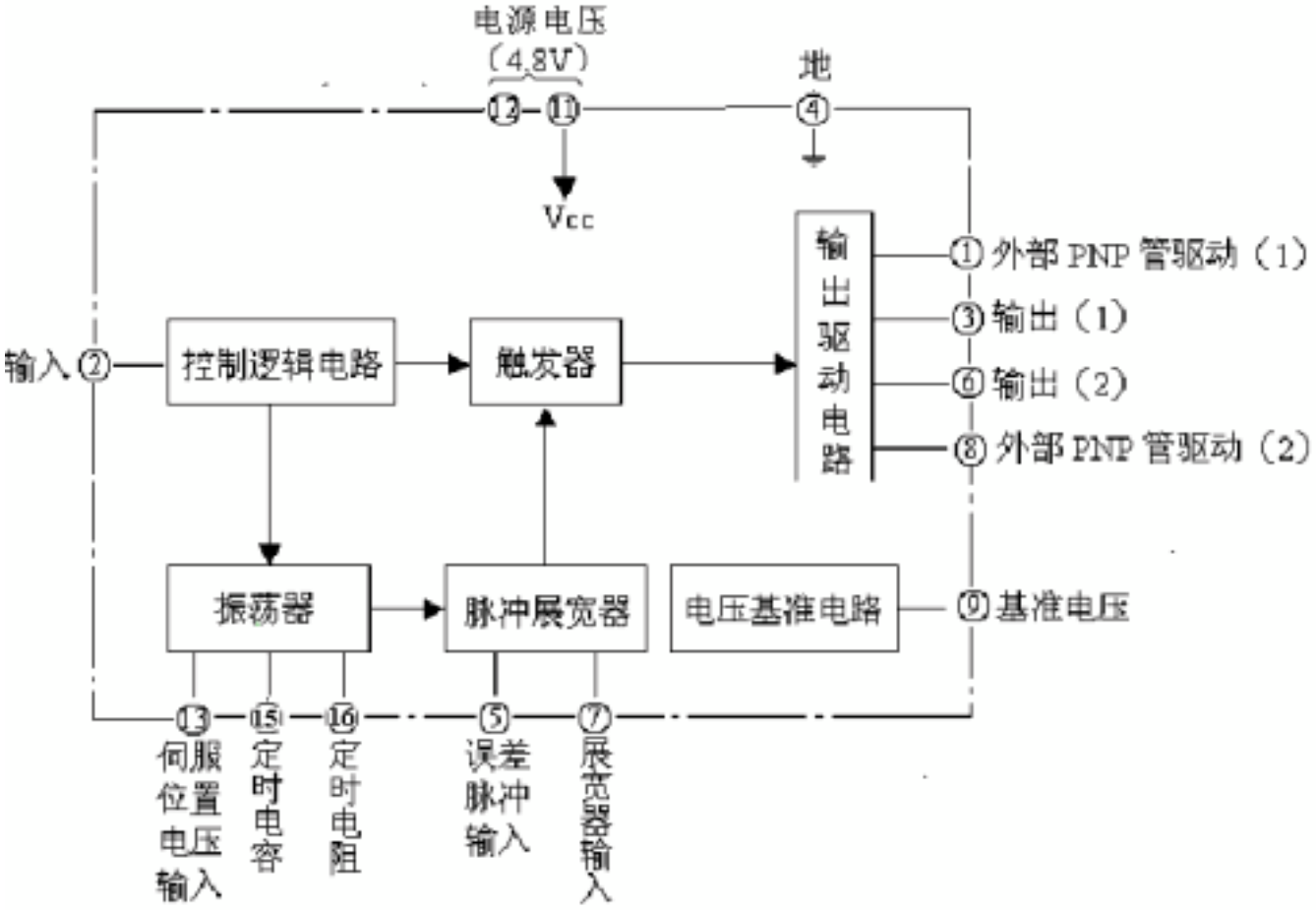
Functional Description

KC5188 And the outer Wai PNP The transistor can be composed of a DC pulse-width modulation circuit. When the control input terminal PIN2 (IN). Enter the cycles 20ms and pulse width is 1.0-2.0ms Variable pulse bridge, the corresponding PWM The circuit can output a positive-Negative can The inverse of the driving voltage. When the input pulse width is 1.5ms When the zero point, the transistors of the bridge circuit at this time outputs a 2.5v About Said voltage, so that the average voltage across the load is zero. When the input pulse width is increased (decreased), the side of the bridge circuit (or Another side) conduction. Conduction time and input pulse width zero (1.5ms)Proportional to the difference. When the pulse width is 2.0ms When the load On the voltage approaches+ Vcc.And the pulse width is 1.0ms When the load on the voltage approaches -Vcc.When the input pulse width of zero value (1.5ms) When, as the output is not zero, adjustable PIN11 Foot of the potential to bring it back to 0:00. With this feature, available bridge circuit Drive a mechanical position sensor (potentiometer), the formation position of closed-loop, thereby forming a position controller.

