

ILA2616

2 X 12 W HI-FI AUDIO POWER AMPLIFIERS WITH MUTE

GENERAL DESCRIPTION

The ILA2616 are dual power amplifiers. The ILA2616 is supplied in a 9-lead single-in-line (SIL9) plastic power package (SOT131). They have been especially designed for mains fed applications, such as stereo radio and stereo TV.

FEATURES

- Requires very few external components
- No switch-on/switch-off clicks
- Input mute during switch-on and switch-off
- Low offset voltage between output and ground
- Excellent gain balance of both amplifiers
- Hi-fi in accordance with IEC 268 and DIN 45500
- Short-circuit proof and thermal protected
- Mute possibility.

QUICK REFERENCE DATA Stereo application

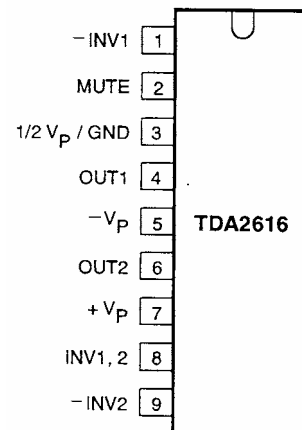
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$\pm V_p$	supply voltage range		7.5	-	21	V
PO	output power	$V_p = \pm 16$ V; THD = 0.5%	-	12	-	W
GV	internal voltage gain		-	30	-	dB
IGyl	channel unbalance		-	0.2	-	dB
a	channel separation		-	70	-	dB
SVRR	supply voltage ripple rejection		-	60	-	dB
Vno	noise output voltage		-	70	-	nV

ORDERING INFORMATION

EXTENDED TYPE		PACKAGE		
NUMBER	PINS	PIN POSITION	MATERIAL	CODE
ILA2616	9	SIL	plastic	SOT131^

PINING

SYMBOL	PIN	DESCRIPTION
-INV1	1	non-inverting input 1
MUTE	2	mute input
1/2V _p /GND	3	1/2 supply voltage or ground
OUT1	4	output 1
-V _p	5	supply voltage (negative)
OUT2	6	output 2
+V _p	7	supply voltage (positive)
INV1,2	8	inverting inputs 1 and 2
-INV2	9	non-inverting input 2



CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
--------	-----------	------------	------	------	------	------

Supply

$\pm V_p$	supply voltage range		-	16	21	V
I_{ORM}	repetitive peak output current		-	2.2	-	A

Operating position; note 1

$\pm V_p$	supply voltage range		7.5	16	21	V
I_P	total quiescent current	$R_L = \infty$	18	40	70	mA
P_o	output power	THD = 0.5% THD = 10%	10 12	12 15	- -	W W
THD	total harmonic distortion	$P_o = 6W$	-	0.15	0.2	%
B	power bandwidth	THD = 0.5%; note 2	-	20 to 20000	-	Hz
Gv	voltage gain.		29	30	31	dB
IGvI	gain unbalance		-	0.2	1	dB
Vno	noise output voltage	note3	-	70	140	nV
IZil	input impedance		14	20	26	k Ω
SVRR	supply voltage ripple rejection	note 4	40	60	-	dB
a	channel separation	$R_s = 0$	46	70	-	dB
Ibias	input bias current		-	0.3	-	nA
IAVeNoI	DC output offset voltage		-	30	200	mV
IAV^I	DC output offset voltage	between two channels	-	4	150	mV

MUTE POSITION (AT $I_{MUTE} \geq 300$ mA)

VQ	output voltage	$V_I = 600$ mV	-	0.3	1.0	mV
22-7	mute input impedance	note 7	6.7	9	11.3	k Ω
I_P	total quiescent current	$R_L = \infty$	18	40	70	mA
Vno	noise output voltage	note3	-	70	140	μ V
SVRR	supply voltage ripple rejection	note 4	40	55	-	dB
$I\Delta V_{GNDI}$	DC output offset voltage		-	40	200	mV
$I\Delta V_{offI}$	offset voltage with respect to operating position		-	4	150	mV
I_2	current if pin 2 is connected to pin 5		-	-	8.2	mA

