

# AN5071

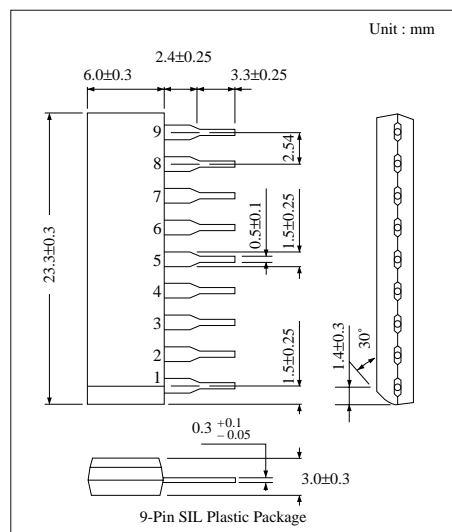
## TV Tuner Band-Switch IC (31V-Voltage Regulator Built-in)

### ■ Overview

The AN5071 is the integrated circuit incorporating TV tuner band-switch circuits and 31V-power-supply circuit.

### ■ Features

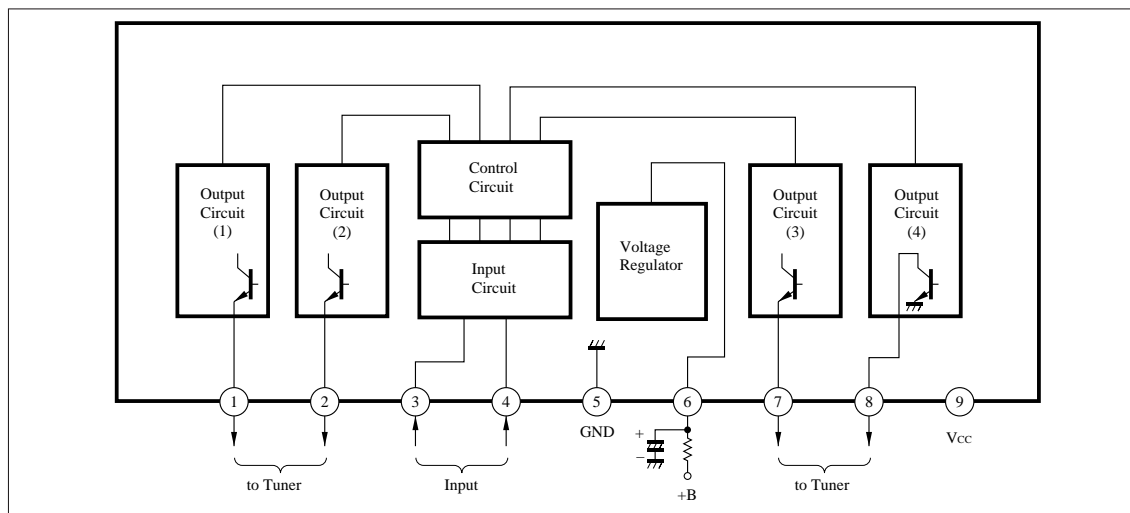
- Tuner band switch circuit with 31V-voltage regulator
- Usable for every tuner by suitable output combination



### ■ Pin Descriptions

Pin No.	Pin name
1	Output (1)
2	Output (2)
3	Input (1)
4	Input (2)
5	GND
6	31.5V supply voltage
7	Output (3)
8	Output (4)
9	V <sub>CC</sub>

### ■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

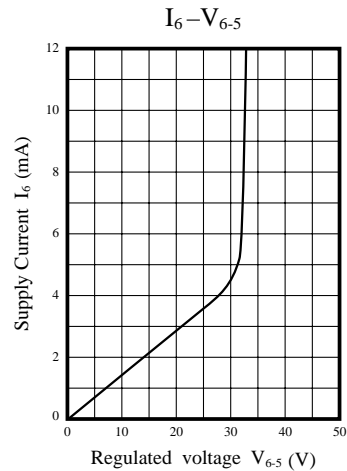
Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	+18	V
Supply current	I <sub>6</sub>	+14	mA
Power dissipation	P <sub>D</sub>	620	mW
Operating ambient temperature	T <sub>opr</sub>	- 20 to + 70	°C
Storage temperature	T <sub>stg</sub>	- 55 to +150	°C

■ Electrical Characteristics (Ta = 25°C)

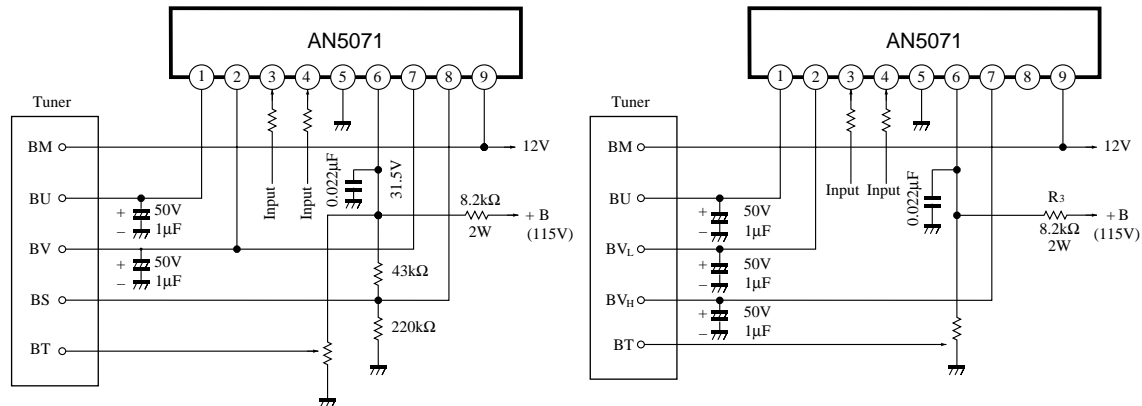
Parameter	Symbol	Condition	min	typ	max	Unit
Input-threshold voltage	V <sub>t</sub>	V <sub>CC</sub> =12V	1.5	—	2.5	V
Input-threshold current	I <sub>t</sub>	V <sub>CC</sub> =12V	100	—	500	μA
Output-saturation voltage	V <sub>CE(sat)</sub>	V <sub>CC</sub> =12V, I <sub>o</sub> = - 60mA	—	0.3	0.8	V
Pin8 output-saturation voltage	V <sub>CE(sat)</sub>	V <sub>CC</sub> =12V, I <sub>s</sub> =20mA	—	0.2	0.5	V
Voltage regulator	V <sub>6.5</sub>	V <sub>CC</sub> =12V, I <sub>6</sub> =10mA	29.5	31.5	33.5	V
Regulated voltage ambient temperature dependency	V <sub>6.5</sub> /T <sub>a</sub>	T <sub>a</sub> = -20 to + 60°C	-1.0	0	1.0	mV/°C
Regulated voltage time drift	ΔV <sub>6.5</sub>	Reference is the voltage at 5 sec. after SW. ON	—	—	±50	mV

■ Input/Output Related (Logic Table)

Input		Output				Remarks (Tuning Status)
Pin3	Pin4	Pin1	Pin2	Pin7	Pin8	
L	L	V <sub>CC</sub>	open	open	L	UHF
H	L	open	V <sub>CC</sub>	open	open	VHF-L
L	H	open	open	V <sub>CC</sub>	L	VHF-H
H	H	open	open	open	open	—



■ Application Circuit



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