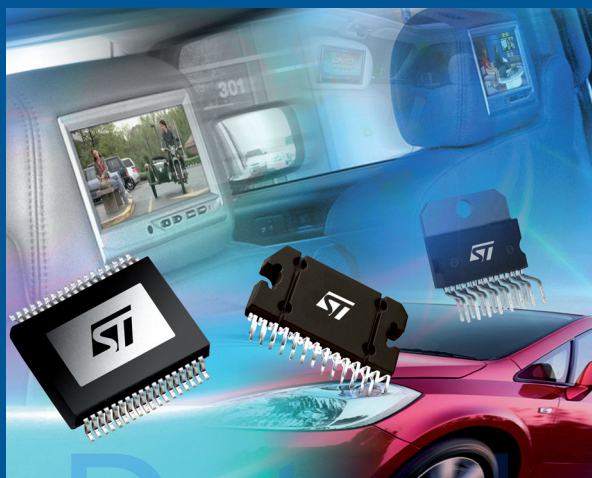


Power ICs for car infotainment

From audio power amplifiers to power management devices



STMicroelectronics is one of the world's leading suppliers of power integrated circuits (ICs) in the field of car infotainment, and the recognized market leader in power audio amplification. The portfolio includes a complete range of output power levels and unique features. In the power management field, ST offers single-chip solutions, which are equipped with all the outputs needed to supply a car audio system and integrate additional functions such as bus drivers, battery monitoring, diagnostics and so on. All this is supported by top-class power packages, both traditional insertion and surface-mount.

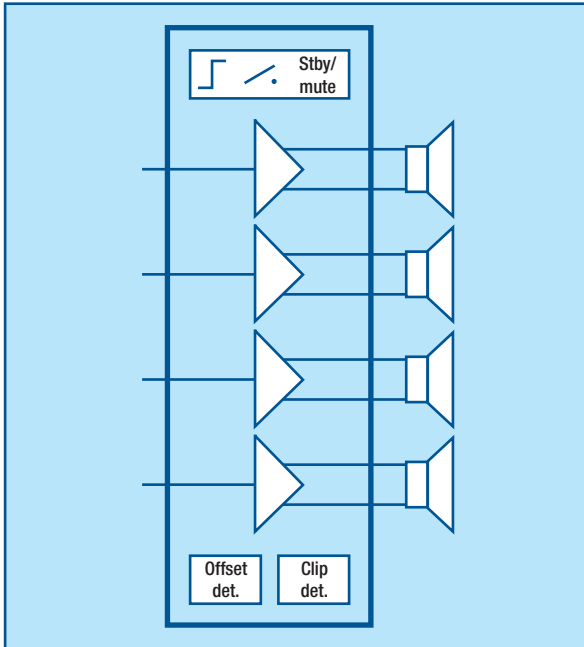
ST provides automotive-graded products for each segment of the car entertainment field.

Technology highlights

ST's leadership in power car entertainment ICs is fed by the use of top technologies:

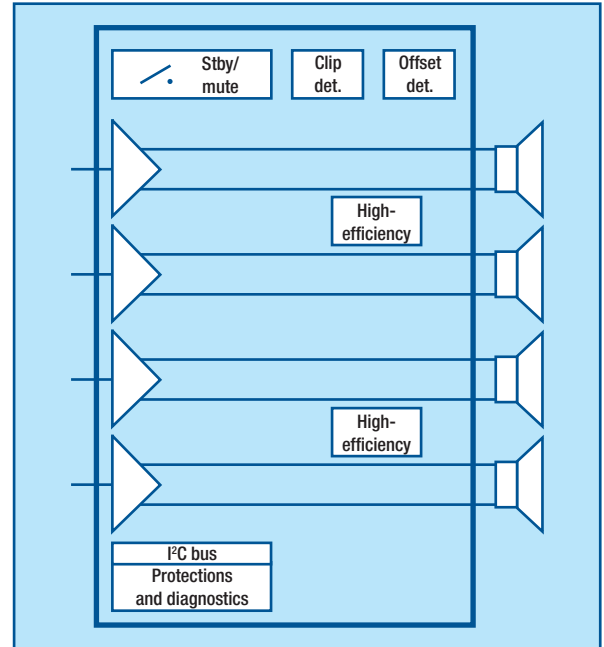
- **Silicon:** from bipolar to advanced BCD (bipolar-CMOS-DMOS)
 - Up to sixth-generation BCD is used for power amplifiers and power management ICs
 - New metallization technologies
 - Advanced research in new SOI techniques
- **Package:** from insertion power packages to power surface-mount packages
 - ST has set a standard in both insertion and SMD power packages with the world-renowned Flexiwatt and PowerSO packages
- **Design architectures:** from standard classAB to classD amplifiers, and from linear to PWM regulators
 - ST products feature many proprietary architectures like classSB 'non-switching' high-efficiency or innovative digital power solutions (Power DAC, classD)
 - Many products integrate additional functions like digital diagnostics or bus physical layers and management

