

## **TDA7519**

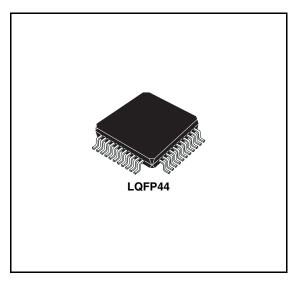
### Multichip module for car radio applications

#### **Features**

- High-performance signal processor for car radio applications
- Adjustment-free stereo decoder
- FM noise blanker
- Programmable multipath detector
- 2 Stereo and 2 mono inputs with mixing capability
- Bass, treble and loudness controls
- 4 Independent speaker outputs
- High-performance fully digital RDS demodulator
- On-chip adjustment-free 57kHz 8th order bandpass filter
- ARI (SK indication) and RDS signal quality output
- Full I<sup>2</sup>C-bus control

### **Description**

The TDA7519 multichip module combines in a single compact (10x10mm) 44-pin package, the signal processing functionalities of a state-of-the-art car radio, with a minimized number of required external components.



Two devices are included: TDA7460N, and TDA7479. (please refer to the relevant datasheet for specifications)

TDA7460N is a digitally controlled stereo decoder and audioprocessor, featuring FM noise blanking and multipath detector; bass, treble, loudness controls with 2 stereo and 2 mono mixable inputs and four independent speaker outputs.

TDA7479 is a fully digital RDS data decoder with an on-chip adjustment-free bandpass filter.

Both chips are I<sup>2</sup>C bus controlled.

#### **Order codes**

Part numbers	Package	Packing
TDA7519	LQFP44 (10x 10x 1.4mm)	Tray
TDA7519TR	LQFP44 (10x 10x 1.4mm)	Tape and reel

November 2006 Rev 3 1/7

PIN description TDA7519

## 1 PIN description

Figure 1. PIN connections

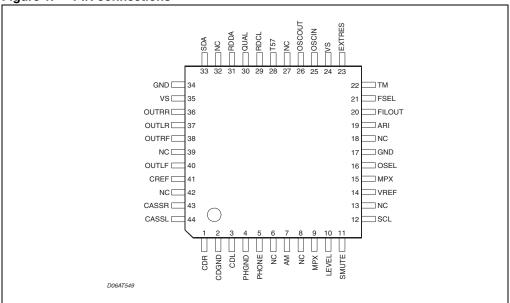


Table 1. PIN description

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TDA7519	Audioprocessor	RDS Decoder	Name	Function			
1DA/519	TDA7460N	TDA7479	wame	runction			
1	3		CDR	CD right channel input			
2	4		CDGND	Ground reference CD			
3	5		CDL	CD left channel input			
4	6		PHGND	Phone ground (MPOUT selectable by SW)			
5	7		PHONE	Phone input (MPIN selectable by SW)			
6				Not connected			
7	8		AM	AM input			
8				Not connected			
9	9		MPX	FM input (MPX)			
10	10		LEVEL	Level input stereo decoder			
11	11		SMUTE	Soft mute drive			
12	12		SCL	I <sup>2</sup> C clock line			
13				Not connected			
14		3	VREF	Reference voltage			
15		4	MPX	RDS input signal			
16		5	OSEL	Oscillator selector pin			

TDA7519 PIN description

Table 1. PIN description (continued)

<b>TD4</b>	Audioprocessor	RDS Decoder					
TDA7519	TDA7460N	TDA7479	Name	Function			
17		6	GND	Ground			
18				Not connected			
19		7	ARI	Output for ARI indication			
20		8	FILOUT	Filter output			
21		9	FSEL	Frequency selector			
22		10	TM	Test mode ENABLE			
23		11	EXTRES	Reset			
24		12	VS	Supply voltage			
25		13	OSCIN	Oscillator input			
26		14	OSCOUT	Oscillator output			
27				Not connected			
28		15	T57	Test output: 57kHz clock			
29		16	RDCL	RDS clock output 1187.5Hz			
30		1	QUAL	Signal quality indication			
31		2	RDDA	RDS data output			
32				Not connected			
33	13		SDA	I2C data line			
34	14		GND	Supply ground			
35	15		VS	Supply voltage			
36	16		OUTRR	Right rear speaker output			
37	17		OUTLR	Left rear speaker output			
38	18		OUTRF	Right front speaker output			
39				Not connected			
40	19		OUTLF	Left front speaker output			
41	20		CREF	Reference capacitor pin			
42				Not connected			
43	1		CASSR	Cassette input right			
44	2		CASSL	Cassette input left			

# 2 Electrical specifications

## 2.1 Thermal data

Table 2. Thermal data

Symbol	Parameter	Test condition	Min	Тур	Max	Units
R <sub>th</sub>	Thermal resistance	Junction to ambient, soldered on multilayer PCB		40		°C/W
T <sub>amb</sub>	Operating temperature range		-40		85	°C
T <sub>stg</sub>	Storage temperature range		-55		150	°C

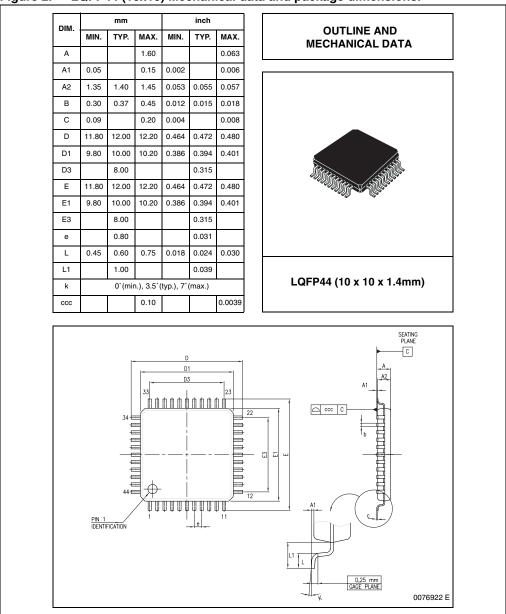
TDA7519 Package information

## 3 Package information

In order to meet environmental requirements, ST offers these devices in ECOPACK® packages. These packages have a lead-free second level interconnect. The category of second level interconnect is marked on the package and on the inner box label, in compliance with JEDEC standard JESD97. The maximum ratings related to soldering conditions are also marked on the inner box label.

ECOPACK is an ST trademark. ECOPACK specifications are available at: www.st.com.

Figure 2. LQFP44 (10x10) Mechanical data and package dimensions.



Revision history TDA7519

## 4 Revision history

Table 3. Document revision history

Date	Revision	Changes
01-Oct-2006	1	Initial release.
15-May-2006	2	Migrate from STPress.
27-Nov-2006	3	Addition of PIN diagram, Package changed, layout changes, modify text.

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