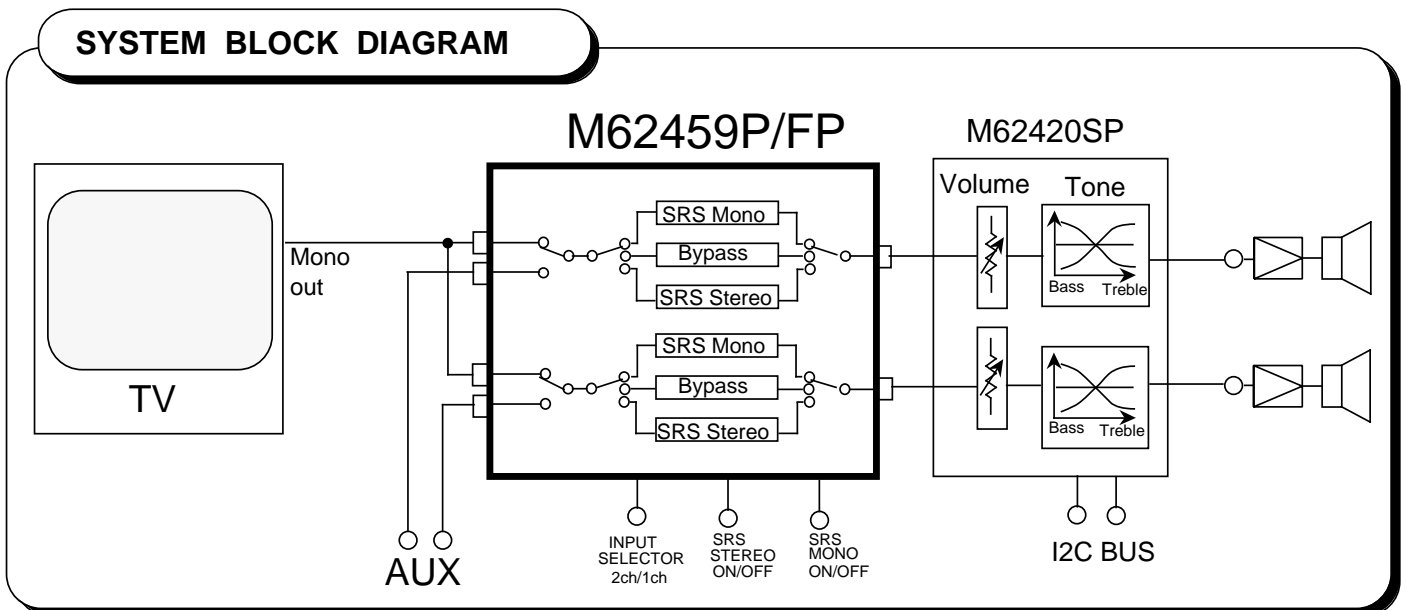


24P4D(P)



24P2W(FP)

