

All devices offer the following features:

- ▶ Load dump/over voltage protection
- ▶ All amplifier outputs short circuit proof to ground, supply voltage and across the load, independent per channel
- ▶ All pins short circuit proof to ground
- ▶ Thermal protection to avoid thermal breakdown
- ▶ Internally fixed gain of 16 dB or 26 dB
- ▶ No hearable pops when switching:
  - Switch on/switch off
  - Standby and mute
  - Mute and operating
- ▶ Single mode control pin (standby, operating: mute/on)
- ▶ Low standby current
- ▶ Low power dissipation in any short-circuit condition
- ▶ Outputs are short-circuit proof to ground
- ▶ Low  $V_p$  mute for fast mute  $V_p$  drops
- ▶ Line driver mode (16 dB gain in BTL mode)
- ▶ Low gain mode for booster mode during engine start condition

- ▶ Indication of a short circuit at an amplifier output, short to battery and ground
- ▶ DC-load detection: open, short, and present (woofer)
- ▶ AC-load detection: for tweeters via series capacitors
- ▶ Programmable thermal pre-warning
- ▶ Independent short-circuit protection per channel
- ▶ Soft thermal clipping to prevent audio holes

#### BEST EFFICIENCY MODE TDF8546 / TDF8546A

The TDF8546A is a redesign of the TDF8546 having a lower quiescent current and improved electromagnetic immunity (EMI) properties.

The TDF8546 and TDF8546A use an asymmetrical input configuration, delivers 25 W of output power, and is available in several bend variants of DBS27 or HSOP36 package.

The bus-controlled features are as follows:

- ▶ Diagnostic output gives clip information at selectable and programmable THD levels (2%, 5%, and 10%)

Output power 14.4 V; 10% THD @ 4 $\Omega$	Input configuration	Package Name	Class-AB amplifier with I <sup>2</sup> C control	Class-AB amplifier with Best Efficiency mode
25 W	Asymmetrical	DBS27	TDF8541J/JS/SD	TDF8546J/JS TDF8546AJ/SD
25 W	Asymmetrical	HSL-DBS27	TDF8541JV/SU	TDF8546JV/SU, TDF8546AJV/SU
25 W	Asymmetrical	HSOP36	TDF8541TH*	TDF8546ATH* TDF8546TH*
28 W	Asymmetrical	DBS27	TDF8544AJ/SD TDF8544J/SD	
28 W	Asymmetrical	HSOP36	TDF8544TH*	

\* Input and output pins use opposite configuration.

Package letters	Name	Description	Version
J	DBS27P	Plastic DIL-bent-SIL (special bent) power package; 27 leads	SOT827-1
JV	HSL-DBS27	Heat slug less -Plastic DIL-bent-SIL (special bent) power package; 27 leads	SOT-1866-1
JS	DBSMS27P	Plastic dual bent surface mounted SIL power package; 27 leads	SOT1154-1
SD	RDBS27P	Plastic rectangular-DIL-bent-SIL (reverse bent) power package; 27 leads	SOT878-1
SU	HSL-RDBS27	Heat slug less - Plastic rectangular-DIL-bent-SIL (reverse bent) power package; 27 leads	SOT-1961-1
TH	HSOP36	Plastic heat sink small outline package; 36 leads; low standoff height	SOT851-1

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