

AN6662

IC for Forward and Reverse Motor Drive ; Suitable for Tape Loading and Cassette Loading of VCRs, Video Disc Players, etc.

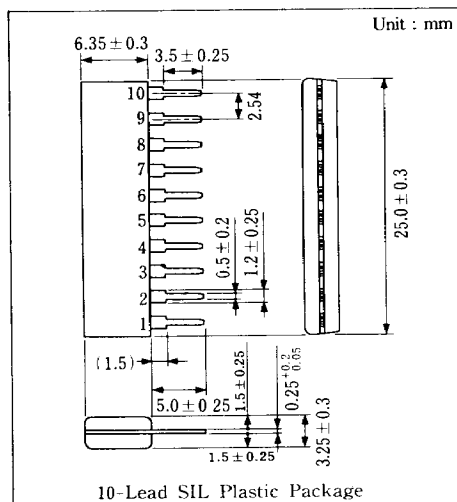
■ Outline

The AN6662 is an integrated circuit designed for forward/reverse direction select driver by switching motor 1 or motor 2 with brush.

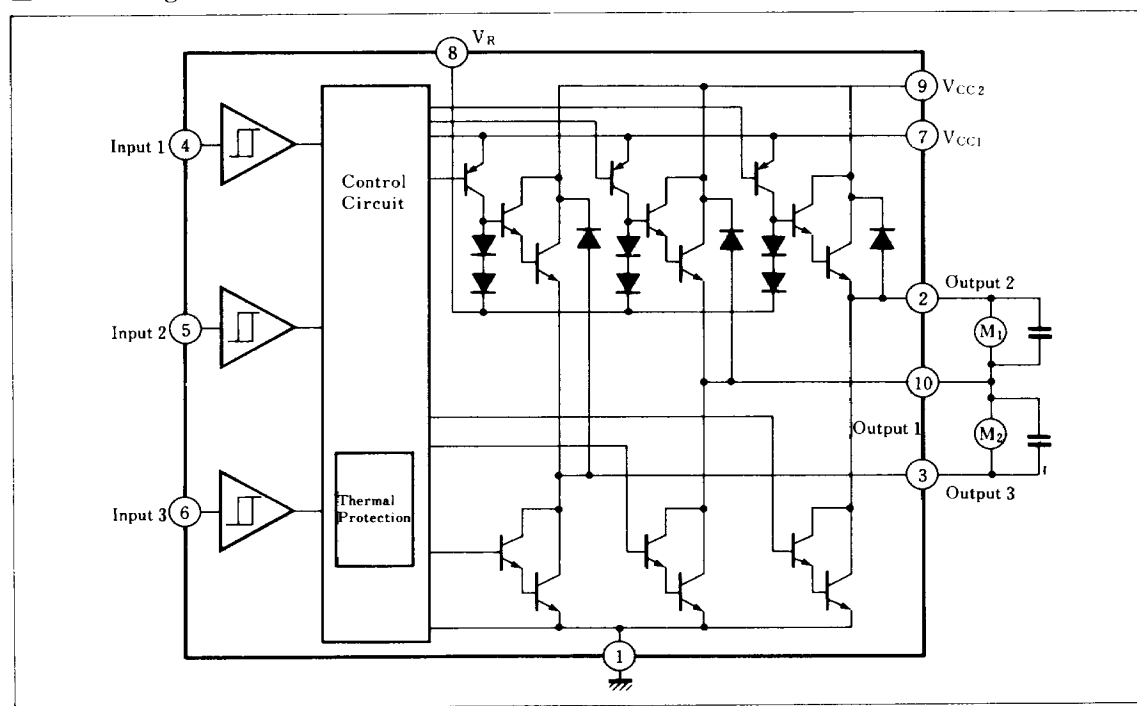
Forward reverse direction select of motor 1 or motor 2 can be made by 3-bit input logic. It also assures five outputs of both brakes and is suitable for VCR tape loading and cassette loading.