Power amplifiers for after market head units



- Pure bipolar or BCD technologies available for best price/performance choice
- Maximum robustness and outstanding sound quality
- Output power range from 4x30W up to 4x65W (max. power, BTL configuration) on 4Ω load or up to 4x80W (max. power) on 2Ω loads
- Diagnostics, offset and clipping detection facilities

Power amplifiers for OEM (before market) head units

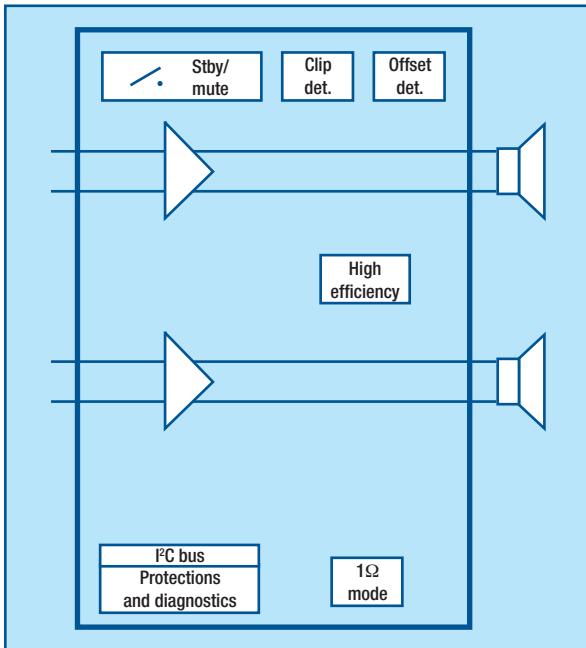


- Pure bipolar or BCD technologies available for best price/performance choice
- Maximum robustness and outstanding sound quality
- Extreme reliability
- Output power range from 4x30W up to 4x50W (max. power, BTL configuration) on 4Ω load or up to 4x80W (max. power) on 2Ω load
- Digital diagnostics (I²C), offset and clipping detection facilities
- Non-switching, high-efficiency (classSB) solutions
- Completely configurable by I²C (where available): dual mute, dual gain, AC and DC diagnostics

Part number	Description	Features
TDA7565	MOSFET 4X65W	Integrated DC/DC, I ² C diagnostics
TDA7850A	MOSFET 4X50W	Offset det.
TDA7560A	MOSFET 4X50W	Offset det.
TDA7851 (coming soon)	MOSFET 4X45W	Offset det., clip det.
TDA7386	BIPOLAR 4X45W	
TDA7388	BIPOLAR 4X41W	
TDA7384A	BIPOLAR 4X40W	
TDA7384B (coming soon)	BIPOLAR 4X40W	34dB
TDA7385	BIPOLAR 4X35W	
TDA7383	BIPOLAR 4X35W	32dB
TDA7381	BIPOLAR 4X30W	Diag. pin, clip
TDA7389	BIPOLAR 4X45W	Diag. pin, clip det.
TDA7389B (coming soon)	BIPOLAR 4X45W	Diag. pin, clip det., 34dB
TDA737X	BIPOLAR 2X30W TO 2X40W	

Part number	Description	Features
TDA7561	MOSFET 4X40W	I ² C diagnostics, clip, offset, multiple gain
TDA7562	MOSFET 4X40W	I ² C diagnostics, clip, offset, multiple gain
TDA7563	MOSFET 4X45W	I ² C diagnostics, clip, offset, multiple gain
TDA7564	MOSFET 4X45W	I ² C diagnostics, clip, offset, multiple gain
TDA7566	MOSFET 4X40W	I ² C diagnostics, clip, offset, multiple gain
TDA7385	BIPOLAR 4X35W	Diag pin, clip
TDA7384A	BIPOLAR 4X40W	
TDA7386	BIPOLAR 4X45W	
TDA7389A	BIPOLAR 4X45W	Diag pin, clip, offset
TDA7375A	BIPOLAR 2X40W	
TDA7376B	BIPOLAR 2X40W	Diag pin, clip, diff. in

