



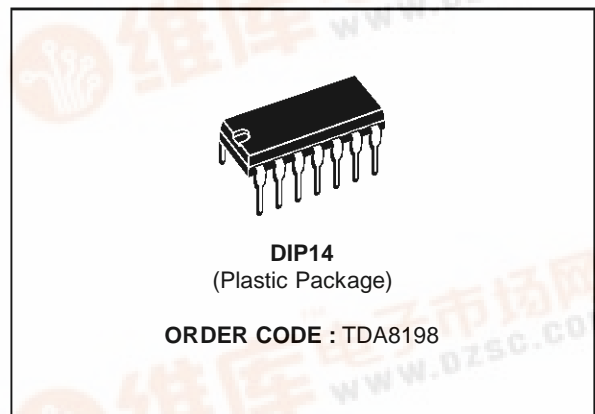
# TDA8198

## DOUBLE AUDIO SWITCH AND DC VOLUME CONTROL FOR TV

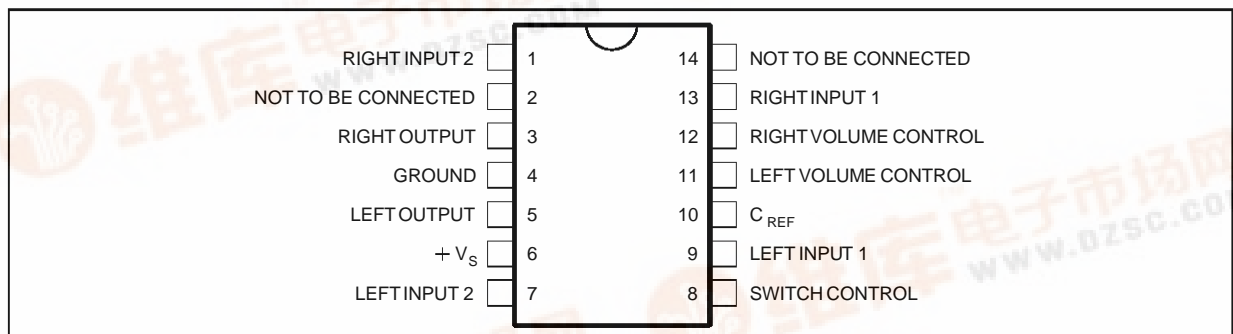
- A DOUBLE TWO-INPUT CIRCUITS WITH SWITCHING FACILITIES
- A DOUBLE DC VOLUME CONTROL
- 12dB MAXIMUM GAIN
- 90dB SIGNAL DYNAMIC RANGE

### DESCRIPTION

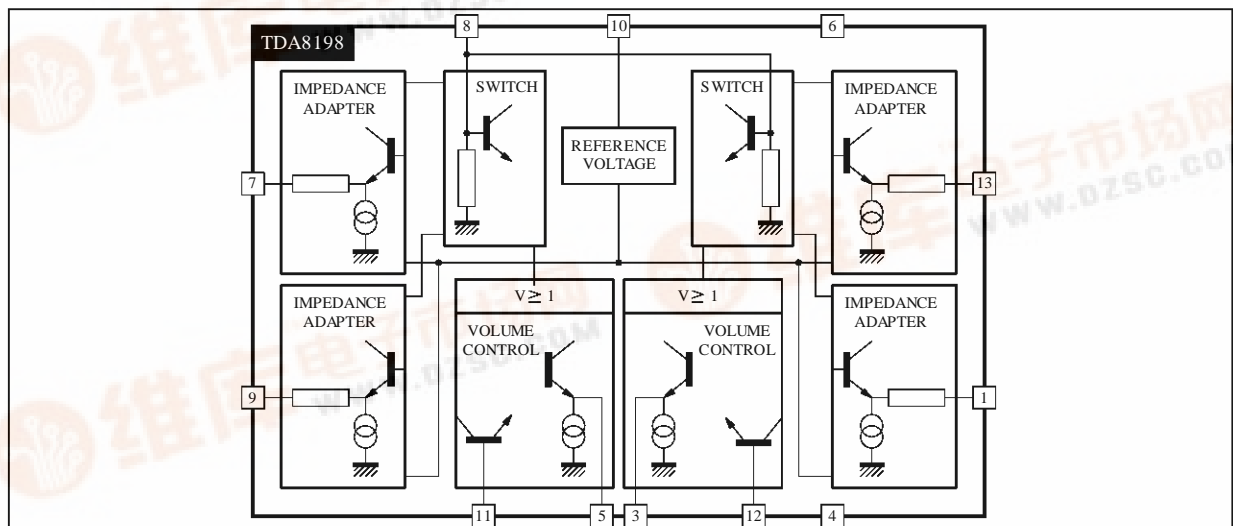
The TDA8198 is a monolithic integrated circuit in DIP14 package intended for TV applications which provides Audio switching facilities between two double inputs including DC volume control.