Features

▲ smaller quiescent current typical value 4.3mA (When the output is open)
▲ dead set simple
▲ superior power and temperature characteristics
▲ Built sustained high level protection circuit
▲ easily CMOS Circuit Interface

The circuit functional block diagram of



Applications

Servo motor control circuit, infinitely remote control applications digital proportional systems.

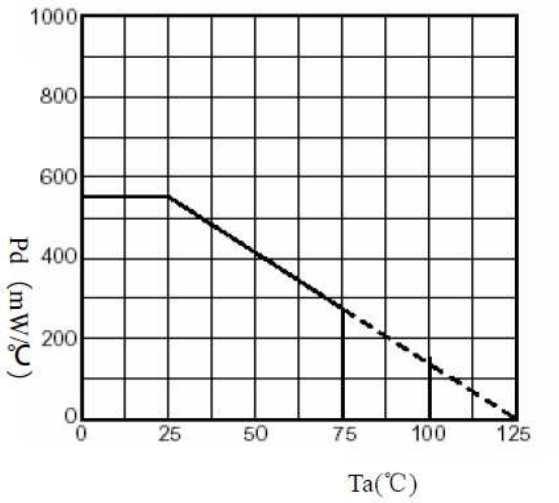
Recommended operating conditions
Supply voltage range:3.4~7.0V
Typical operating voltage:4.8V

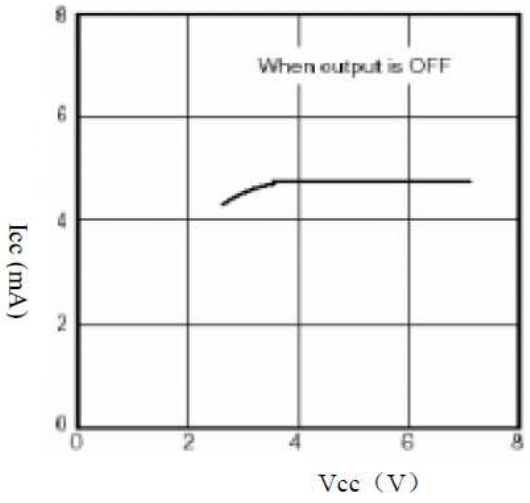
Absolute parameter values(Unless otherwise indicated,Ta=25℃)

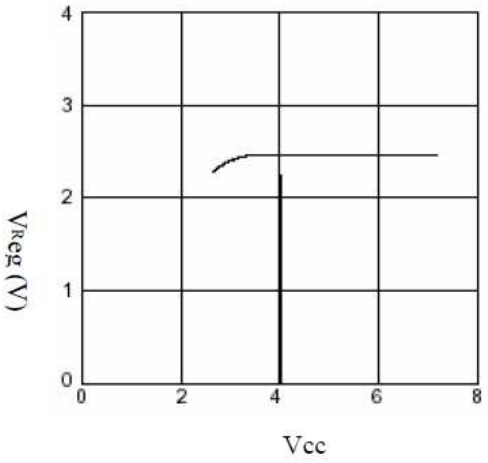
Symbol	Parameter Description	Condition	Parameter values	Unit
Vcc	Supply Voltage		7.5	V
Io SINK	Pull-down current of the output		950	mA
Io SOURCS	The output source current		520	mA
Pd	Power consumption		550	mW
Kθ	Heat consumption rate of change	Ta≥25 °C	5.5	mW /℃
Topr	Operating Temperature		-20 To +75	℃
Tstg	Storage Temperature		-40 To +125	℃

