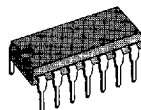


DOUBLE AUDIO SWITCH AND DC VOLUME CONTROL FOR TV

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

DESCRIPTION

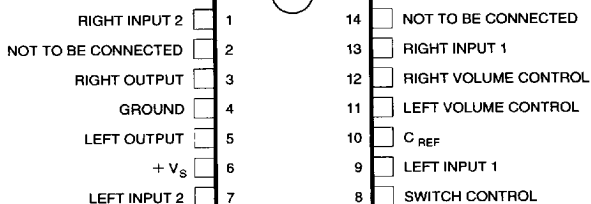
The TDA8198 is a monolithic integrated circuit in DIP14 package intended for TV applications which provides Audio switching facilities between two double inputs including DC volume control.



DIP14
(Plastic Package)

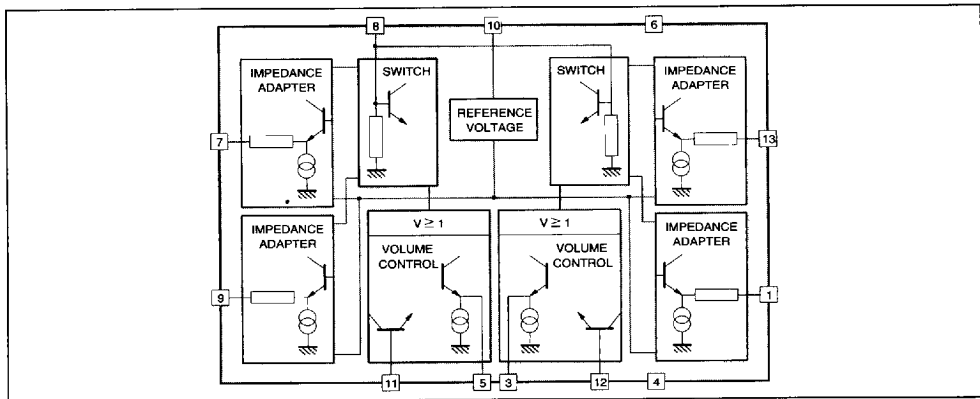
ORDER CODE : TDA8198

PIN CONNECTIONS



8198-01 EPS

BLOCK DIAGRAM



8198-02 EPS

ABSOLUTE MAXIMUM RATINGS

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

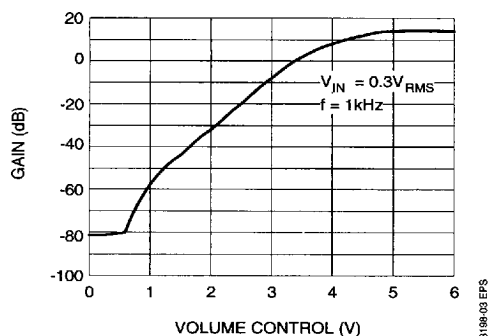
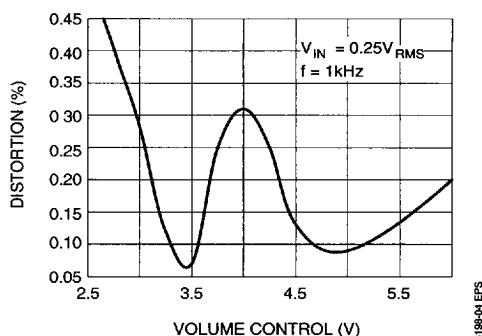
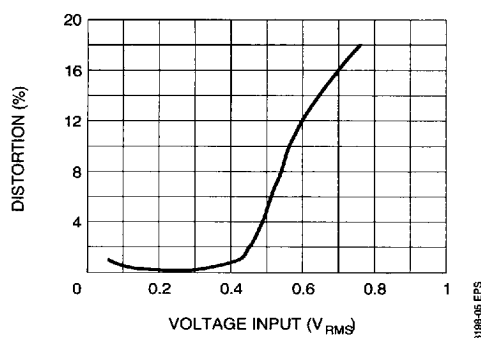
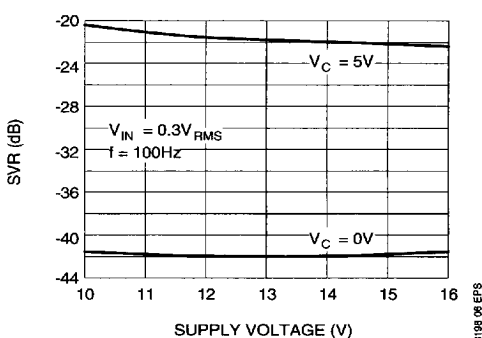
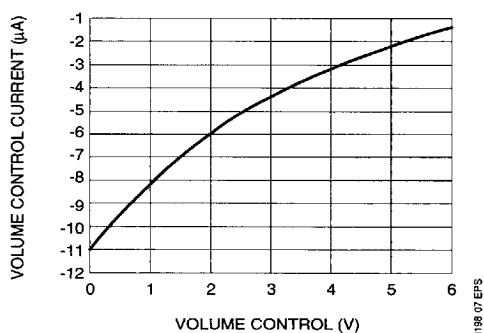
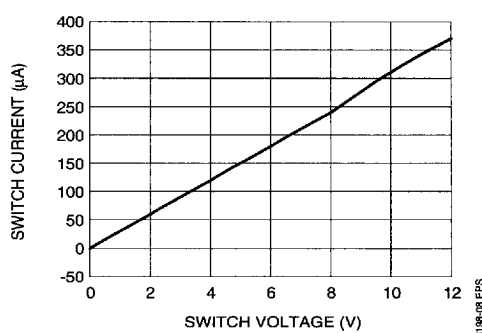
8198-01 TEL

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 Ω
V_I	Audio Input Amplitude		0.125	0.3	V_{RMS}
Δk	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 Ω
R_O	Audio Output Resistance		10	300	Ω
	Output Noise Level @ $V_C = 5\text{V}$ (weighted) (curve : DIN45 405)		300		μV_{RMS}
$I - V_C$	Volume Control Input Current (Pins 11 and 12) at $V_C = 5\text{V}$		-12		μA
	Volume thermal stability ($k = 30\text{dB}$, $0 < T_{AMB} < 60^{\circ}\text{C}$)		0.04		dB/°C

8198-02 TEL

Figure 1 : Gain versus Volume Control**Figure 2 : Distortion versus Volume Control****Figure 3 : Distortion versus Voltage Input****Figure 4 : Supply Voltage Rejection****Figure 5 : Volume Control Current versus Voltage (pins 11 - 12)****Figure 6 : Switch Current versus Voltage (pin 8)**

APPLICATION DIAGRAM