■ Features

- Wide range of operating supply voltage : $V_{CC(OPR)} = 4 \sim 20V$
- Forward and reverse drive of motor 1 or motor 2 by 3-bit input.
- Circuit for thermal protection built-in



■ Block Diagram



■ Pin

Pin No.	Pin Name	Pin No.	Pin Name
1	GND	6	IN 3
2	OUT 2	7	V _{CC1}
3	OUT 3	8	V _R
4	IN 1	9	V _{CC2}
5	IN 2	10	OUT 1

■ Absolute Maximum Ratings (Ta=25℃)

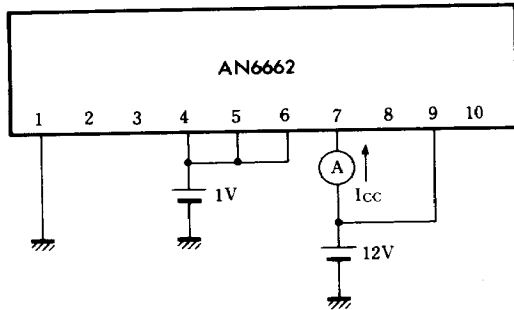
Item	Symbol	Rating	Unit
Supply Voltage(1)	V _{CC1}	-0.5 ~ +24	V
Supply Current(1)	I _{CC1}	20	mA
Supply Voltage(2)	V _{CC2}	-0.5 ~ +24	V
Input Voltage	V _I	-0.5 ~ V _{CC1}	V
Motor Rush Allowable Current	I _{OP} *1	±1.6	A
Motor Ordinal Current	I _O *2	±600	mA
Power Dissipation	P _D	1100	mW
Operating Ambient Temperature	T _{OPR}	-20 ~ +75	℃
Storage Temperature	T _{stg}	-55 ~ +150	℃

■ Electrical Characteristics (Ta=25℃)

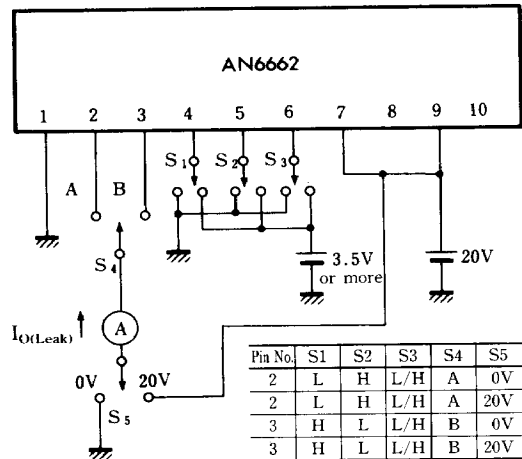
Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Supply Current	I _{CC1}	1	V ₄ =V ₅ =V ₆ =1.0V I _Q =0mA V _{CC1} =V _{CC2} =12V		7	20	mA
Output Leak Current	I _{O(Leak)}	2	V _{CC1} =V _{CC2} =20V Output Open V _o =0V or 20V			±100	μA
Low Level Output Voltage	V _{OL}	3	I _{OL} =500mA			1.5	V
High Level Output Voltage	V _{OH}	3	I _{OH} =-500mA	10			V
Output Offset Voltage	V _{O(offset)}	4	V _R =6V, I _{OH} =-500mA	-0.5		0.5	V
8-pin Output Current	I _R	4	V _R =6V, I _{OH} =-500mA	-1.4		-0.6	mA

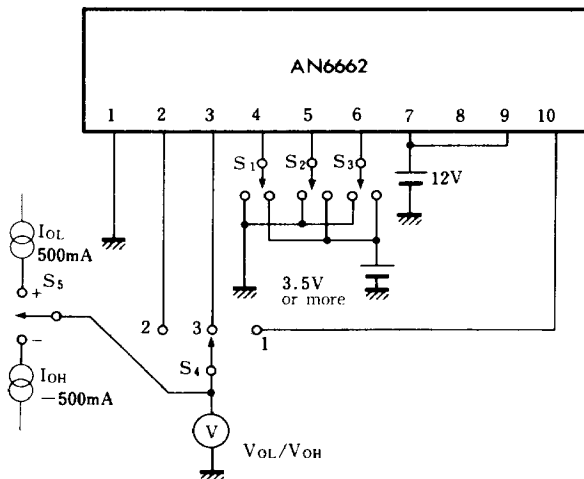
Note) Operating Supply Voltage Range : V_{CC(OPR)} = 4 ~ 20V

Test Circuit 1 (I_{CC1})



Test Circuit 2 (I_{O(Leak)})