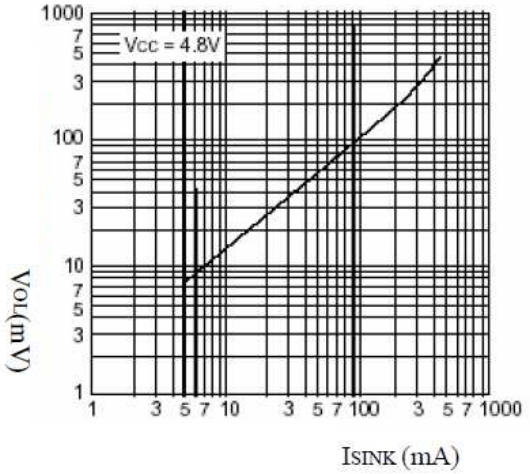
Electrical characteristics(Unless otherwise specified.Ta=25℃,VCC=4.8V)

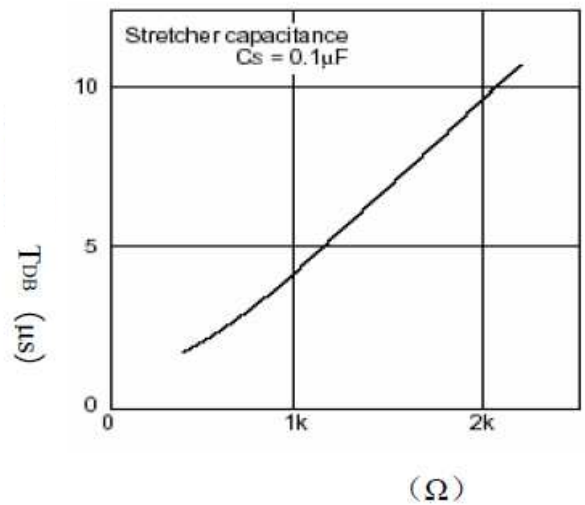
Symbol	Parameter Description	Test conditions	The minimum	Typical values	Maximum	Unit
Icc	Supply Current	Output off		4.2	6	mA
		Output is open		22		
V_{OL}	Output Low Voltage	Io SINK = 100 mA		0.15	0.25	V
		Io SINK = 400 mA		0.35	0.7	
V_{OH}	Output High Voltage	Io SOURCE = 100 mA	3.5	3.8		V
IPNP	Periphery PNP Transistor		30			mA
VReg	Reference voltage		2.3	2.45	2.6	V
IReg	Internal reference voltage				3.5	mA
TDB	Minimum dead zone width	RDB = 2k, Cs = 0.1μF			20	μs


1000
800
600
400
200
0
Pd (mW/℃)
0
25
50
75
100
125
Ta(℃)

