



Functional Description

KC8801 And peripheral PNP Transistor may be composed of a direct current pulse width modulation circuit. When the control input terminal PIN2 (IN) Enter a period 20ms Pulse width of 1.0-2.0ms When the variable pulse, respective bridge PWM Circuit outputs a positive - negative drive voltage to the reversible. When the input pulse width 1.5ms When the zero point, when the output of a transistor bridge circuit 2.5v Symmetrical about a voltage, so that the average voltage across the load is zero. When the input pulse width is increased (decreased), one side of the bridge circuit (or the other) begin to conduct. On-time pulse width and the input zero (1.5ms) Is proportional to the difference. When the pulse width is 2.0ms Voltage across the load approaches is + V cc . The pulse width 1.0ms When the load voltage close - Vcc . When the input pulse width value zero (1.5ms), The output is not zero as adjusted PIN11 Feet of potential to make it back to zero. With this feature, the bridge circuit can be used to drive a mechanical position sensor (potentiometer), a closed loop forming position, thereby constituting a position controller.

Features

▲ quiescent current is small, typically 4.3mA (When the output open) ▲ dead-set

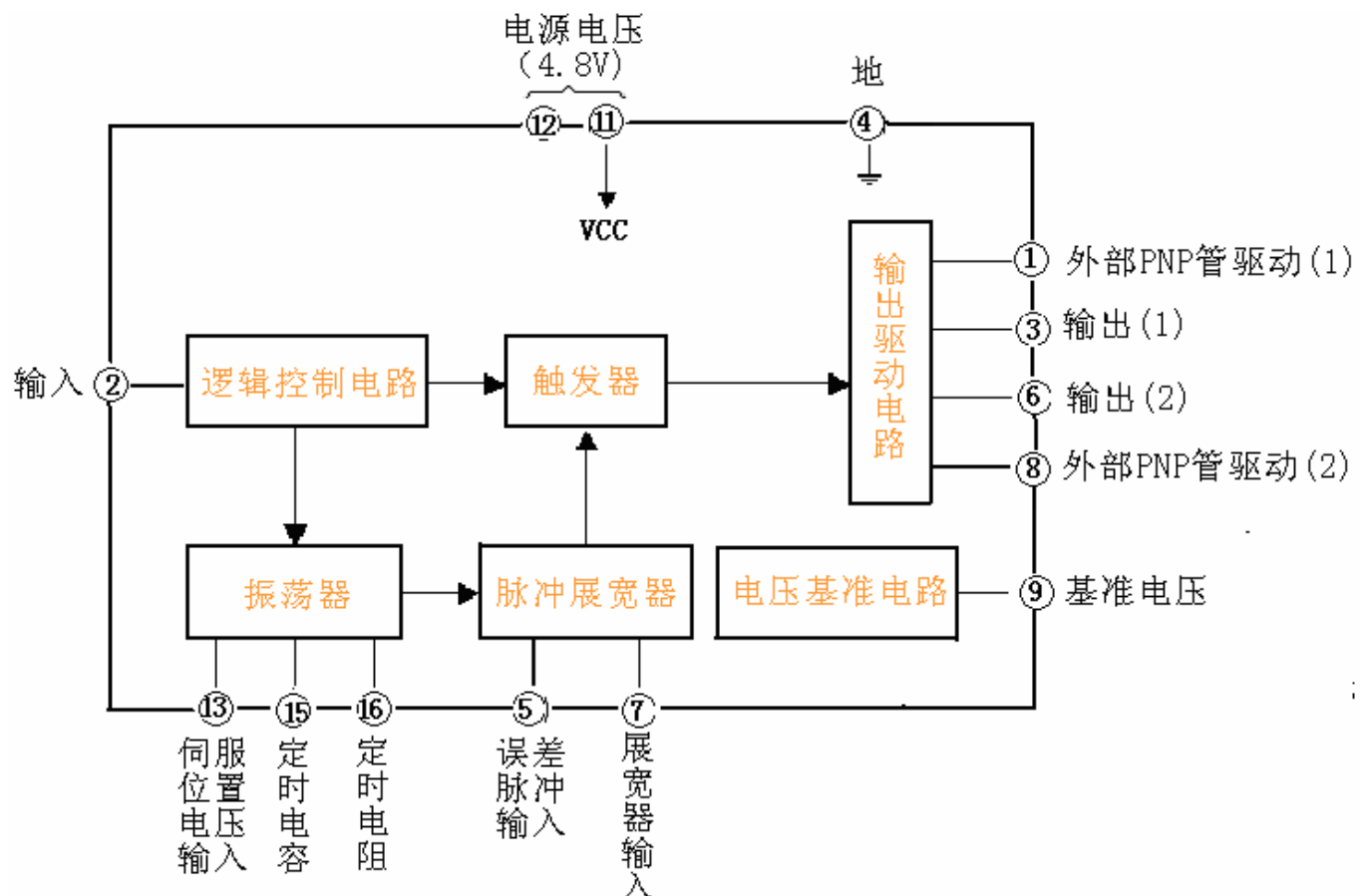
simple

▲ power and superior temperature

characteristics of continuous high-level

protection circuit built ▲ ▲ and easily CMOS Circuit Interface

A circuit block diagram of





Applications

