AN6880

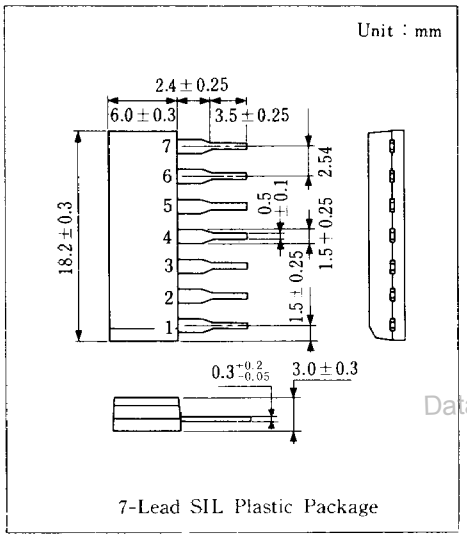
Servo Motor Control Circuit

■ Outline

The AN6880 is an integrated circuit designed for control of a servo motor.

■ Features

- Wide range of operating supply voltage : 3.5~6.0V
- Low quiescent current
- Large power dissipation : P_D=600mW max.
- Separate control for deadband and pulse stretch
- Single supply, bi-directional operation

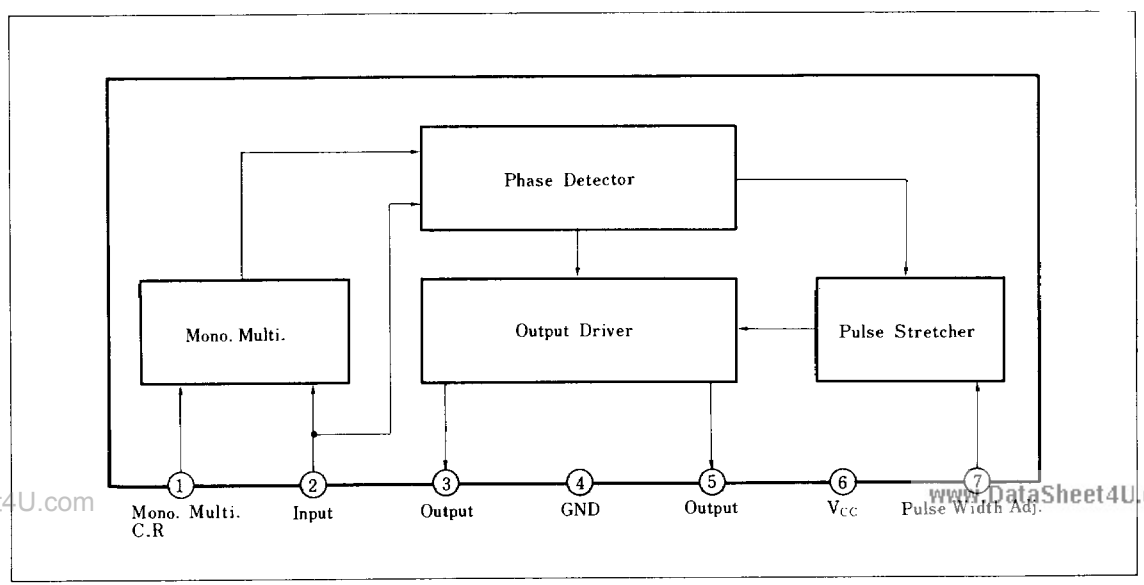


7-Lead SIL Plastic Package

■ Pin

Pin No.	Pin Name
1	Mono. Multi.
2	Input
3	Output
4	GND
5	Output
6	V_{CC}
7	Pulse Width Adj.