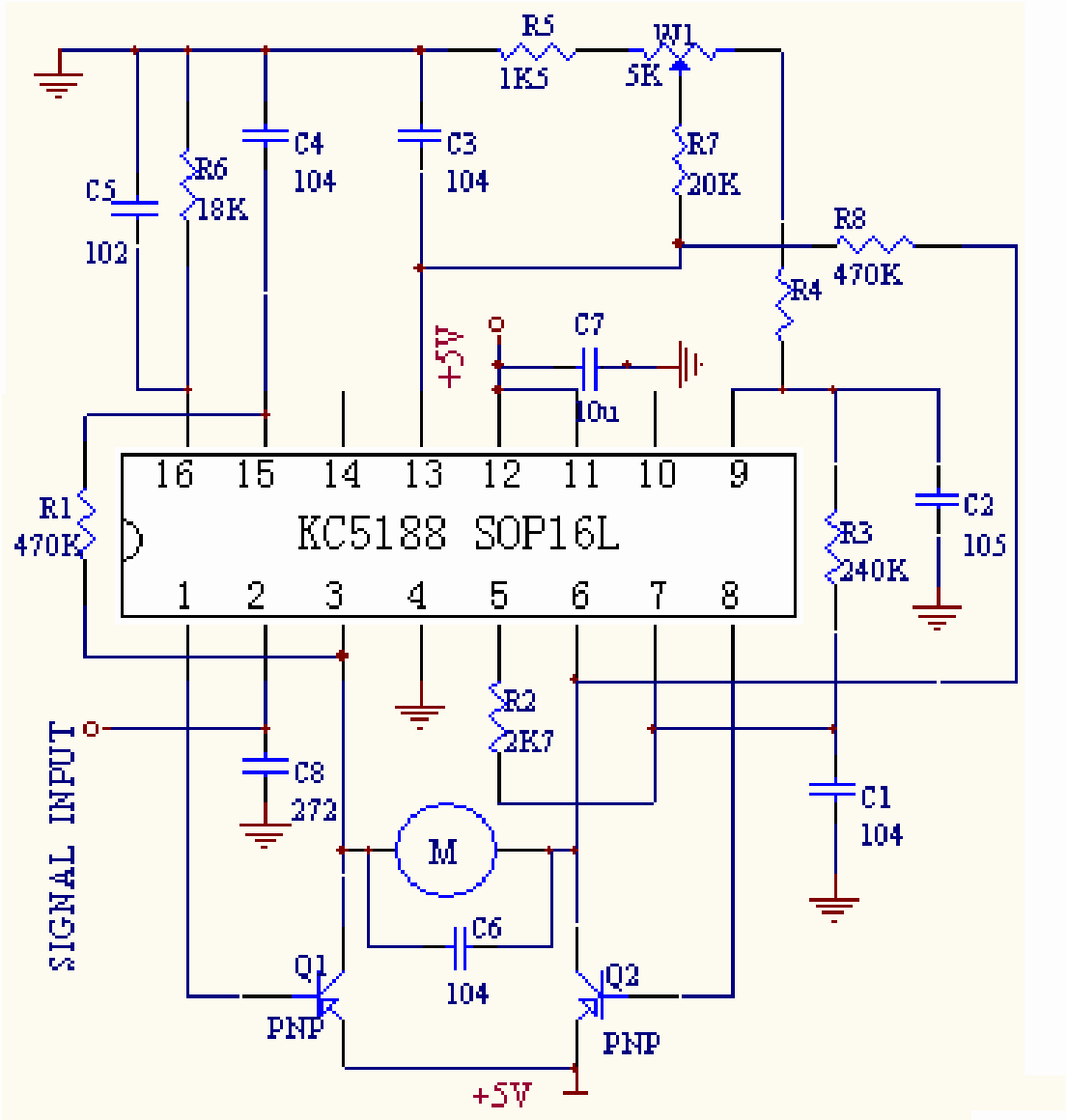

When output is OFF
Icc (mA)
0
2
4
6
8
Vcc（V）


VReg (V)
0
1
2
3
4
0
2
4
6
8
Vcc

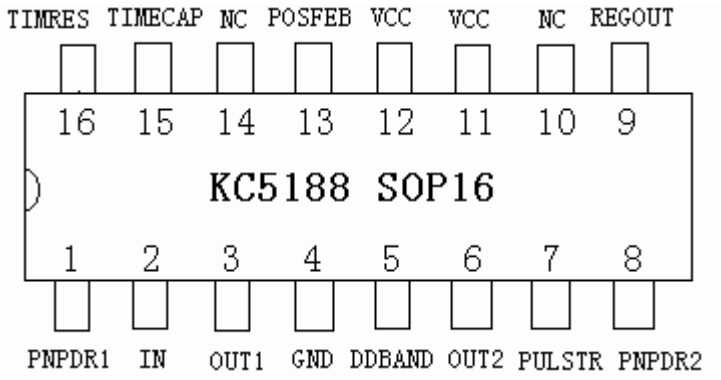

Vcc = 4.8V
VOL(mV)
1000
100
10
1
1
3
5
7
10
3
5
7
100
3
5
7
1000
ISINK (mA)


