

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

MITSUBISHI SOUND PROCESSOR



M62458FP

SRS 3D SOUND PROCESSOR

SRS-Headphone 3D Sound Processor

OUTLINE

M62458FP is an SRS-Headphone 3D sound processor for Headphone, Speaker and Audio equipment.

This IC has only SRS-Headphone circuit and packed in a small 14-pin SOP.

FEATURES

- SRS-Headphone 3D sound circuit
- SRS on/off function switch included

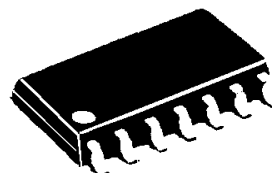
APPLICATION

- Headphone, Speaker, etc

RECOMMENDED OPERATING CONDITION

- Supply voltage range 4.5~12.0V
- Rated supply voltage 5V

PACKAGE OUTLINE



14Pin SOP

Size : 10.1mm X 5.3mm X 1.8mm

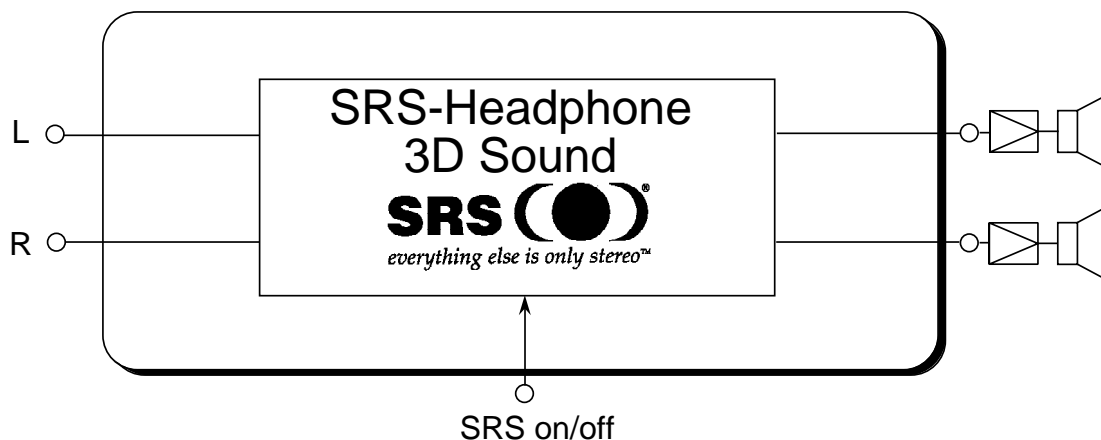
Note !!

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SYSTEM BLOCK DIAGRAM



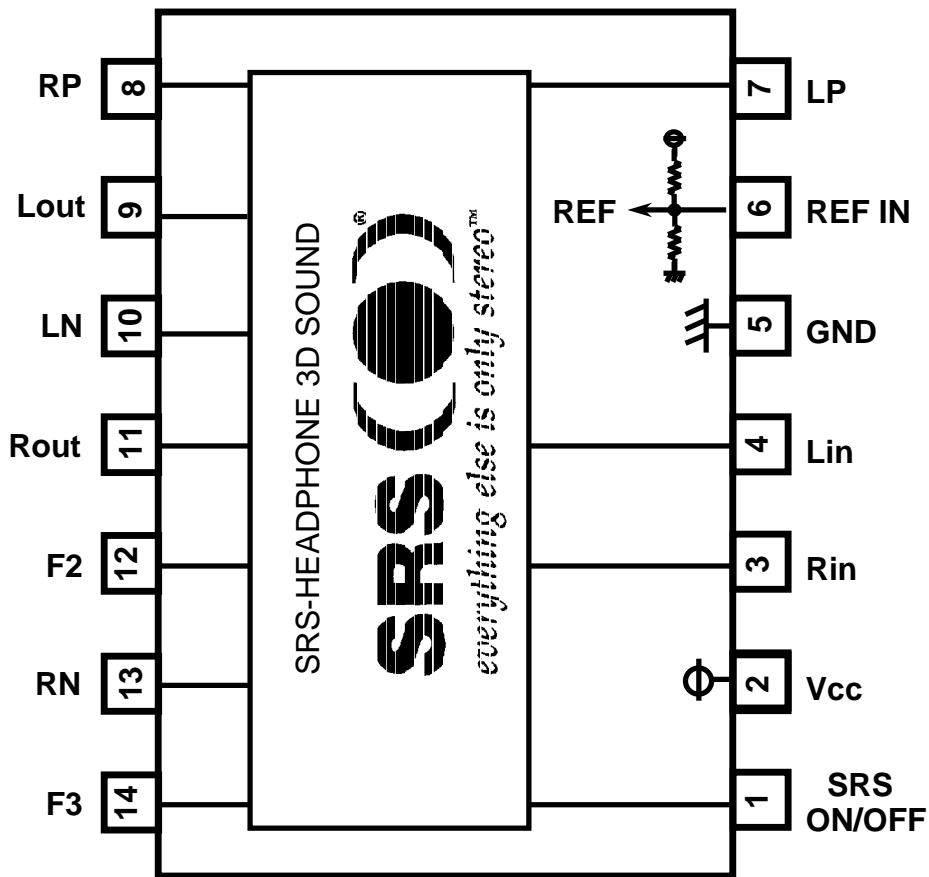
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BLOCK DIAGRAM

