SRS everything else is only stereo™

M62458FP

SRS 3D SOUND PROCESSOR

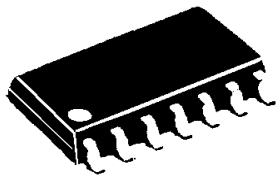
SRS-Headphone 3D Sound Processor

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.

PACKAGE OUTLINE



14Pin SOP

Size : 10.1mm X 5.3mm X 1.8mm

FEATURES

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

APPLICATION

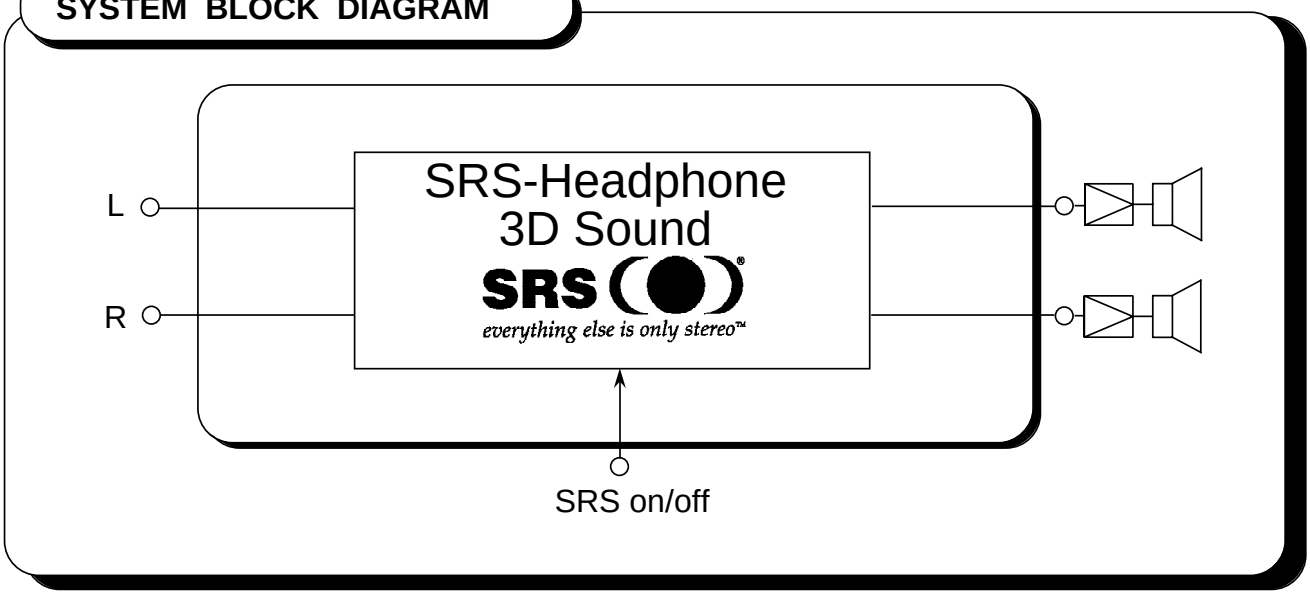
- Headphone,Speaker, etc

RECOMMENDED OPERATING CONDITION

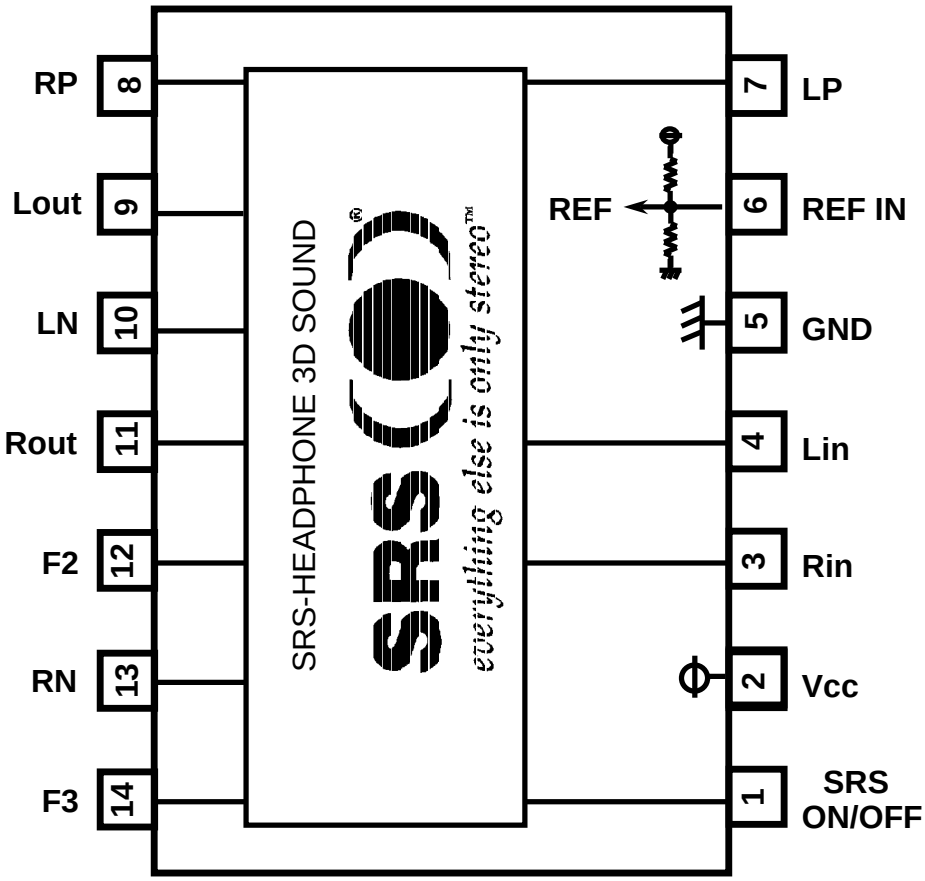
- Supply voltage range 4.5~12.0V
- Rated supply voltage 5V