SYSTEM BLOCK DIAGRAM



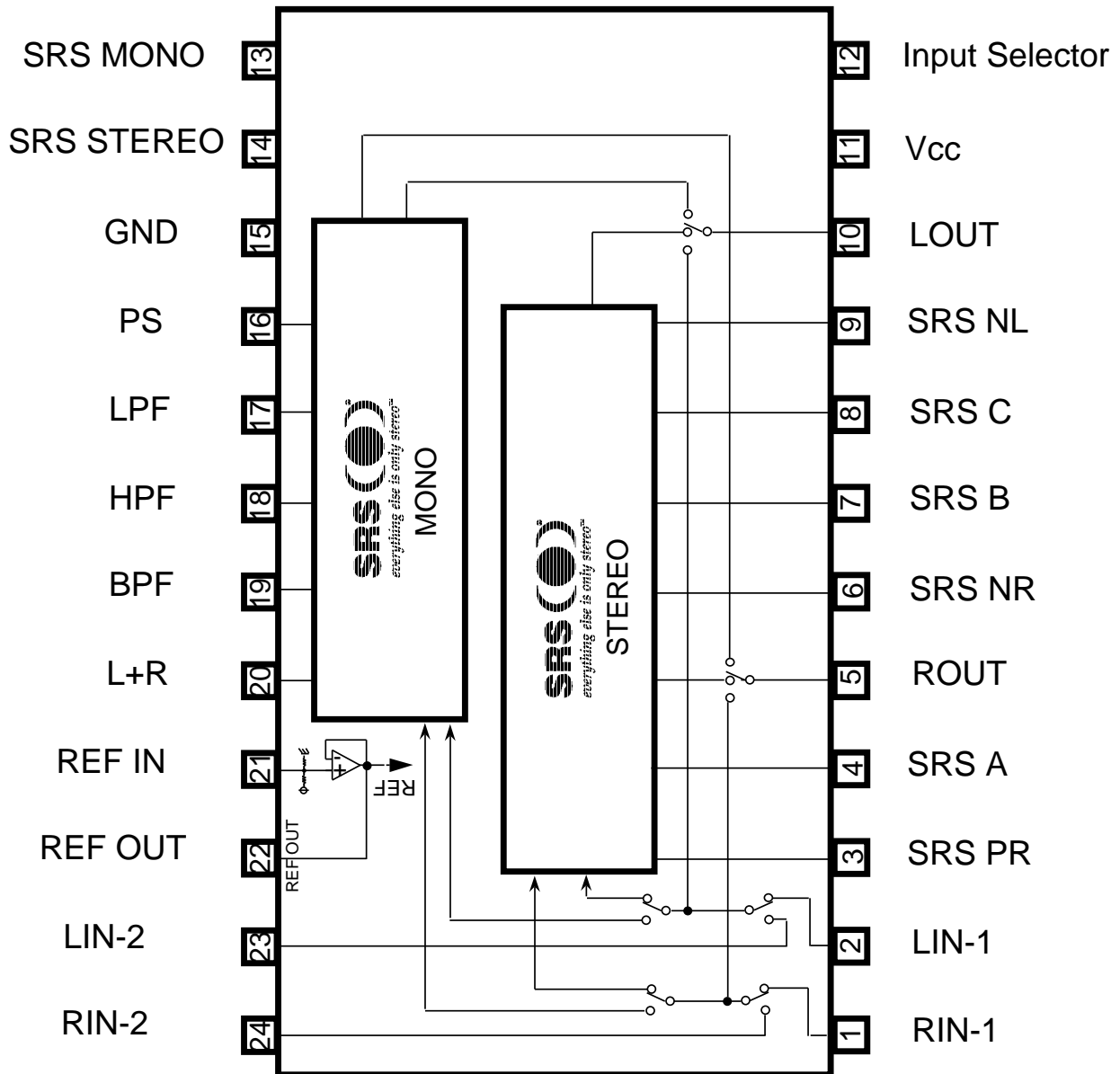
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Block Diagram



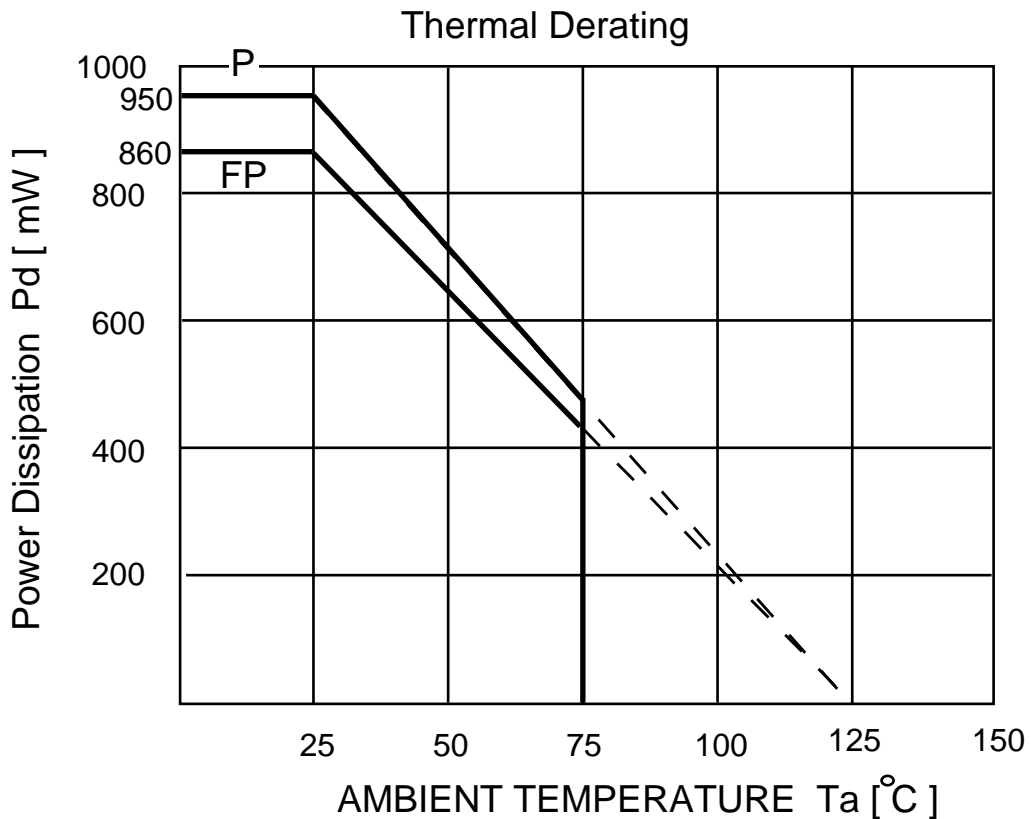
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ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply Voltage		13.0	V
Pd	Power Dissipation	Ta 25	950(P)/860(FP)	mW
K θ	Thermal Derating	Ta>25	9.5(P)/8.6(FP)	mW/°C
Topr	Operating Temperature		-20 ~ 75	°C
Tstg	Storage Temperature		-40 ~ 125	°C