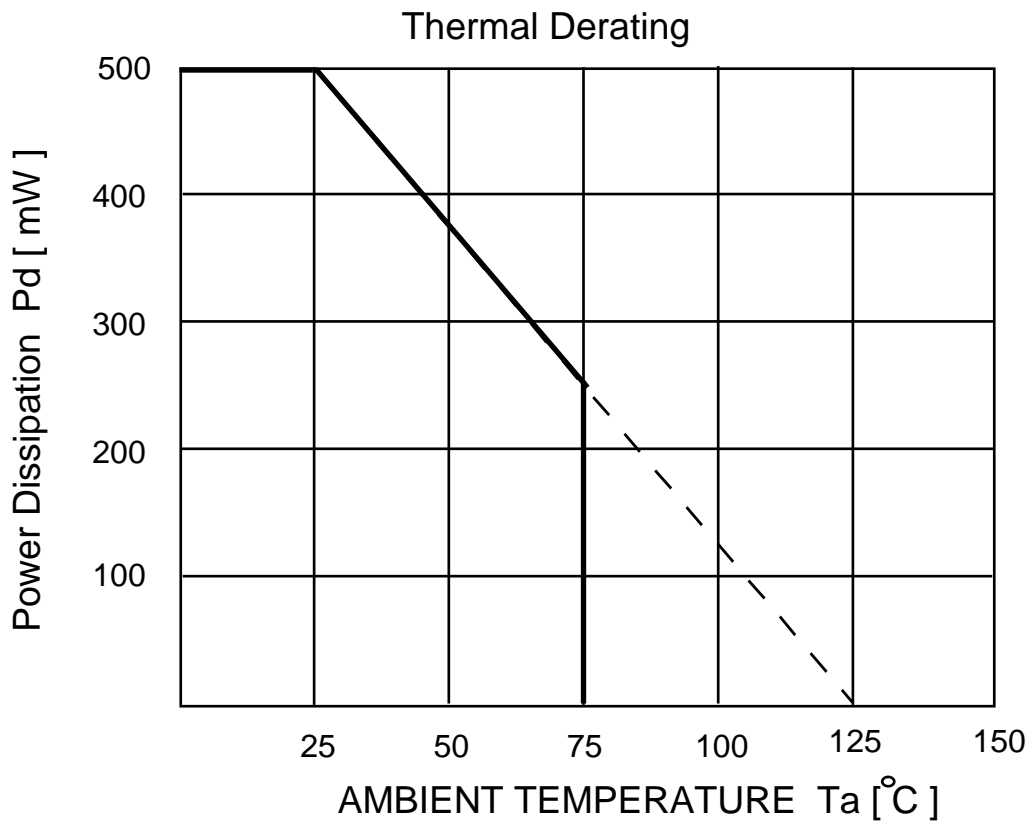


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ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply Voltage		13.0	V
Pd	Power Dissipation	Ta<25	500	mW
K θ	Thermal Derating	Ta>25	5	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
Vcc	Supply Voltage		4.5	5.0	12.0	V
V _{IH}	High Level Input Voltage	Pin-1 (SRS on)	2.1	—	VDD	V
V _{IL}	Low Level Input Voltage	Pin-1 (SRS off)	0	—	0.8	V

ELECTRICAL CHARACTERISTICS

(1) Power Supply Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I _{cc}	Circuit Current		—	10	20	mA

(2) -1 Input / Output Characteristics (V_{cc}=5V, T_a=25°C, V_i=0.1V_{rms})

Symbol	Parameter	Conditions		Conditions	Limit			Unit
		Input	Output		Min.	Typ.	Max.	
G _{v1}	Input - Output Voltage Gain1	f=1kHz	R _L =10K	SRS off	-3	0	+3	dB
G _{v2}	Input - Output Voltage Gain2	f=1kHz	R _L =10K	SRS on (VOL=max)	3.5	6.5	9.5	dB
G _{v3}	Input - Output Voltage Gain3	f=100Hz	R _L =10K	SRS on (VOL=max)	13.0	16.0	19.0	dB
G _{v4}	Input - Output Voltage Gain4	f=10KHz	R _L =10K	SRS on (VOL=max)	8.0	11.0	14.0	dB
V _{OM}	Maximum Output Voltage	f=1kHz	THD=1% IHF-A filter R _L =10K	SRS on/off	0.7	1.0	—	V _{rms}
THD	Total Harmonic Distortion	f=1kHz V _i =-10dBv	DIN-A filter R _L =10K	SRS off	—	0.01	0.05	%
V _{NO1}	Output Noise Voltage1		IHF-A filter	SRS off	—	5	10	μV _{rms}
V _{NO1}	Output Noise Voltage2		IHF-A filter	SRS on (VOL=max)	—	40	100	μV _{rms}