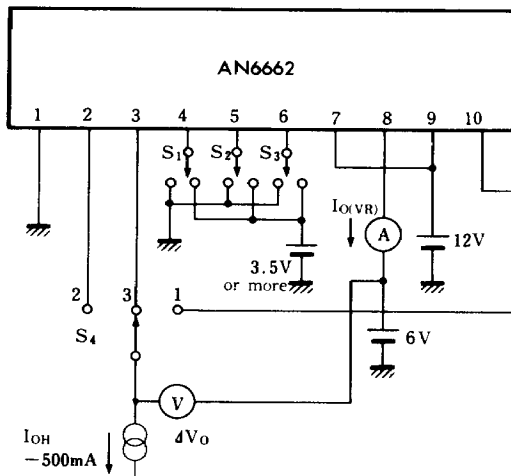


Test Circuit 3 (V_{OL} , V_{OH})


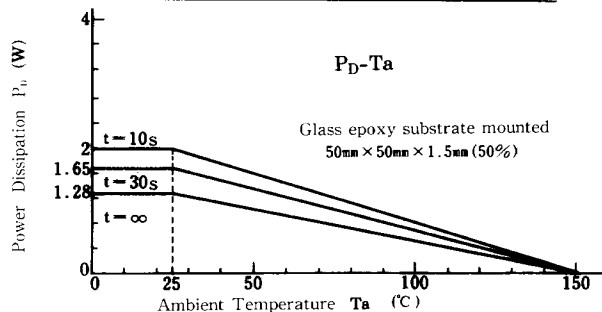
Item	Pin No.	S_1	S_2	S_3	S_4	S_5
V_{OL}	10	H	L	H	1	+
	10	L	H	H	1	
	2	H	L	L	2	
	3	L	H	L	3	
V_{OH}	10	H	L	L	1	-
	10	L	H	L	1	
	2	H	L	H	2	
	3	L	H	H	3	

Truth Table

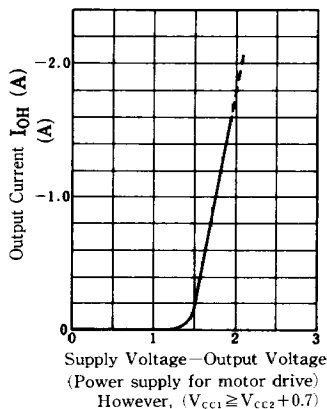
Input			Output			Note
Pin④ IN1	Pin⑤ IN2	Pin⑥ IN3	Pin⑩ OUT1	Pin③ OUT2	Pin② OUT3	
L	L	L/H	L	L	L	Brake
H	L	L	H	L	OPEN	Forward(motor1)
H	L	H	L	H	OPEN	Reverse(motor1)
L	H	L	H	OPEN	L	Forward(motor2)
L	H	H	L	OPEN	H	Reverse(motor2)
H	H	L/H	L	-L	L	Brake

Test Circuit 4 ($V_{O(Offset)}$, I_R)


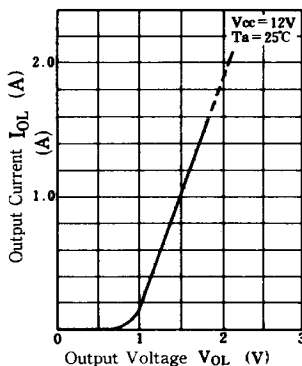
Item	Pin No.	S_1	S_2	S_3	S_4
$V_{O(Offset)}$	10	H/L	L/H	L	1
	2	H	L	H	2
	3	L	H	H	3
I_R	10	H/L	L/H	L	1
	2	H	L	H	2
	3	L	H	H	3



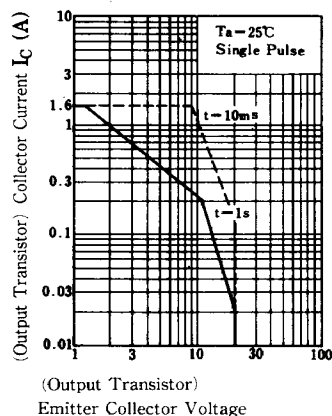
Output "H" Voltage Load Characteristics



Output "L" Voltage Load Characteristics



Safety Operation Area



■ Application Circuit