The servo motor control circuit, infinite digital proportional remote control system applications and the like.

Recommended operating conditions

Supply Voltage Range: 3.4 ~ 7.0V

Typical operating voltage: 4.8V

Absolute parameter values (Unless otherwise specified, Ta = 25 °C)

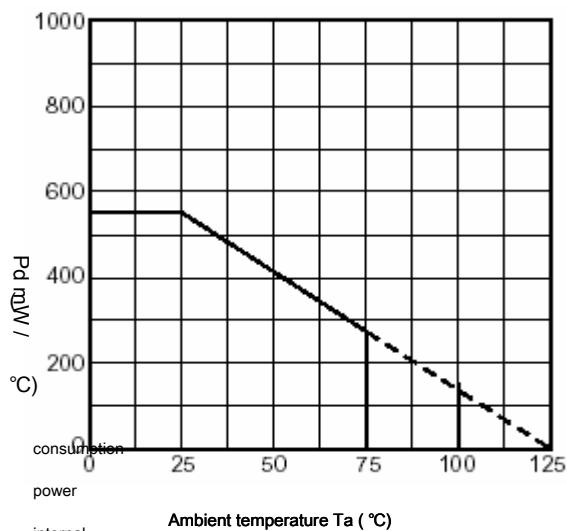
symbol	Parameter Description	condition	Parameter Value	unit
V _{CC}	voltage		7.5	V
I _{O SINK}	Down current output terminal		950	mA
I _{O SOURCS}	Source current output terminal		520	mA
P _d	Power consumption		550	mW
K _θ	Heat consumption rate of change with temperature	Ta ≥ 25 ° C	5.5	mW / °C
T _{opr}	Operating temperature		-20 ~ +75	°C
T _{stg}	Storage temperature		- 40 to +125	°C

Electrical characteristics (Unless otherwise specified, Ta = 25 °C, VCC = 4.8V)

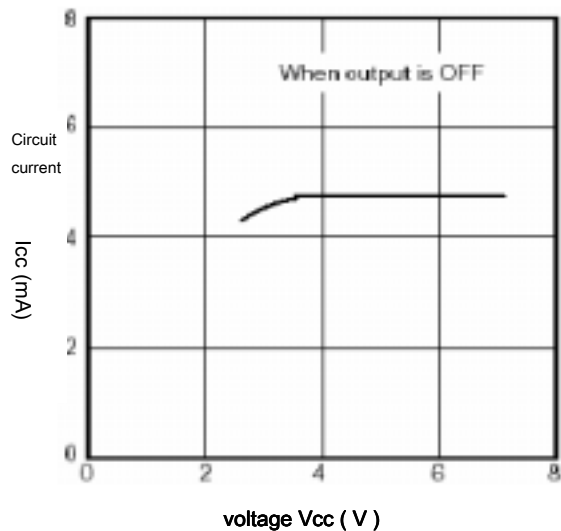
symbol	Parameter Description	Test Conditions	Min	Typ	Max	Units
I _{CC} Supply Current		Output OFF			4.2	mA
		Output open			twenty two	
V _{OL} Low Output Voltage	Output Voltage	I _{O SINK} = 100 mA			0.15	0.25
		I _{O SINK} = 400 mA			0.35	
V _{OH} High voltage output	High voltage output	I _{O SOURCE} = 100 mA	3.5		3.8	V
I _{PNP} periphery PNP Transistor drive current	periphery PNP Transistor drive current		30			mA
V _{Reg} The reference voltage	reference voltage		2.3		2.45	2.6 V
I _{Reg} Internal reference voltage output current	Internal reference voltage output current					3.5 mA
T _{DB} The minimum width of the dead zone	minimum width of the dead zone	R _{DB} = 2k, Cs = 0.1μF				20 μs