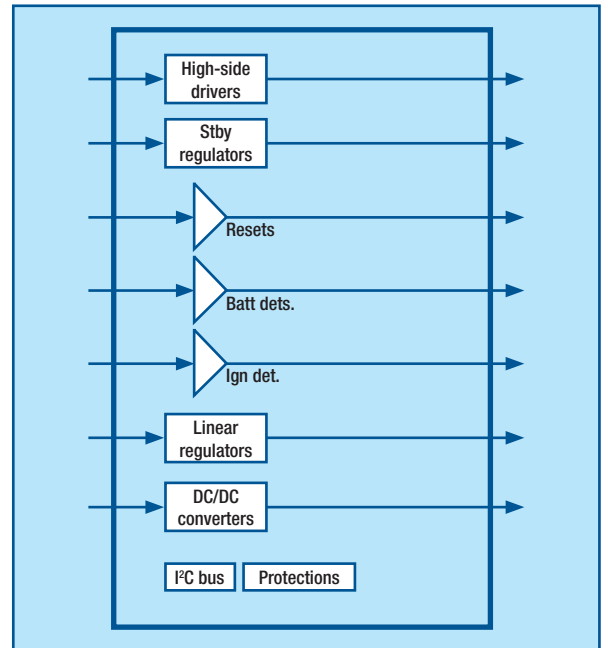
Power amplifiers for automotive sound systems



- ST offers a wide range of power products in surface-mount package for sound system applications enabling fully automated production lines and innovative mechanical design
- Packages: PowerSO or HiQuad, slug-up or slug-down; horizontal Flexiwatt
- Pure bipolar or BCD technologies available for best price/performance choice
- Maximum robustness and outstanding sound quality
- Extreme reliability
- Output power ranging from 35W to 500 or 100W in classD configuration
- Digital diagnostics (I²C), offset and clipping detection facilities
- Non-switching, high-efficiency (classSB) solutions
- Completely configurable by I²C (where available): dual mute, dual gain, AC and DC diagnostics

Part number	Description	Features
TDA7563BPD	MOSFET 4X45W	I ² C diagnostics, classSB (high-efficiency)
TDA7575BPD	MOSFET 2X45W	
TDA7385PD	BIPOLAR 4X35W	Diag. pin, standby/mute
TDA7376PD	BIPOLAR 2X40W	
TDA7391PD	BIPOLAR 1X40W	
TDA7560H	MOSFET 4X40W to 4x50W	
TDA7561H	BIPOLAR 4X35W	
TDA7563H		
TDA7385H		
TDA7570	PWM DRIVER 500W	
TDA7571	PWM DRIVER 500W	Digital input

Multifunction voltage regulators and power management ICs



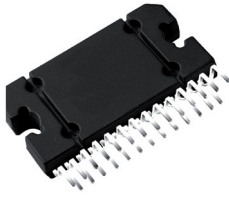
- ST offers a wide range of power management ICs specifically designed to satisfy all the power supply needs of automotive sound systems and head units in a single chip
- All the ICs are equipped with short circuit protections, thermal and over-voltage shutdown and in general all the features needed to work in an automotive environment
- Very low consumption devices available
- Power management ICs with integrated DC/DC converters
- I²C bus controlled multiple output

Part number	Description	Features
L5950	Multiple multifunction voltage regulators	Standby regulators; linear regulators with enable; high-side drivers; I ² C bus control; adjustable battery detection; reset; load dump, thermal, over-current and short circuit protections.
L5951		
L5952		
L5955		
L494x L495x		
L5956	Very low consumption multiple multifunction voltage regulators	Standby regulators; linear regulators with enable; high-side drivers; I ² C bus control; adjustable battery detection; reset; load dump, thermal, over-current and short circuit protections. Very low current consumption in standby. Surface mount package available.
L5957		
L5959		
L595x		
L5953	Multiple multifunction switching voltage regulators	Standby regulators; linear regulators with enable; switching regulators with enable; high-side drivers; I ² C bus control; adjustable battery detection; reset; load dump, thermal, over-current and short circuit protections. Very low current consumption in standby. Surface mount package available.
L5960		
L596x		

Power packages

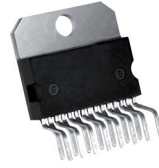
Flexiwatt27

Available with different lead-forming options



Multiwatt15

Available with different lead-forming options



PowerSO-36

Available in slug-up or slug-down version



PowerSSO36

Available in slug-up or slug-down version



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Full product information at www.st.com