### PIN CONNECTIONS



### BLOCK DIAGRAM



8198-01.EPS

8198-02.EPS

## TDA8198

### ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
$V_S$	Supply Voltage	16	V
$T_{stg}$	Storage Temperature	-55, +125	°C
$T_{oper}$	Operating Ambient Temperature	0, +70	°C

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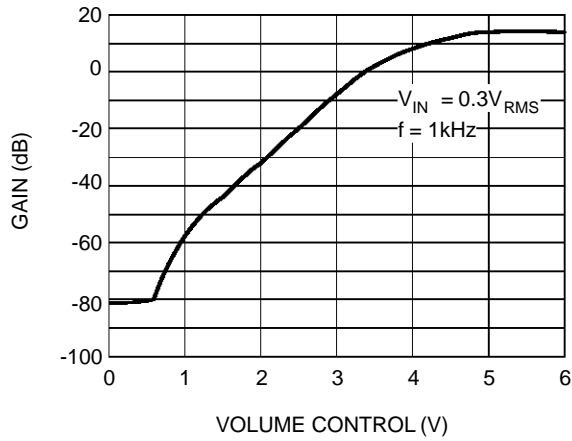
### ELECTRICAL CHARACTERISTICS

Measured according to the following conditions, unless otherwise specified :  $T_{amb} = 25^{\circ}\text{C}$ ,  $V_S = +12\text{V}$ .

Symbol	Parameter	Min.	Typ.	Max.	Unit
$V_S$	Supply Voltage Range	10.8	12	13.2	V
$I_S$	Supply Current ( $V_{IN} = 0$ , $V_C = 0.5\text{V}$ )		24	32	mA
$V_R$	Reference Voltage		6.9		V
$V_M$	Mode Selection Voltage Audio 1 Audio 2	9.5		5 $V_S$	V
$R_{SW}$	Switching Input Resistance	15	30		k $\Omega$
$V_I$	Audio Input Amplitude		0.125	0.3	$V_{RMS}$
$\Delta k$	DC Volume Control Range @ $V_I = 0.3V_{RMS}$	70	90		dB
$k_{MIN}$	Output/Input Gain for Maximum Volume ( $V_C = 5\text{V}$ )		12		dB
dK	Gain Difference between Channels at $V_C = 5\text{V}$		0		dB
$V_C$	Voltage Control Range $k = k_{MAX}$ (volume minimum) $k = k_{MIN}$ (volume maximum)	5		0.5	V
THD1	Distortion for $V_I = 0.25V_{RMS}$ at Maximum Volume		0.3	1	%
THD2	Distortion for $V_O = 1.2V_{RMS}$			5	%
$C_T$	Crosstalk between Switched Inputs		80		dB
$C_C$	Crosstalk between Channels 1 & 2		70		dB
$R_I$	Audio Input Resistance		22		k $\Omega$
$R_O$	Audio Output Resistance		10	300	$\Omega$
	Output Noise Level @ $V_C = 5\text{V}$ (weighted) (curve : DIN45 405)		300		$\mu V_{RMS}$
I - $V_C$	Volume Control Input Current (Pins 11 and 12) at $V_C = 5\text{V}$		-12		$\mu\text{A}$
	Volume thermal stability ( $k = 30\text{dB}$ , $0 < T_{amb} < 60^{\circ}\text{C}$ )		0.04		dB/°C

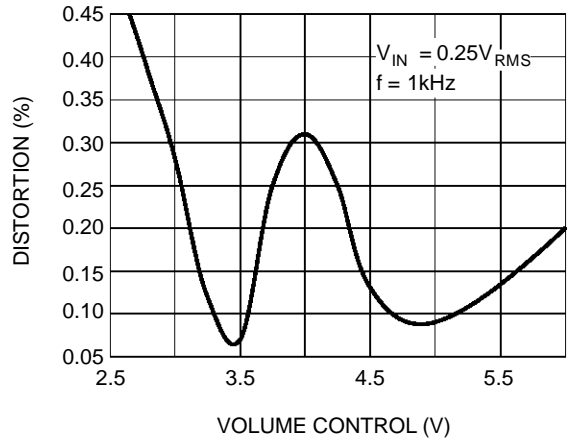
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**Figure 1 : Gain versus Volume Control**