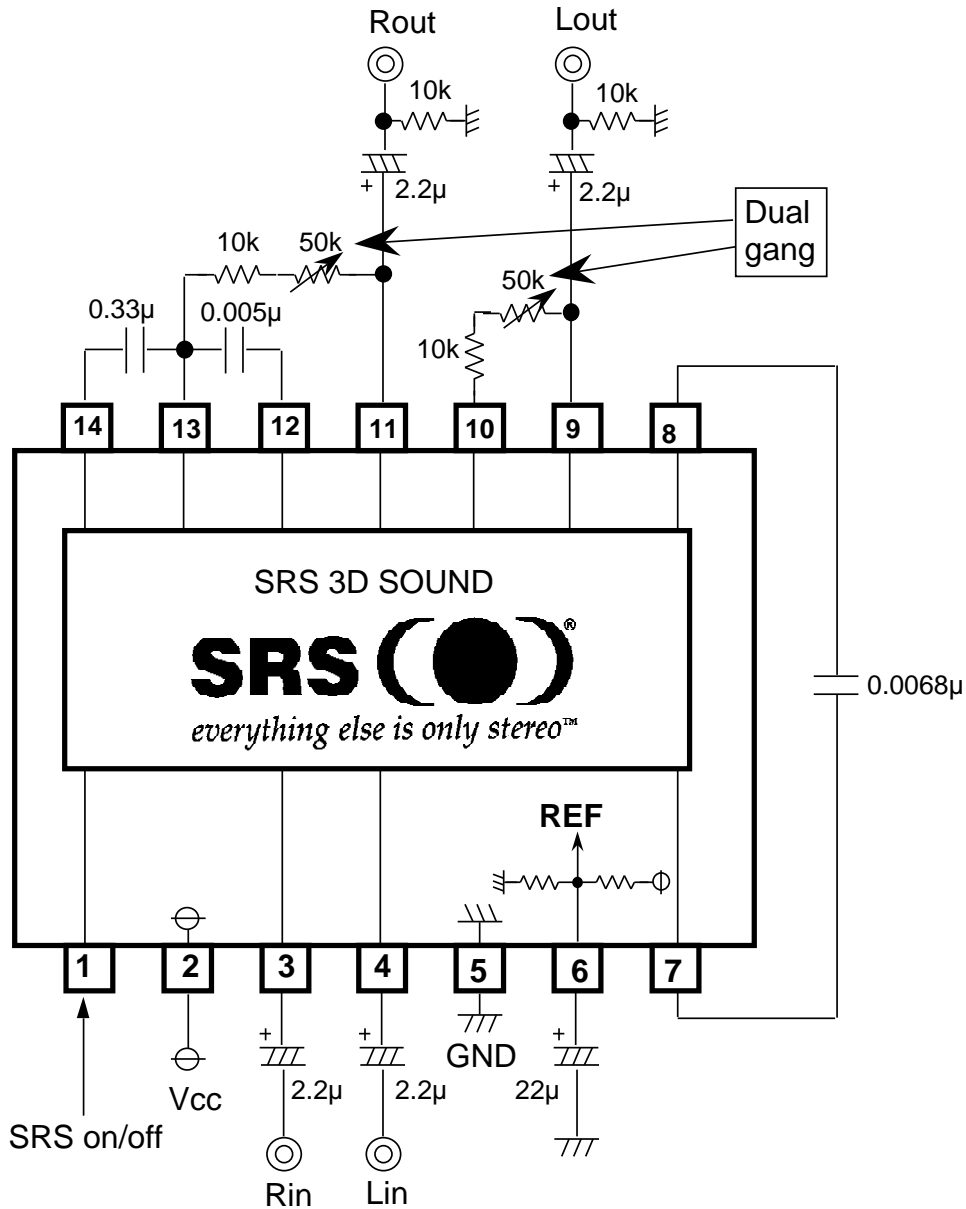
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APPLICATION EXAMPLE



Unit R:
 C: F

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Keep safety first in your circuit designs !

- Mitsubishi Electric Corporation puts the maximum effort into making semiconductor products better and more reliable, but there is always the possibility that trouble may occur with them. Trouble with semiconductors may lead to personal injury, fire or property damage. Remember to give due consideration to safety when making your circuit designs, in order to prevent fires from spreading, redundancy, malfunction or other mishap.

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