Mute position; note 5

$\pm V_p$	supply voltage range		2	-	5.8	V
I_P	total quiescent current.	$R_L = \infty$	9	30	40	mA
VQ	output voltage	$V_I = 600$ mV	-	0.3	1.0	mV
Vno	noise output voltage	note 3	-	70	140	μ V
SVRR	supply voltage ripple rejection	note 4	40	55	-	dB

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$ V_{GND} $	DC output offset voltage		-	40	200	mV
Operating position; note 6						
I_P	total quiescent current		18	40	70	mA
P_O	output power	THD = 0.5% THD = 10% THD = 0.5%; $R_L = 4 \Omega$ THD = 10%; $R_L = 4 \Omega$	5 6.5 - -	6 8 10 14	- - - -	W W W W
THD	total harmonic distortion	$P_O = 4W$	-	0.13	0.2	%
B	power bandwidth	THD = 0.5%; note 2	-	40 to 20000	-	Hz
Gv	voltage gain		29	30	31	dB
$ G_{v1} $	gain unbalance		-	0.2	1	dB
V_{no}	noise output voltage	note 3	-	70	140	mV
$ Z_{il} $	input impedance		14	20	26	k Ω
SVRR	supply voltage ripple rejection		35	44	-	dB
a	channel separation		-	45	-	dB
MUTE POSITION ($I_{MUTE} \geq 300 \mu A$)						
V_Q	output voltage	$V_i = 600 mV$	-	0.3	1.0	mV
Z_{2-7}	mute input impedance	note 7	6.7	9	11.3	k Ω
I_P	total quiescent current		18	40	70	mA
V_{no}	noise output voltage	note 3	-	70	140	mV
SVRR	supply voltage ripple rejection	note 4	35	44	-	dB
$ \Delta V_{off1} $	offset voltage with respect to operating position		-	4	150	mV
I_2	current if pin 2 is connected to pin 5		-	-	8.2	mA

Notes to the characteristics

- $V_p = \pm 16 V$; $R_L = 8 \Omega$; $T_{amb} = 25^\circ C$; $f = 1 kHz$; symmetrical power supply $I_{MUTE} < 30 \mu A$. SEE Fig.4
- The power bandwidth is measured at an output power of $P_{Qmax} -3 dB$
- The noise output voltage (RMS value) is measured at $R_g = 2 k\Omega$, unweighted (20 Hz to 20 kHz)
- The ripple rejection is measured at $R_s = 0$ and $f = 100 Hz$ to 20 kHz. The ripple voltage (200 mV) is applied in phase to the positive and the negative supply rails. With asymmetrical power supplies, the ripple rejection is measured at $f = 1 kHz$
- $\pm V_p = 4 V$; $R_L = 8 \Omega$; $T_{amb} = 25^\circ C$; $f = 1 kHz$; symmetrical power supply. See Fig.4
- $V_p = 24 V$; $R_L = 8 \Omega$; $T_{amb} = 25^\circ C$; $f = 1 kHz$; asymmetrical power supply $I_{MUTE} < 30 \mu A$. see Fig.5
- The internal network at pin 2 is a resistor divider of typical 4 k Ω and 5 k Ω to the positive supply rail. At the connection of the 4 k Ω and 5 k Ω resistor a zener diode of typical 6.6 V is also connected to the positive supply rail. The spread of the zener voltage is 6.1 to 7.1 V.



ООО «НИОКРсистемс» - это оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов. Реализуемая нашей компанией продукция насчитывает более полумиллиона наименований.

Благодаря этому наша компания предлагает к поставке практически не ограниченный ассортимент компонентов как оптовыми, мелкооптовыми партиями, так и в розницу.

Благодаря развитой сети поставщиков, помогаем в поиске и приобретении экзотичных или снятых с производства компонентов.

Наша компания это:

- Гарантия качества поставляемой продукции
- Широкий ассортимент
- Минимальные сроки поставок
- Техническая поддержка
- Подбор комплектации
- Индивидуальный подход
- Гибкое ценообразование
- Работаем по 275 ФЗ