

AN7375N, AN7375NS

Low Voltage Dual Dolby* B-type Noise Reduction Processors

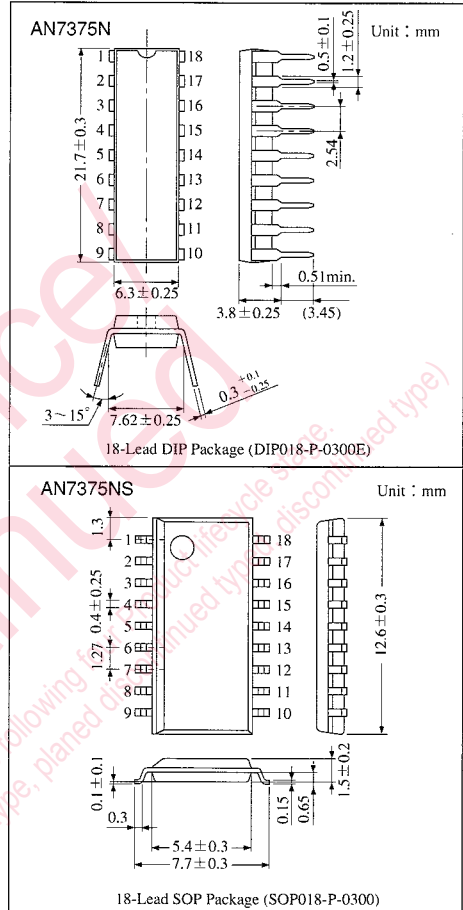
Overview

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.

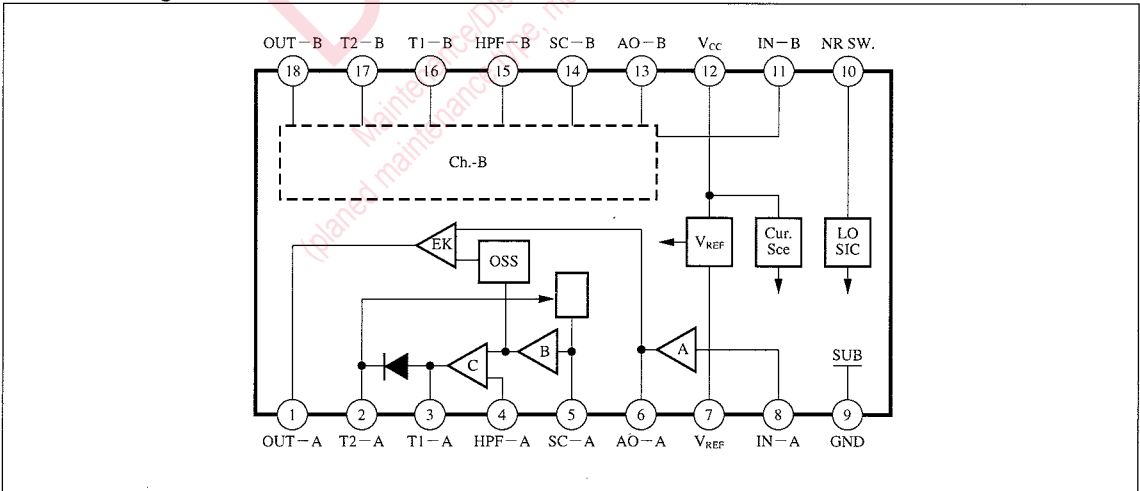
Features

- 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



ICs for
Cassette
Deck

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. Output (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°C)

Parameter	Symbol	Rating	Unit
Supply Voltage	V _{CC}	6	V
Supply Current	I _{CC}	10	mA
Power Dissipation (Ta = 75°C)	P _D	60	mW
Operating Ambient Temperature	T _{opr}	-20 ~ +75	°C
Storage Temperature	AN7375N	-55 ~ +150	°C
	AN7375NS	-55 ~ +125	°C

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

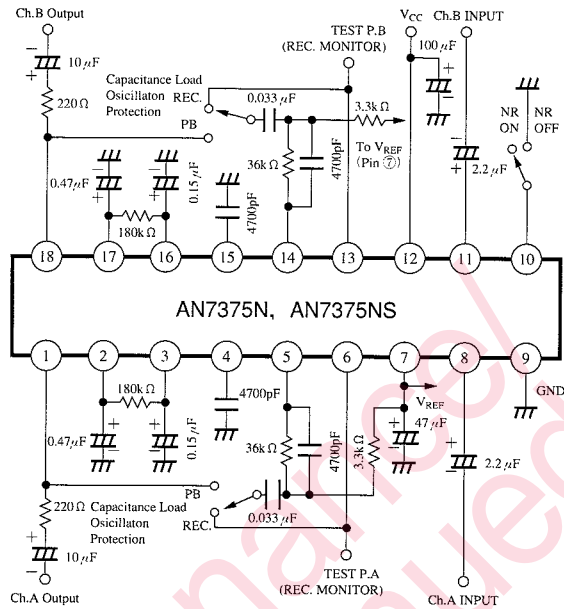
Parameter	Symbol	Condition	min.	typ.	max.	Unit
Total Circuit Current	I _{tot}	REC. NR OFF non-signal	—	4.0	6.0	mA
Input Amp. Gain	G _{VA}	Pin⑧-⑥, Pin⑪-⑬, V _{in} = 1kHz, 0dB	10.0	11.0	12.0	dB
Recording Frequency Characteristics - 1	f _{C(R-1)}	REC. NR ON, V _{in} = 1kHz, -20dB	2.7	4.2	5.7	dB
Recording 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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 Dolby Research Center : Tokyo Office (Far Eastan Continental Inc.)
 Tel : 03-3584-0039



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