AN5079

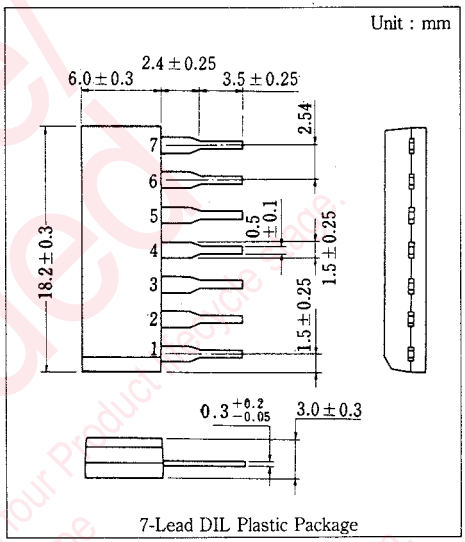
TV Tuning Voltage Circuit

■ Outline

The AN5079 is an integrated circuit which converts a pulse-width modulated input signal into DC voltage to generate a tuning voltage.

■ Feature

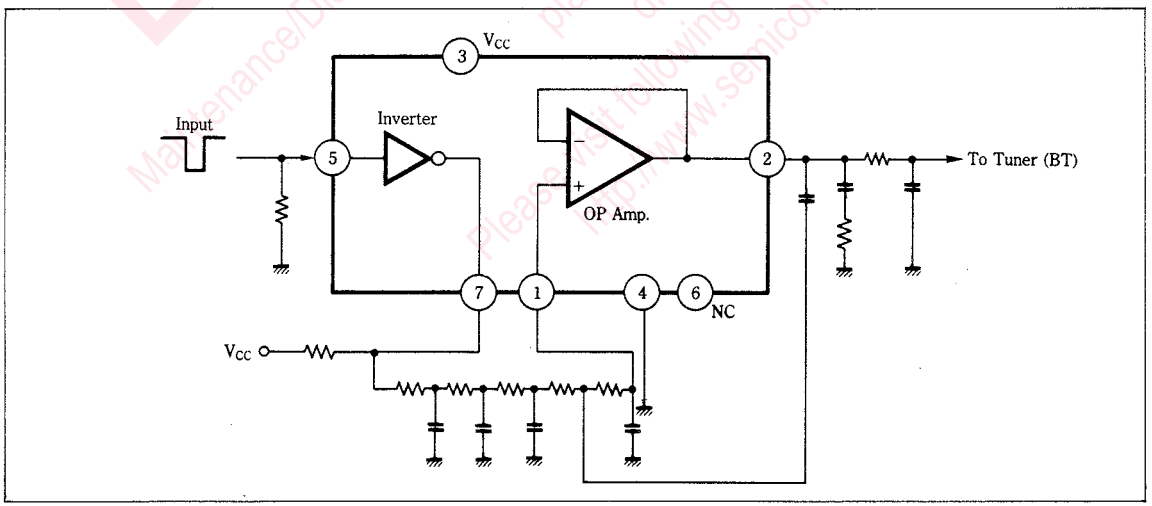
- Output tuning voltage: 0.7V~30V



■ Pin

Pin No.	Pin Name
1	OP Amp. Input
2	OP Amp. Output
3	V_{CC}
4	GND
5	Inverter Input
6	NC
7	Inverter Output

■ Block Diagram



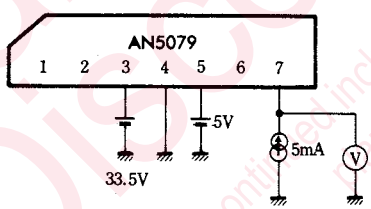
■ Absolute Maximum Ratings (Ta=25℃)

Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	+33.5	V
Supply Current	I_{CC}	+ 6.0	mA
Power Dissipation	P_D	250	mW
Operating Ambient Temperature	T_{por}	−20～+70	℃
Storage Temperature	T_{stg}	−55～+150	℃

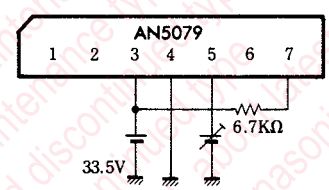
■ Electrical Characteristics (Ta=25℃)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Output saturation Voltage	V_{7-4}	1	I_7=5mA	0	0.06	0.3	V
Input Threshold Voltage	V_{5TH}	2		2.0	3.0	4.5	V
Input Bias Current	I_1	3	V_{1-5}=0.7V	−190		0	nA
Input Offset Voltage	V_{2-1}	3	V_{1-5}=0.7V, 15V	−100	0	100	mA
Output Leak Current	I_7	4				10	μA
Current Circuit	I_3	3	V_{CC}=31.5V	2.2	4.0	5.5	mA

Test Circuit 1 (V_{7-4})

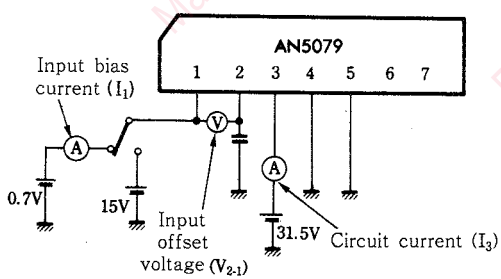


Test Circuit 2 (V_{5TH})

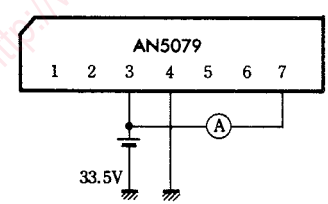


Vary Pin ⑤ voltage, change Pin ⑦ from Low to High and then measure the voltage.

Test Circuit 3 (I_1, V_{2-1}, I_3)



Test Circuit 4 (I_7)



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