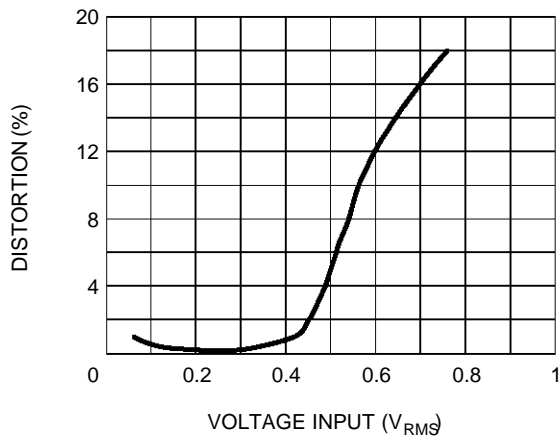
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**Figure 2 : Distortion versus Volume Control**



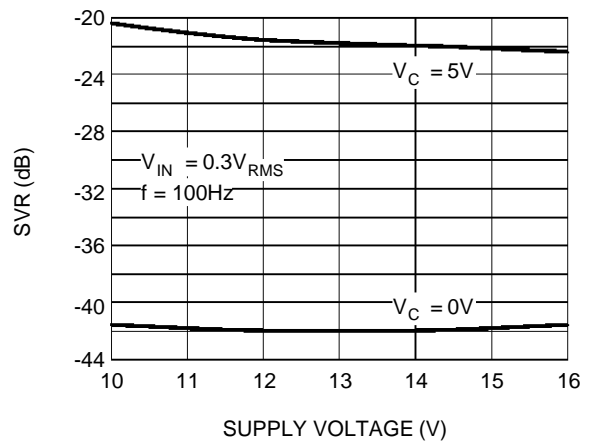
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**Figure 3 : Distortion versus Voltage Input**



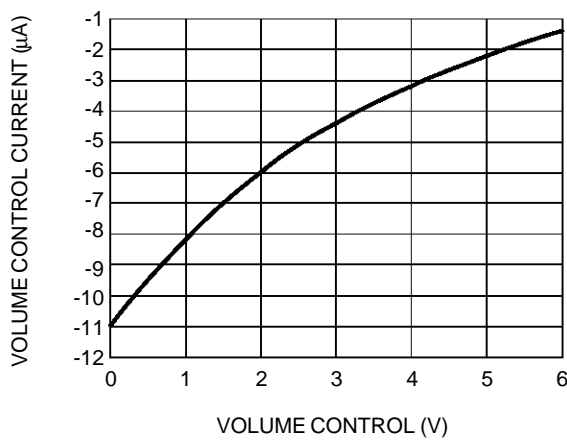
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**Figure 4 : Supply Voltage Rejection**



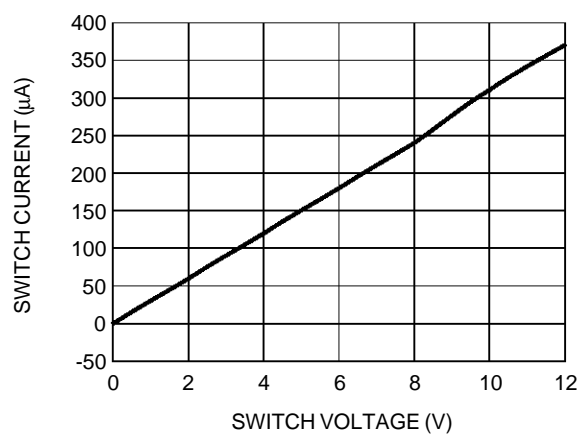
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**Figure 5 : Volume Control Current versus Voltage (pins 11 - 12)**