**TYPICAL CHARACTERISTICS (Unless otherwise specified, $T_a = 25^\circ\text{C}$)**

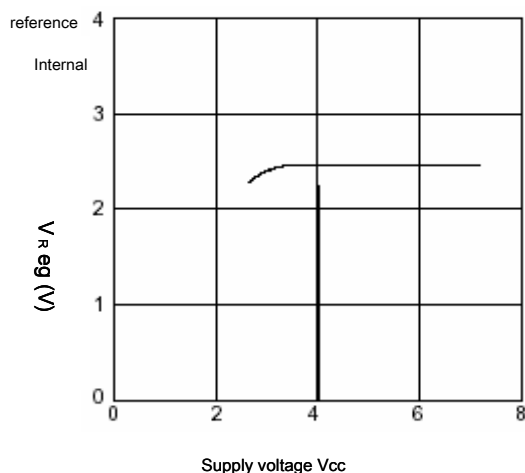
Heat consumption rate of change with temperature (maximum value)



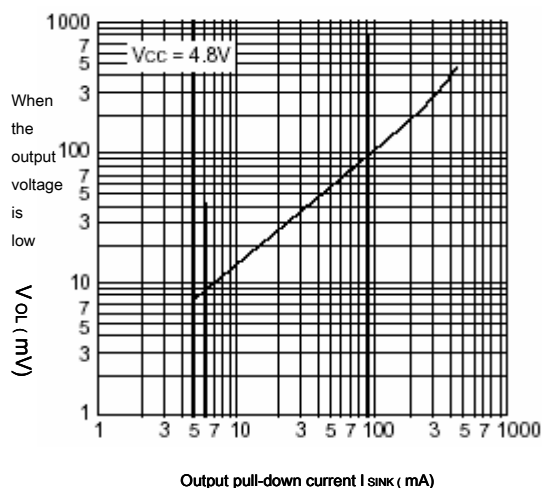
Circuit current rate of change of the power source voltage



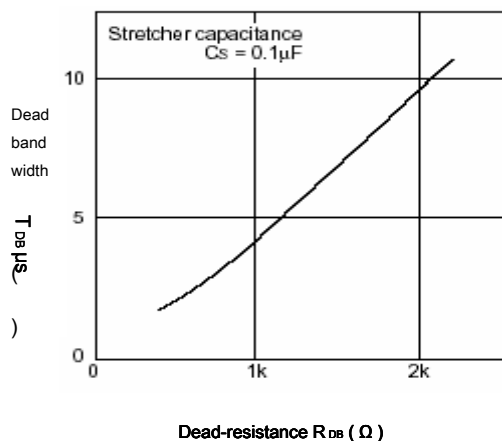
Internal reference voltage with the power supply voltage variation rate



