AN7375N, AN7375NS

Low Voltage Dual Dolby* B-type Noise Reduction Processors

■ Overview

The AN7375N and the AN7375NS are the integrated circuits designed for dolby B type noise reduction system of low voltage operation. Two channels built-in one chip enable easy stereo construction.

■ Features

- Low voltage operation : 1.8～4.5V
- Low current consumption : 4mA type.
- Fewer external components
- Dolby ON/OFF switch built-in.

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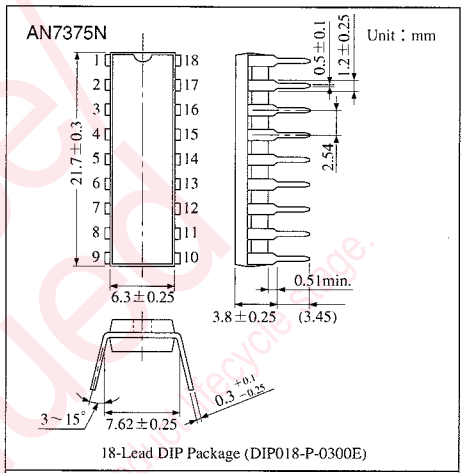
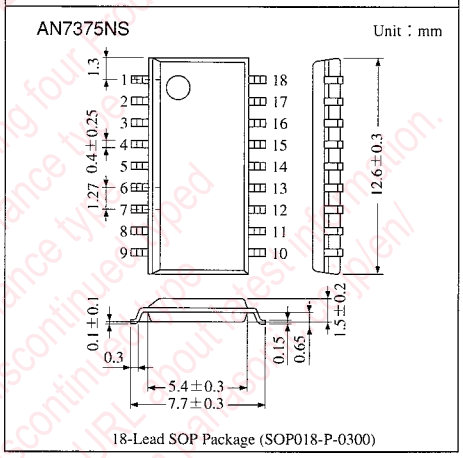
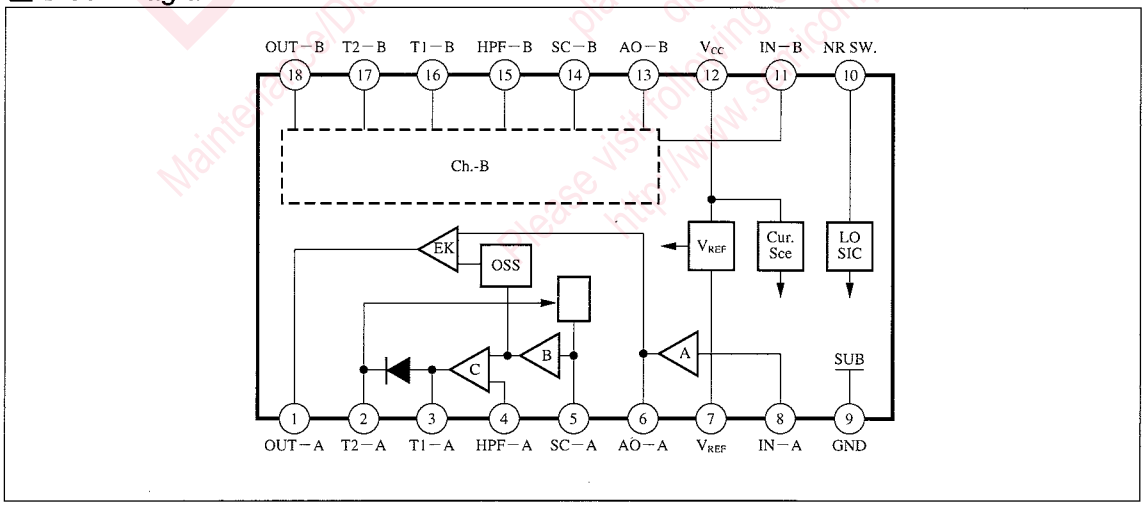




■ Block Diagram



■ Pin Descriptions

Pin No.	Pin Name	Pin No.	Pin Name
1	Output (Ch.A)	10	NR ON/OFF Switch
2	Time Constant－2 (Ch.A)	11	Input (Ch.B)
3	Time Constant－1 (Ch.A)	12	Power Supply
4	High Pass Filter (Ch.A)	13	Input Amp. Output (Ch.B)
5	Side Chain Input (Ch.A)	14	Side Chain Input (Ch.B)
6	Input Amp. Outpout (Ch.A)	15	High Pass Filter (Ch.B)
7	Reference Voltage	16	Time Constant－1 (Ch.B)
8	Input (Ch.A)	17	Time Constant－2 (Ch.B)
9	GND	18	Output (Ch.B)