Stretcher capacitance
Cs = 0.1μF
TDB (μs)
0
5
10
0
1k
2k
（Ω）

Examples of application circuits



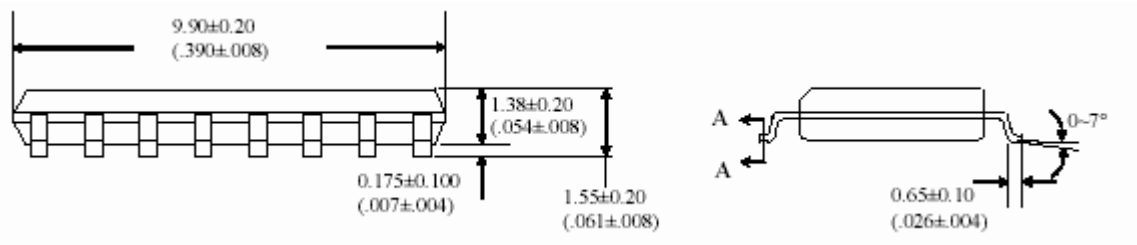
Pin Assignment

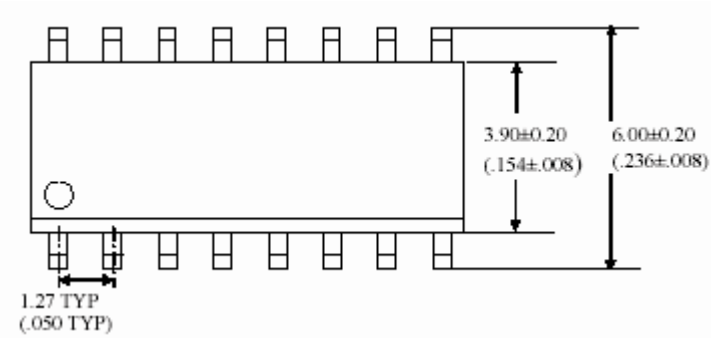


Pin Function Description

Pin number	Pin Symbol	I / O Recognition	Features
Pin1	PNPDR1	O	Connecting peripheral PNP The base of the transistor.
Pin2	IN	I	Work when the input the positive pulse peak is greater than or equal to 3V.Cycle T = 20msAndPulse Width in 1.0 ~ 2.0ms Between changes.
Pin3	OUT1	O	Connected to a feedback resistor Pin15.
Pin4	GND		Ground terminal
Pin5	DDBAND	I	A resistor connected to the Pin7 according to the value of range 2-5 Kohm the resistor to change the dead zone, the resistance
Pin6	OUT2	O	Then peripheral PNP Tube collector.
Pin7	PULSTR	I	Connecting a connected capacitor and resistor, used to extend the pulse width,A 180K Ω of resistance to PIN9.
Pin8	PNPDR2	O	Connecting peripheral PNP The base of the transistor.
Pin9	REGOUT	O	The internal reference voltage output. This pin variable resistor and pulse broadening pin Resistor connected. Connecting a approximately 2.2μF Capacitance to improve circuit stability.
Pin10	NC		
Pin11 & pin12	VCC		The supply voltage 3.4V~7V When electrical characteristics remain constant. This pin is connected An approximately 10μF Of the capacitor.
Pin13	POSFEB	I	Connecting the ends of the middle of the variable resistor, for the position detection of the shaft. The foot electric Pressure and Pin15 A triangular wave of the voltage comparison, the drive motor. Adjust potentiometer To adjust servo motor's zero. Simultaneously connected to a approximately 0.1μF Filter electricity Yung, used to reduce the effects of noise.
Pin14	NC		
Pin15	TIMECAP	O	Connect a capacitor, the capacitor through a constant current to generate a triangular wave. Typical Value is 0.1μF. Application between the pin and the output connected to an anti- The feedback resistor.
Pin16	TIMERES	O	Connecting a resistor to the resistor determines Pin15 The constant charging current Size.18 kΩ The resistance will produce 1.0mA Current. At the same time in parallel with a One is about 0.03μF Capacitance to improve stability.

Package Outline DimensionsMap unit: mm (inch)





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