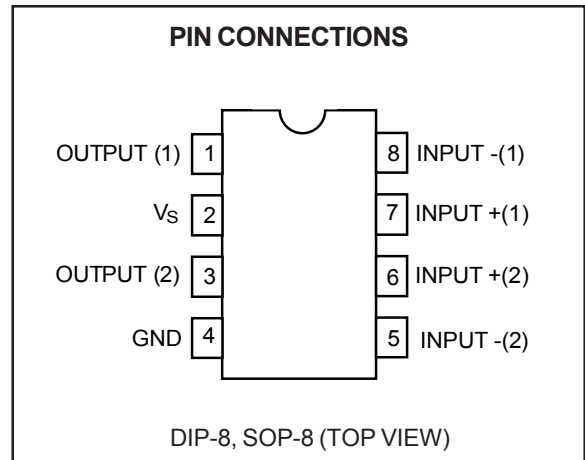


DUAL LOW-VOLTAGE POWER AMPLIFIER

- Supply voltage down to 1,8 V
- Low crossover distortion
- Low quiescent current
- Bridge or stereo configuration



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The GMA2822M is a monolithic integrated circuit of analog low - voltage power amplifier.

It is intended for use as mono (bridge)/stereo audio power amplifier in portable cassette players and radios.

PIN FUNCTIONS DESCRIPTION

PIN	I/O	NAME
1	OUTPUT	OUTPUT (1)
2		SUPPLY VOLTAGE
3	OUTPUT	OUTPUT (2)
4		GROUND
5	INPUT	INPUT -(2)
6	INPUT	INPUT +(2)
7	INPUT	INPUT -(1)
8	INPUT	INPUT +(1)

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V_s	15	V
Peak Output Current	I_o	1	A
Total Power Dissipation at $T_A=50^\circ\text{C}$	P_{LOT}	1	W
Total Power Dissipation at $T_{EASE}=50^\circ\text{C}$	P_{LOT}	1.4	W
Storage Temperature	T_{STG}	-40	$^\circ\text{C}$
Junction Temperature	T_J	+150	$^\circ\text{C}$

DUAL LOW-VOLTAGE POWER AMPLIFIER
ELECTRICAL CHARACTERISTICS ($V_S=6V$, $T_A=25^\circ C$, unless otherwise specified)

CHARACTERISTICS	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
STEREO						
Supply Voltage	V_S	-	1.8		15	V
Quiescent Output Voltage	V_O	- $V_S = 3V$		2.7 1.2		V
Quiescent Drain Current	I_b	-		6	9	mA
Input Bias Current	I_b	-		100		nA
Output Power (each channel) $f=1kHz$, $d=10\%$	P_O	$R_L=32\Omega$, $V_S = 9V$ $V_S = 6V$ $V_S = 4.5V$ $V_S = 3V$ $V_S = 2V$ $R_L=16\Omega$, $V_S = 6V$ $R_L=8\Omega$, $V_S = 9V$ $V_S = 6V$ $R_L=4\Omega$, $V_S = 6V$ $V_S = 4.5V$ $V_S = 3V$	90 15 170 300 450	300 120 60 20 5 220 1000 380 650 320 110		mW
Distortion ($f=1kHz$)	d	$R_L=32\Omega$, $P_O = 40mW$ $R_L=16\Omega$, $P_O = 75mW$ $R_L=8\Omega$, $P_O = 150mW$		0.2 0.2 0.2		%
Closed Loop Voltage Gain	G_V	$f=1kHz$	36	39	41	dB
Channel Balance	ΔG_V	-			± 1	dB
Input Resistance	R_i	$f=1kHz$	100			k Ω
Total Input Noise	θ_N	$R_S=10k\Omega$, B = Curve A B = 22Hz to 22kHz		2 2.5		μV
Supply Voltage Rejection	SVR	$f=100Hz$, $C1=C2=100 \mu F$	24	30		dB
Channel Separation	C_s	$f=1kHz$		50		dB
BRIDGE						
Supply Voltage	V_S	-	1.8		15	V
Quiescent Drain Current	I_b	$R_L = \infty$		6	9	mA
Output Offset Voltage (between the outputs)	V_{OS}	$R_L=8\Omega$			± 50	mV
Input Bias Current	I_b	-		100		nA
Output Power (each channel) $f=1kHz$, $d=10\%$	P_O	$R_L=32\Omega$, $V_S = 9V$ $V_S = 6V$ $V_S = 4.5V$ $V_S = 3V$ $V_S = 2V$ $R_L=16\Omega$, $V_S = 9V$ $V_S = 6V$ $V_S = 3V$ $R_L=8\Omega$, $V_S = 6V$ $V_S = 4.5V$ $V_S = 3V$ $R_L=4\Omega$, $V_S = 4.5V$ $V_S = 3V$ $V_S = 2V$	320 50	1000 400 200 65 8 2000 800 120 900 700 220 1000 350 80		mW
Distortion	d	$R_L=32\Omega$, $P_O = 0.5W$, $f=1kHz$		0.2		%
Closed Loop Voltage Gain	G_V	$f=1kHz$		39		dB
Input Resistance	R_i	$f=1kHz$	100			k Ω
Total Input Noise	θ_N	$R_S=10k\Omega$, B = Curve A B = 22Hz to 22kHz		2.5 3		μV
Supply Voltage Rejection	SVR	$f=100Hz$		40		dB
Power Bandwidth (-3dB)	B	$R_L=8\Omega$, $P_O = 1W$		120		kHz