

SANYO	No.2247A	LA4535M
	POWER AMP FOR 1.5V HEADPHONE STEREO	

Features

- . Low current dissipation
- . 16ohm load drive capability
- . Excellent reduced voltage characteristics
- . Excellent power supply ripple rejection
- . Minimum number of external parts required (no input capacitor, feedback capacitor required)
- . Less harmonic interference in radio band
- . On-chip power switch function, muting function

Maximum Ratings at Ta=25°C

Maximum Supply Voltage	V _{CCmax}	Quiescent	4.5	V
Allowable Power Dissipation	Pdmax		300	mW
Operating Temperature	Topr		-20 to +75	°C
Storage Temperature	Tstg		-40 to +125	°C

Operating Conditions at Ta=25°C

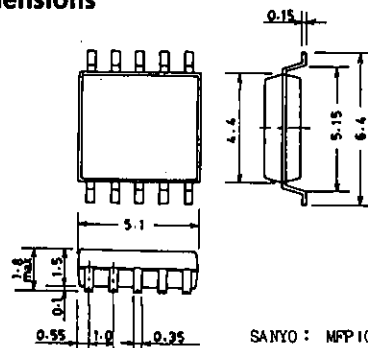
Recommended Supply Voltage	V _{CC}		1.5	V
Operating Voltage Range	V _{CCOP}		0.9 to 4.0	V
Recommended Load Resistance	R _L		16 to 32	ohm

Operating Characteristics at Ta=25°C, R_L=16ohms, R_g=600ohms, See Test Circuit.

		min	typ	max	unit
Quiescent Current *1	Icco(1) V _{CC} =1.2V, quiescent		3.5	6.0	mA
	Icco(2) V _{CC} =2.5V, pin10→GND		1.5	2.5	mA
	Icco(3) V _{CC} =2.5V, pin1→GND				1.0
Voltage Gain	VG(1) V _{CC} =1.2V, f=1kHz, Vo=-20dBm	20.5	22	23	dB
	VG(2) V _{CC} =0.9V, f=1kHz, Vo=-20dBm	19.5	22	23	dB
Voltage Gain Difference	ΔVG(1) V _{CC} =1.2V, f=1kHz, Vo=-20dBm			1.0	dB
	ΔVG(2) V _{CC} =0.9V, f=1kHz, Vo=-20dBm			1.0	dB
Total Harmonic Distortion	THD V _{CC} =1.2V, f=1kHz, Po=0.5mW		0.8	1.5	%
Output Power	Po V _{CC} =1.5V, f=1kHz, THD=10%	5	8		mW
Crosstalk	CT V _{CC} =1.2V, f=100Hz, R _g =1kohm, Vo=-20dBm	40	45		dB
	SVRR V _{CC} =1.0V, f=100Hz, R _g =1kohm, V _R =-30dBm, BPF=100Hz	45	50		dB

Package Dimensions
(unit: mm)
3086

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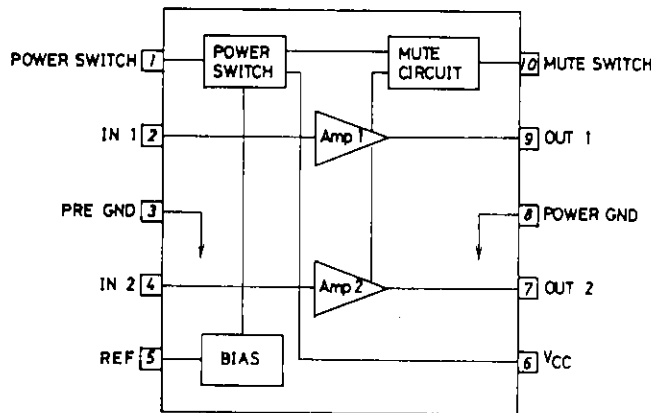