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RECOMMENDED OPERATING CONDITION

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V _{CC}	Supply Voltage		4.5	9.0	12.0	V
V _{IH}	High Level Input Voltage	Pin-12,13,14	2.1	—	V _{CC}	V
V _{IL}	Low Level Input Voltage	Pin-12,13,14	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=500mVrms)

Symbol	Parameter	Conditions		Conditions	Limit			Unit
		Input	Output		Min.	Typ.	Max.	
G _{v1}	Input - Output Voltage Gain1	pin1,2 f=1kHz	pin5,10 RL=10K	Bypass(pin13,14=0V) 1ch select(pin12=0V)	-3	0	+3	dB
G _{v2}	Input - Output Voltage Gain2	pin1,2 f=1kHz	pin5,10 RL=10K	SRS Stereo(pin14=5V) 1ch select(pin12=0V)	-0.5	+2.5	+5.5	dB
G _{v3}	Input - Output Voltage Gain3	pin1,2 f=100Hz	pin5,10 RL=10K	SRS Stereo(pin14=5V) 1ch select(pin12=0V)	+7	+10	+13	dB
G _{v4}	Input - Output Voltage Gain4	pin1,2 f=100Hz	pin10 RL=10K	SRS Mono(pin13=5V) 1ch select(pin12=0V)	+4.5	+7.5	+10.5	dB
G _{v5}	Input - Output Voltage Gain5	pin1,2 f=10kHz	pin10 RL=10K	SRS Mono(pin13=5V) 1ch select(pin12=0V)	+2.5	+6	+9.5	dB
V _{OM}	Maximum Output Voltage	pin1,2 f=1kHz	pin5,10 THD=1% IHF-A filter RL=10K	Bypass(pin13,14=0V) 1ch select(pin12=0V)	1.8	2.2	—	Vrms
THD	Total Harmonic Distortion	pin1,2 f=1kHz V _i =-10dBv	pin5,10 DIN-A filter RL=10K	Bypass(pin13,14=0V) 1ch select(pin12=0V)	—	0.01	0.05	%

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Symbol	Parameter	Conditions		Conditions	Limit			Unit
		Input	Output		Min.	Typ.	Max.	
VNO1	Output Noise Voltage1		IHF-A filter	Bypass(pin13,14=0V)	—	3	10	μVrms
VNO2	Output Noise Voltage2		IHF-A filter	SRS Stereo(pin14=5V)	—	30	100	μVrms
VNO3	Output Noise Voltage2		IHF-A filter	SRS Mono(pin13=5V)	—	30	100	μVrms

Switch Condition and the Mode

⑫ Input Selector	Input Selector Switch
2 ch	H
1 ch	L

⑬ SRS MONO	SRS MONO Switch
SRS MONO ON	H
SRS MONO OFF	L

⑭ SRS STEREO	FOCUS H/L Switch
SRS STEREO ON	H
SRS STEREO OFF	L

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

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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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