Note !!

SYSTEM BLOCK DIAGRAM

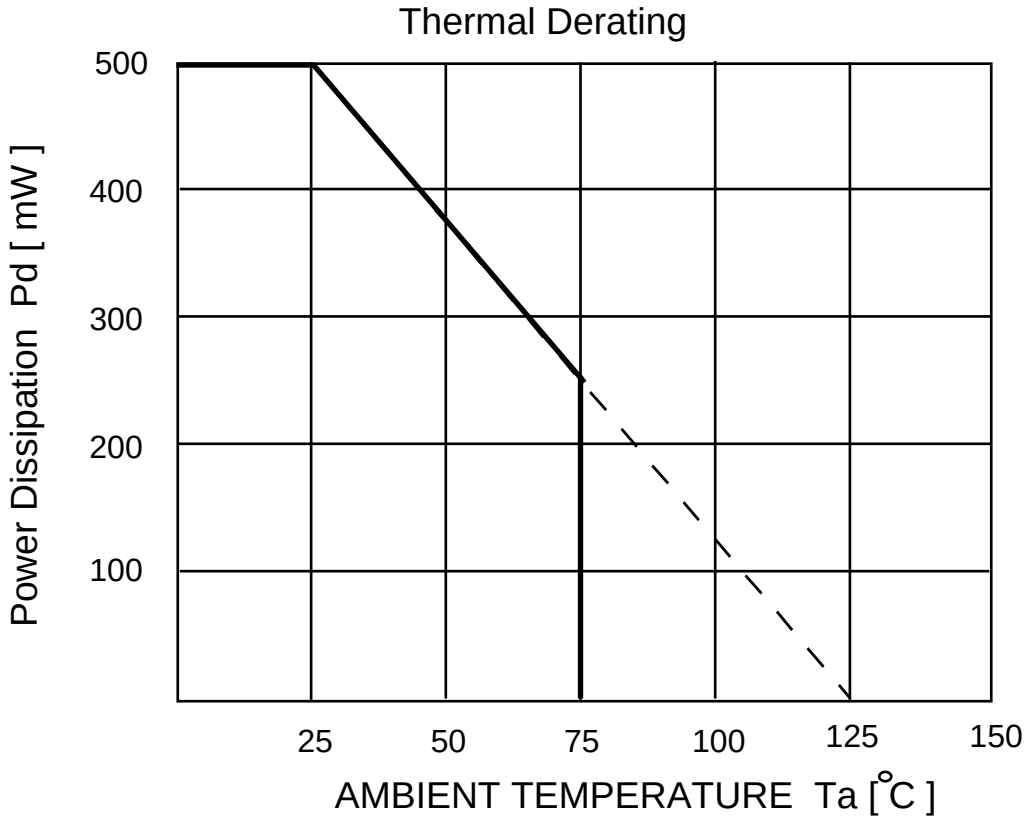


BLOCK DIAGRAM



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



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

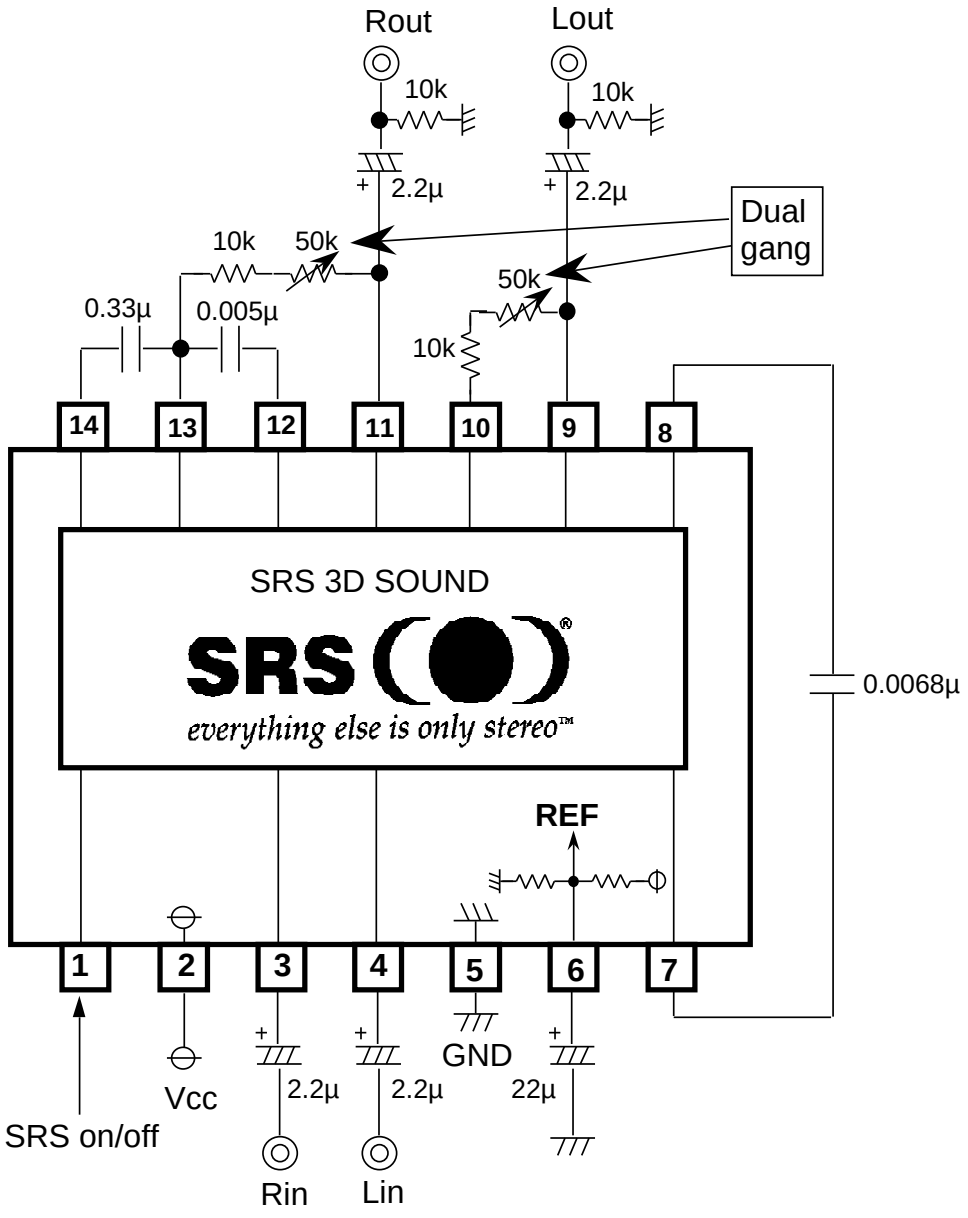
(1) Power Supply Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
Icc	Circuit Current		—	10	20	mA

(2) -1 Input / Output Characteristics (Vcc=5V, Ta=25°C, Vi=0.1Vrms)

Symbol	Parameter	Conditions		Conditions	Limit			Unit
		Input	Output		Min.	Typ.	Max.	
Gv1	Input - Output Voltage Gain1	f=1kHz	R_L=10KΩ	SRS off	-3	0	+3	dB
Gv2	Input - Output Voltage Gain2	f=1kHz	R_L=10KΩ	SRS on (VOL=max)	3.5	6.5	9.5	dB
Gv3	Input - Output Voltage Gain3	f=100Hz	R_L=10KΩ	SRS on (VOL=max)	13.0	16.0	19.0	dB
Gv4	Input - Output Voltage Gain4	f=10KHz	R_L=10KΩ	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=10KΩ	SRS on/off	0.7	1.0	—	Vrms
THD	Total Harmonic Distortion	f=1kHz Vi=-10dBv	DIN-A filter R_L=10KΩ	SRS off	—	0.01	0.05	%
V_{NO1}	Output Noise Voltage1		IHF-A filter	SRS off	—	5	10	μVrms
V_{NO1}	Output Noise Voltage2		IHF-A filter	SRS on (VOL=max)	—	40	100	μVrms

APPLICATION EXAMPLE



Unit R:Ω
C: F

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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