Output voltage with low rate of change of the output pull-down

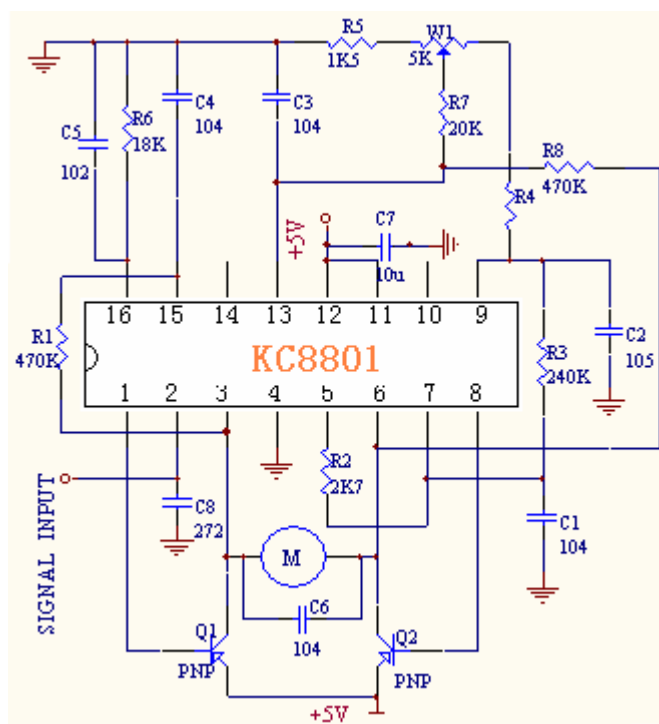


The dead band width change ratio of resistance of dead

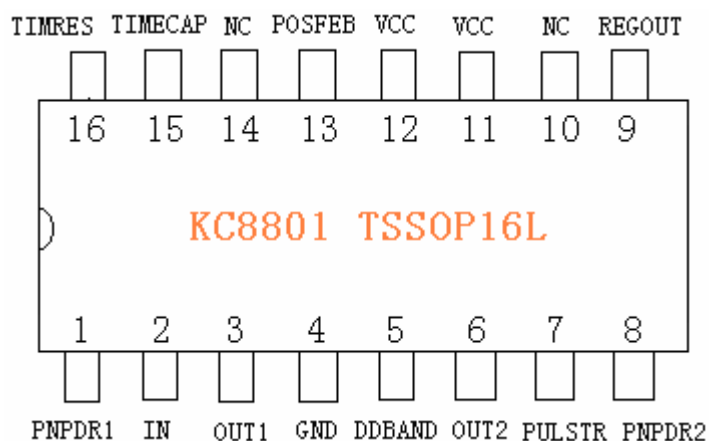




Application Circuit Example



Pin arrangement of FIG.



Pin Function Description

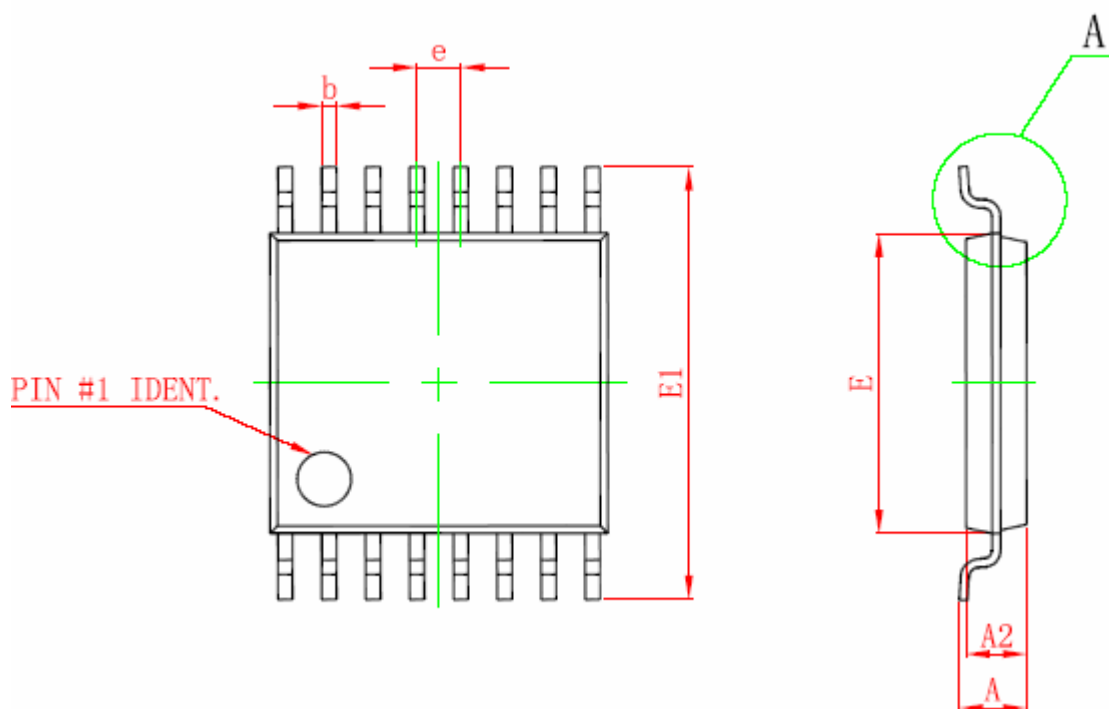
Pin Number	Pin Symbol	I / O Recognition	Features
Pin1	PNPDR1	O	Connect peripherals PNP Base of the transistor.
Pin2	IN	I	Positive working peak pulse input greater than or equal 3V . cycle T = 20ms , Pulse width 1.0 ~ 2.0ms Changes in between.
Pin3	OUT1	O	A feedback resistor connected to Pin15 .
Pin4	GND		To end