■ Block Diagram



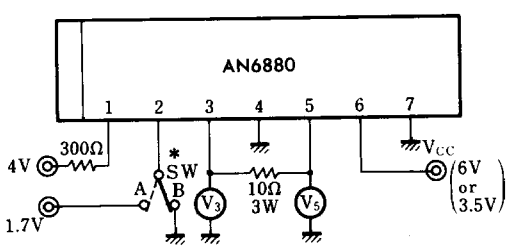
■ Absolute Maximum Ratings (Ta=25℃)

Item		Symbol	Rating		Unit
Supply Voltage		V_{CC} (V_{6-4})	6.5		V
Output Current		I_3, I_5	−400	400	mA
Power Dissipation		P_D	600		mW
Temperature	Operating Ambient Temperature	T_{opr}	−10～+60		℃
	Storage Temperature	T_{stg}	−55～+150		℃

■ Electrical Characteristics (Ta=25℃)

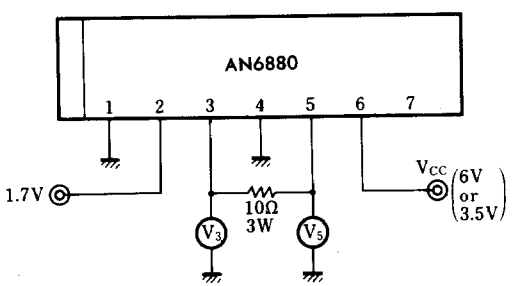
Item		Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Supply Voltage		V_{CC}			3.5		6	V
Quiescent Circuit Current		I_{CQ}		V_{6-4}=6V, V_{2-4}=0V, V_{7-4}=2.5V		4		mA
Output Voltage	High level	$V_{OH(1)}$	1	V_{6-4}=6V,Load 10Ω between Pin③ and Pin⑤	4.6			V
	Low level	$V_{OL(1)}$	1				0.7	V
Output Voltage	High level	$V_{OH(2)}$	2		4.6			V
	Low level	$V_{OL(2)}$	2				0.7	V
Output Voltage	High level	$V_{OH(3)}$	1	V_{6-4}=3.5V,Load 10Ω between Pin③ and Pin⑤	2.2			V
	Low level	$V_{OL(3)}$	1				0.45	V
Output Voltage	High level	$V_{OH(4)}$	2		2.2			V
	Low level	$V_{OL(4)}$	2				0.45	V
Input Voltage	High level	I_{IH1}		V_{6-4}=6V, V_{1-4}=2V V_{2-4}=1.7V			5	μA
	Low level	I_{IH1}		V_{6-4}=6V, V_{1-4}=2V V_{2-4}=0.3V	−2		2	μA

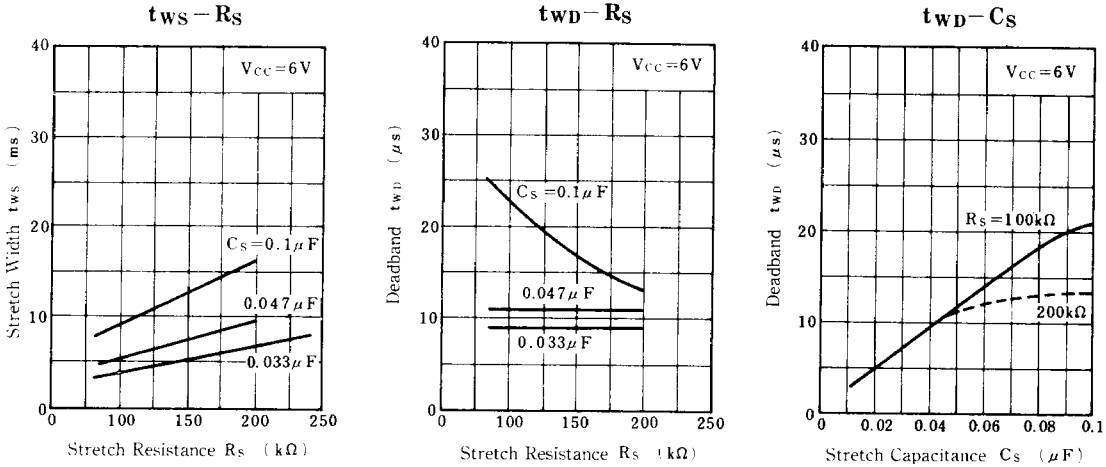
Test Circuit 1 ($V_{OH(1)}$, $V_{OL(1)}$, $V_{OH(3)}$, $V_{OL(3)}$)



* Measurement is made by changing SW from A to B to set Pin③ to "H" and Pin⑤ to "L".

Test Circuit 2 ($V_{OH(2)}$, $V_{OL(2)}$, $V_{OH(4)}$, $V_{OL(4)}$)





■ Application Circuit