8198-07.EPS

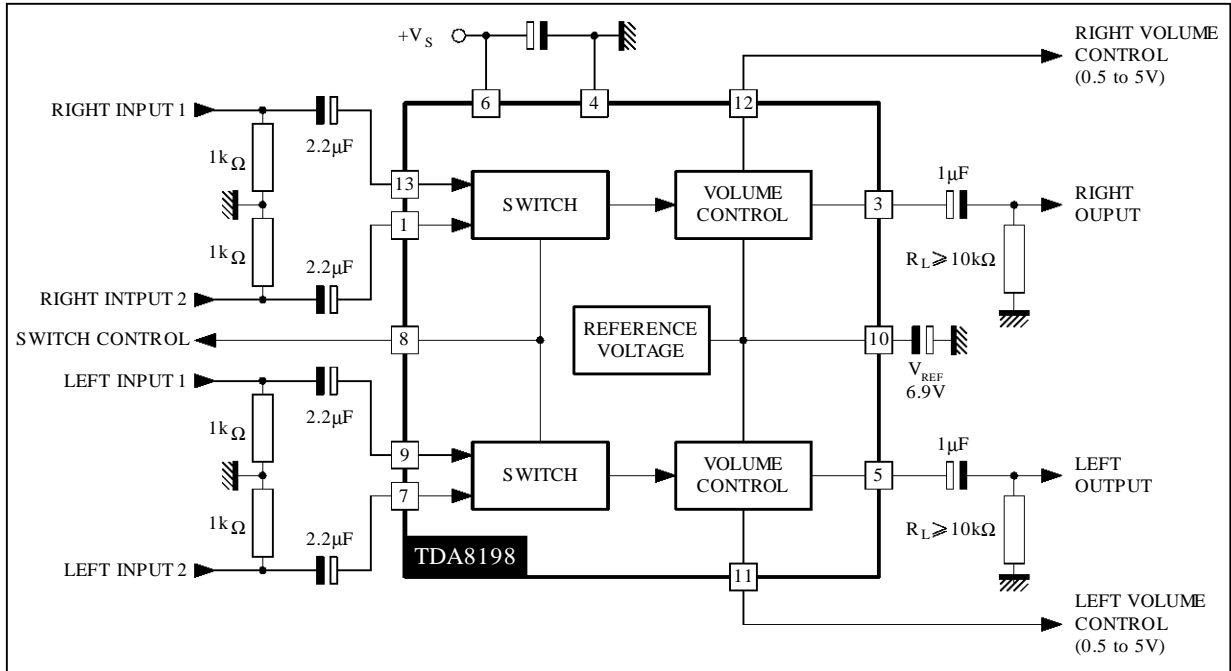
**Figure 6 : Switch Current versus Voltage (pin 8)**



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# TDA8198

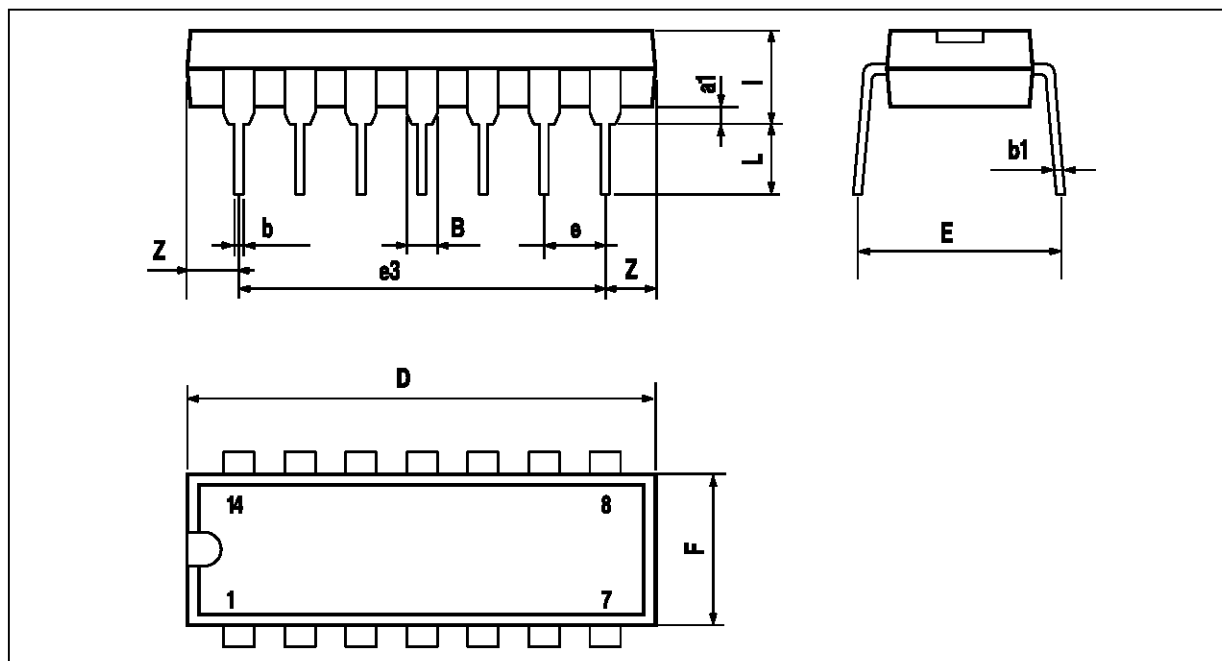
## APPLICATION DIAGRAM



8198-09.EPS

## PACKAGE MECHANICAL DATA

14 PINS - PLASTIC DIP



PM-DIP14.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.51			0.020		
B	1.39		1.65	0.055		0.065
b		0.5			0.020	
b1		0.25			0.010	
D			20			0.787
E		8.5			0.335	
e		2.54			0.100	
e3		15.24			0.600	
F			7.1			0.280
l			5.1			0.201
L		3.3			0.130	
Z	1.27		2.54	0.050		0.100

DIP14.TBL

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