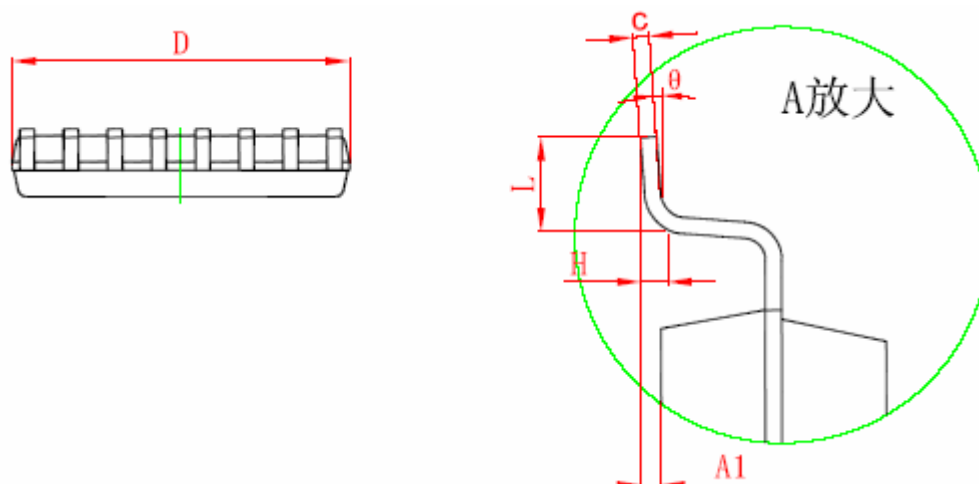


KC8801 Product Manual

Pin5	DDBAND	I	A resistor connected to the Pin7 . The resistance of the resistor to vary the dead zone, the variable resistance range 2 ~ 5K Ω
Pin6	OUT2	O	Peripheral access PNP The collector tube.
Pin7	PULSTR	I	Connected capacitor and resistor, to extend the width of the pulse, a connector 180K Ω resistance to PIN9 .
Pin8	PNPDR2	O	Connect peripherals PNP Base of the transistor.
Pin9	REGOUT	O	An internal reference voltage output. The wide lead pin electrically variable resistor for pulse stretcher and Resistance is connected. Connected about a 2.2 μ F Capacitance to improve stability of the circuit.
Pin10	NC		
Pin11 & pin12	VCC		Supply voltage 3.4V ~ 7V When the electrical characteristics remain constant. This pin is connected about a 10 μ F The capacitance.
Pin13	POSFEB	I	Variable resistor connected intermediate the ends, for the position of the probe shaft. The pin voltage and Pin15 Comparing the triangular wave voltage, the drive motor. Adjusting potentiometer can adjust the zero point of the servo motor. At the same time about a connection 0.1 μ F Filter capacitor, for reducing the influence of noise.
Pin14	NC		
Pin15	TIMECAP	O	Connecting a capacitor which generates a triangular wave by a constant current. typical Value is 0.1 μ F . It requires a feedback resistor connected between the output pin and the application.
Pin16	TIMERES	O	A resistor connected to ground, this resistance determines Pin15 Constant charging current size. 18 k Ω Resistance will produce 1.0mA Current. At the same time about a parallel 0.03 μ F Capacitance to improve stability.

Package Dimensions (TSSOP16L)





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
D	4.900	5.100	0.193	0.201
E	4.300	4.500	0.169	0.177
b	0.190	0.300	0.007	0.012
c	0.090	0.200	0.004	0.008
E1	6.250	6.550	0.246	0.258
A		1.100		0.043
A2	0.800	1.000	0.031	0.039
A1	0.020	0.150	0.001	0.006
e	0.65 (BSC)		0.026 (BSC)	
L	0.500	0.700	0.020	0.028
H	0.25 (TYP)		0.01 (TYP)	
θ	1 °	7 °	1 °	7 °