



# ANALOG Audio Amplifiers

## ► Product Portfolio:

- Class A-B, D, G Speakers & Headphone Drivers
- Small size and low power features- ideal in mobile and portable solutions
- Mono and Stereo
- Volume, Tone, Gain Control
- 3D Surround and Bass Enhancement

## ► Product Benefits:

- Rugged testing to ensure high level of reliability and quality
- Low cost
- Power saving features
- Multiple packages offered for increased cross compatibility

## ► Applications:

- Mobile Devices: Cell Phones, Tablet Computers, PDA, 2-way Radio
- Toys with audio output capability
- Multimedia Devices: MP3/Video Players
- Portable electronics (GPS/Navigation/ Medical)
- Conference Phones, IP Phones
- Desktop Speakers, Hi-Fi Speaker systems
- Bluetooth, Wireless speakers
- Smart phone docking stations

## Product Selector Guide

### Class-AB Audio Power Amplifier with or without Headphone Driver

Part No.	No. of Channel	Power [W]	THD+N [kHs]	PSRR [dB]	VDD [V]	IDD [mA]	Package [Size in mm]	Key Feature	Status
IS31AP4990D	1	1.2	0.23%	61	2.7 - 5.5	3.8	UTQFN-9L [1.5x1.5]	1.2W Mono Audio Power Amplifier in UTQFN Package	Prod
IS31AP4991A	1	1.1	0.03%	68	2.7 - 5.5	3.0	MSOP-8 [3.0x5.0] SOP-8 [5.0x6.0]	1.1W Mono Audio Power Amplifier	Prod
IS31AP4066D	2	1.3	0.10%	60	2.7 - 5.5	3.9	QFN-16 [3.0x3.0]	Dual 1.3W Stereo Audio Power Amplifier	Prod
IS31AP4088D	2	2.6	0.10%	60	2.7 - 5.5	4.5	QFN-16 [4.0x4.0]	Dual 2.6W Stereo Audio Power Amplifier	Prod
IS31AP4088A	2+2 HP	2.84	0.06%	80	2.7 - 5.5	5.7	QFN-16 [4.0x4.0]	Dual 2.84W Stereo Audio Power Amplifier with Headphone Driver	Prod
IS31AP4833	2+2HP	2.8	0.022%	67	3.0 - 5.5	6	QFN-36[4x4] TQFP48[9x9]	Stereo audio PA with headphone driver, with Multi input & I2C control for 3D, Tone, Volume	Prod
IS31AP4996	1	1.1	0.074%	68	2.7 - 5.5	3	MSOP-8 SOP-8	Ultra-low power, low distortion Amplifier with BTL output	Prod

### Class-D Audio Power Amplifier

Part No.	No. of Channel	Power [W]	THD+N [kHs]	PSRR [dB]	VDD [V]	IDD [mA]	Package [Size in mm]	Key Feature	Status
IS31AP2005	1	2.95	0.20%	65	2.5 - 5.5	2.6	DFN-8[3x3] MSOP-8	2.95W Mono Filter-less Class-D Audio Power Amplifier	Prod
IS31AP2006	1	3	0.28%	55	2.7 - 5.5	2.6	DFN-8[3x3]	3W Mono Filter-less Class-D Audio Power Amplifier	Prod
IS31AP2010B	1	3	0.22%	75	2.7 - 5.5	2.6	UTQFN-9 [1.5x1.5]	3W Mono Filter-less Class-D Audio Power Amplifier	Prod
IS31AP2010F	1	2.8	0.22%	75	2.7 - 5.5	2.6	UTQFN-9 [1.5x1.5]	2.8W Mono Filter-less Class D Audio Power Amplifier, Fast Wake Up	Prod
IS31AP2145A	1	2.9	0.2%	72	2.7 - 5.5	2.0	UTQFN-9 [1.5x1.5]	2.9W Mono Clip-less & Filter-less Audio Amplifier with Built-in AGC	Prod
IS31AP2145E	1	2.7	0.20%	67	2.7 - 5.5	2.0	UTQFN-9 [1.5x1.5]	2.7W Mono Clip-less & Filter-less Audio Amplifier with Built in AGC	S=Q1/14
IS31AP2118	2	Mono 20/ Dual 12	0.1%	70	6 - 26	35	TSSOP-28	High efficiency [90%], low EMI, stereo Class-D Power Amplifier	S=Q2/14