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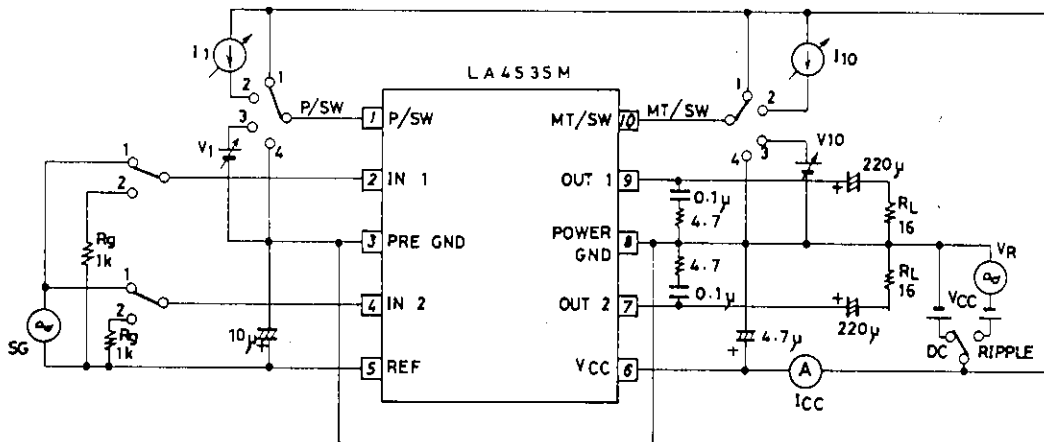
			min	typ	max	unit
Output Noise Voltage	V_{NO}	$V_{CC}=2.5V, R_g=1k\Omega,$ $BPF=20Hz\text{to}20kHz$		30	44	μV
Power OFF Effect	$V_{o(off)}$	$V_{CC}=0.9V, f=100Hz,$ $Pin1 \rightarrow GND, V_i=-10dBm$			-80	dBm
Muting Effect	$V_{o(MT)}$	$V_{CC}=0.9V, f=100Hz,$ $Pin10 \rightarrow GND, V_i=-10dBm$			-80	dBm
Power ON Current Sensitivity	$I_{1(on)}$	$V_{CC}=0.85V, V_5 \leq 0.5V$		0.1	1.0	μA
Power OFF Voltage Sensitivity	$V_{1(off)}$	$V_{CC}=0.85V, V_5 \leq 0.1V$	0.5	0.65		V
Muting OFF Current Sensitivity	$I_{10(off)}$	$V_{CC}=0.85V, V_5 \leq 0.5V$		0.3	1.0	μA
Muting ON Voltage Sensitivity	$V_{10(on)}$	$V_{CC}=0.85V, V_5 \leq 0.1V$	0.5	0.65		V

Note) *1 The quiescent current is represented by the current flowing into pin 6. The respective maximum currents flowing into pin 1 and pin 10 are calculated by $(V_{pin} - 0.5)/16$ (V/kohm) and the total current increases by these current values.

Equivalent Circuit Block Diagram

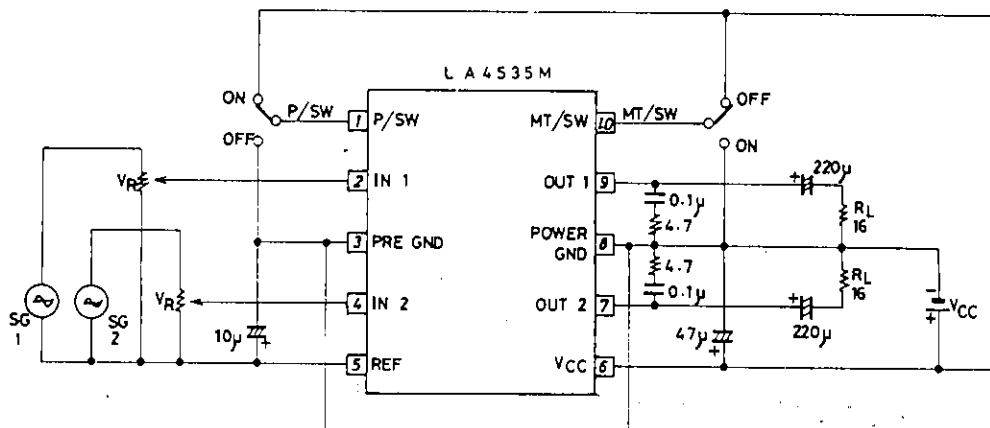


Test Circuit



Sample Application Circuit

Unit (resistance: Ω , capacitance: F)



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