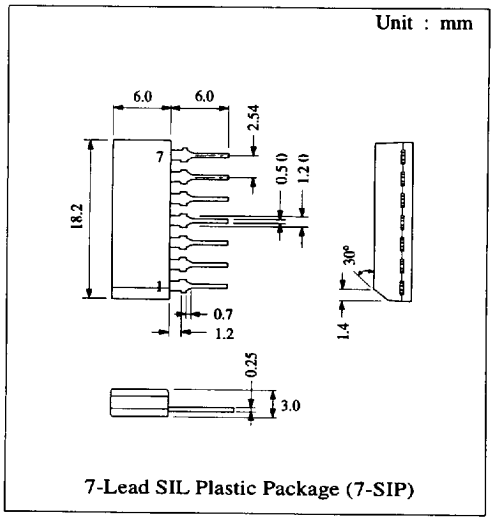
AN7072N

High Voltage Audio Amplifier Muting Circuit

■ Description

The AN7072N is a monolithic integrated circuit designed for muting and protecting of 60W-class Hi-Fi audio power amplifier, which enables superior Hi-Fi amplifier design in joint use with a power amplifier - the AN7062N.



7-Lead SIL Plastic Package (7-SIP)

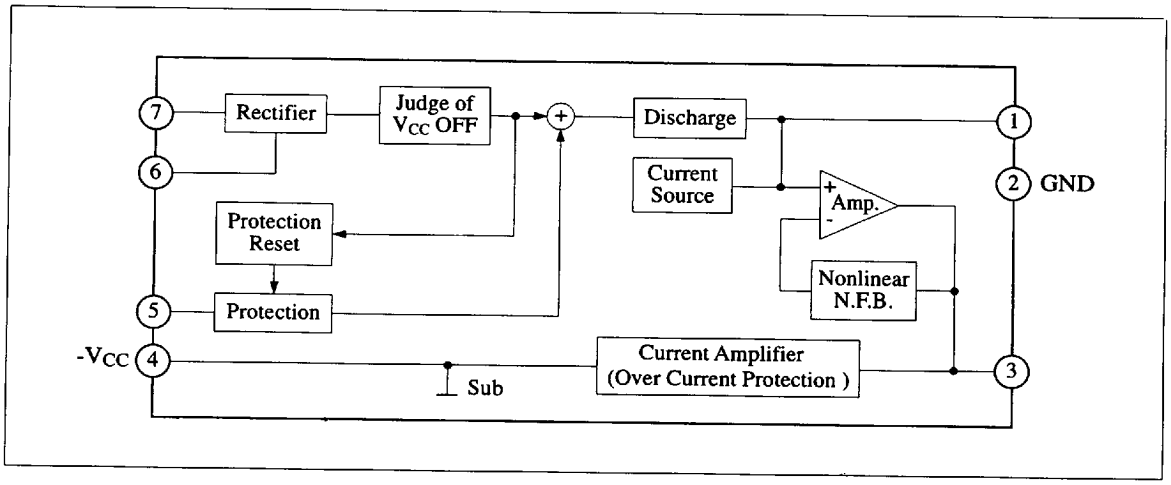
■ Features

- Built-in muting circuit during power ON/OFF
- Low shock noise when power is switched ON and OFF
- Built-in circuit for muting when speaker short-circuits
- Built-in over-current protection circuit
- High voltage

■ Pin

Pin No	Pin Name
1	Muting
2	GND
3	Output
4	-V_{CC}
5	Load Short Reset
6	Output Reset
7	AC Input

■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

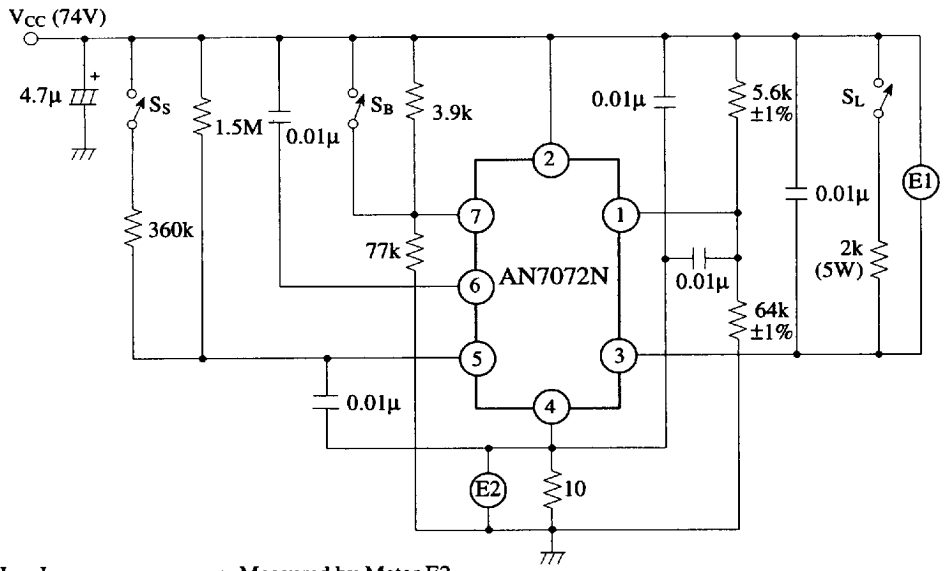
Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	74	V
Supply Current	I_{CC}	10	mA
Pin 3 Current	I_3	100	mA
Pin 5 Current	I_5	2	mA
Power Dissipation	P_D	1000	mW
Operating Ambient Temperature	Topr	-25 ~ +75	°C
Storage Temperature	Tstg	-55 ~ +150	°C

Operating Supply Voltage Range: V_{CC} = 15.0 V ~ 74.0V

■ Electrical Characteristics (V_{CC}=74V, Ta=25°C)

Item	Symbol	Condition			min.	typ.	max.	Unit
		S_B	S_L	S_S				
Supply Current (Normal)	I_{CC}	OFF	OFF	OFF	3.5	5.0	6.5	mA
Supply Current (Muting)	$I_{CC(Mute)}$	OFF	OFF	ON/OFF	3.5	5.0	6.5	mA
Output Voltage (Muting)	$V_{O(Mute)}$	ON	ON	OFF			1.0	V
Output Voltage (Normal)	V_O	OFF	ON	OFF	65			V
Output Voltage (Speaker Short-Circuit)	$V_{O(sp\text{-}short)}$	OFF	ON	ON/OFF			1.0	V

Test Circuit



Note 1) I_{CC}, $I_{CC(mute)}$: Measured by Meter E2
Note 2) $V_{O(mute)}$, V_O, $V_{O(sp\text{-}short)}$: Measured by Meter E1
Note 3) $I_{CC(mute)}$, $V_{O(sp\text{-}short)}$: S_S is set OFF after ON for $I_{CC(mute)}$ and $V_{O(sp\text{-}short)}$