### Product Selector Guide cont'd.

#### Headphone Driver

Part No.	No. of Channel	Power [mW]	THD+N [kHs]	PSRR [dB]	VDD [V]	IDD [mA]	Package [Size in mm]	Key Feature	Status
IS31AP4912	2	30	0.024%	95	2.7 - 5.5	5.0	UTQFN-12 [2.0x2.0]	High Quality Stereo Headphone Driver with High SNR and 7uV Ultra-Low O/P Noise	Prod
IS31AP4913	2	30	0.05%	92	2.7 - 5.5	5.0	QFN-20 [3.0x3.0]	3D Surround & Bass Enhanced High Quality Stereo Headphone Driver	Prod

#### Class-G Speaker Amplifier

Part No.	No. of Channel	Power [W]	THD+N [kHs]	SNR [dB]	VDD [V]	IDD [mA]	Package [Size in mm]	Key Feature	Status
IS31AP4915A	1	20VP-P	0.01%	100	2.5 - 6.5	6	QFN-16 [4.0x4.0]	20VP-P Charge Pump Ceramic Speaker Driver	Prod
IS31AP2031	1	2W	0.33%	-	2.7 - 4.5	5	QFN-20 [3.0x3.0]	High Power, Ultra-Low EMI Class-G Amplifier with AGC	Prod

### Evaluation Boards \* Note : Visit [www.issi.com](http://www.issi.com) for a complete list of Evaluation Boards.

#### Class D

Device	Evaluation Board	Description
IS31AP2005-DLS2-TR	IS31AP2005-DLS2-EB	2.7W Mono Filter-less Class-D Amp
IS31AP2005-SLS2-TR	IS31AP2005-SLS2-EB	2.7W Mono Filter-less Class-D Amp
IS31AP2010B-UTLS2-TR	IS31AP2010B-UTLS2-EB	3.0W Mono Filter-less Class-D Amp
IS31AP2145A-UTLS2-TR	IS31AP2145A-UTLS2-EB	2.9W Mono Clip-less & Filter-less Amp with Built-in AGC

#### Class AB

Device	Evaluation Board	Description
IS31AP4066D-QFLS2-TR	IS31AP4066D-QFLS2-EB	Dual 1.3W Stereo Audio Amplifier
IS31AP4088A-QFLS2-TR	IS31AP4088A-QFLS2-EB	Dual 2.84W Stereo Audio Amplifier Plus Headphone Driver
IS31AP4088D-QFLS2-TR	IS31AP4088D-QFLS2-EB	Dual 2.6W Stereo Audio Amplifier
IS31AP4833-TQLS2	IS31AP4833-TQLS2-EB	Stereo audio PA with headphone driver, multi-input & I2C control for 3D, Tone, Volume
IS31AP4990D-UTLS2-TR	IS31AP4990D-UTLS2-EB	1.2W Audio Power Amplifier with Active-low Shutdown Mode
IS31AP4991A-GRLS2-TR	IS31AP4991-GRLS2-EB	1.1W Audio Power Amplifier with Active-low Shutdown Mode
IS31AP4991A-SLS2-TR	IS31AP4991-SLS2-EB	1.1W Audio Power Amplifier with Active-low Shutdown Mode

#### Class G

Device	Evaluation Board	Description
IS31AP2031-QFLS2-TR	IS31AP2031-QFLS2-EB	2.0W audio amplifier with charge pump, AGC, and serial interface
IS31AP4915A-QFLS2-TR	IS31AP4915-QFLS2-EB	20Vp-p Charge Pump Ceramic Speaker Driver
IS31AP2031-QFLS2-TR	IS31AP2031-QFLS2-EB	2.0W audio amplifier with charge pump, AGC, and serial interface
IS31AP4915A-QFLS2-TR	IS31AP4915-QFLS2-EB	20Vp-p Charge Pump Ceramic Speaker Driver

#### Headphone Driver

Device	Evaluation Board	Description
IS31AP4912-UTLS2-TR	IS31AP4912-UTLS2-EB	High Quality Stereo Headphone Driver with High SNR and 7uV Ultra-Low O/P Noise
IS31AP4913-QFLS2-TR	IS31AP4913-QFLS2-EB	3D Surround & Bass Enhanced High Quality Stereo Headphone Driver
IS31AP4912-UTLS2-TR	IS31AP4912-UTLS2-EB	High Quality Stereo Headphone Driver with High SNR and 7uV Ultra-Low O/P Noise
IS31AP4913-QFLS2-TR	IS31AP4913-QFLS2-EB	3D Surround & Bass Enhanced High Quality Stereo Headphone Driver