■ Absolute Maximum Ratings (Ta＝25℃)

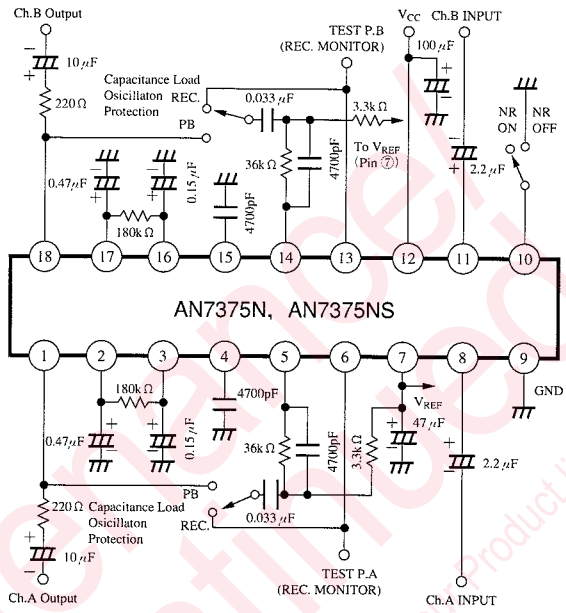
Parameter		Symbol	Rating	Unit
Supply Voltage		V_{CC}	6	V
Supply Current		I_{CC}	10	mA
Power Dissipation (Ta＝75℃)		P_D	60	mW
Operating Ambient Temperature		T_{opr}	−20 ～＋75	℃
Storage Temperature	AN7375N	T_{stg}	−55 ～＋150	℃
	AN7375NS		−55 ～＋125	℃

■ Electrical Characteristics (V_{CC}＝3V, Ta＝25℃±2℃) *1, *2

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Total Circuit Current	I_{tot}	REC. NR OFF non-signal	—	4.0	6.0	mA
Input Amp. Gain	G_{VA}	Pin⑧－⑥, Pin⑪－⑬, V_{in}＝1kHz, 0dB	10.0	11.0	12.0	dB
Recording Frequency Characteristics－1	$f_{C(R-1)}$	REC. NR ON, V_{in}＝1kHz, −20dB	2.7	4.2	5.7	dB
Recording Frequency Characteristics－2	$f_{C(R-2)}$	REC. NR ON, V_{in}＝1kHz, −40dB	5.2	6.2	7.2	dB
Recording Frequency Characteristics－3	$f_{C(R-3)}$	REC. NR ON, V_{in}＝5kHz, 0dB	−0.7	0.3	1.3	dB
Recording Frequency Characteristics－4	$f_{C(R-4)}$	REC. NR ON, V_{in}＝5kHz, −20dB	1.7	3.2	4.7	dB
Recording Frequency Characteristics－5	$f_{C(R-5)}$	REC. NR ON, V_{in}＝5kHz, −40dB	9.3	10.3	11.3	%
Total Harmonic Distortion－1	THD－1	REC. NR ON, V_{in}＝1kHz, 0dB	—	0.1	0.5	%
Total Harmonic Distortion－2	THD－2	PB. NR ON, V_{in}＝1kHz, 0dB	—	0.1	0.5	dB
Maximum Output Voltage－1	$V_{O(max.-1)}$ *3	REC. NR ON, f＝1kHz, THD＝1%	12	15	—	dB
Signal to Noise Ratio－1	S/N_{-1}	REC. NR ON, R_g＝10kΩ, CCIR/ARM	64	69	—	dB
Signal to Noise Ratio－2	S/N_{-2}	PB. NR ON, R_g＝10kΩ, CCIR/ARM	75	85	—	dB
Crosstalk	CT	PB. NR ON, V_{in}＝1kHz, 0dB	50	60	—	dB
Channel Balance	CB	PB. NR ON, V_{in}＝1kHz, 0dB	−1	0	1	dB
Switch Voltage	V_{OFF}	Pin⑩ applied voltage which NR is OFF	—	—	0.3	V

*1 Dolby level＝0dB (Signal level which becomes 100mV output at test point when 400Hz signal is applied to input pin at REC. NR OFF.)
*2 Measure Ch. A and Ch. B.
*3 Measure at V_{CC}＝1.8V.

■ Application Circuit



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