

# TA7248P

## DC MOTOR DRIVER

The TA7248P is a DC motor (3 phase) driver IC.

It contains regulator, position sensing amplifiers, control amplifier, quick stop circuit and drivers. Maximum output current (Bi-direction) of driver is  $\pm 900\text{mA}$  (average).

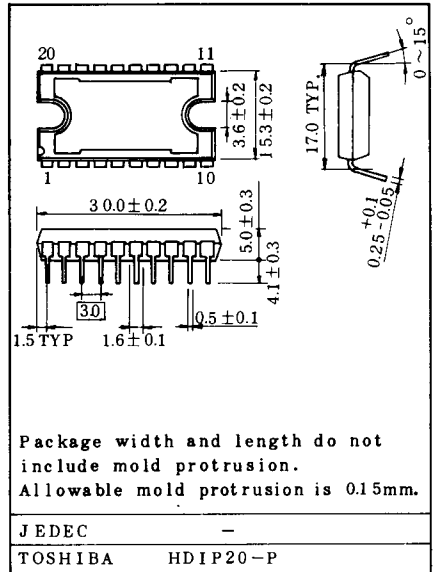
Hall element is used as a position sensor.

By combining this IC and TA7674P (or TA7715P) F-servo motor driver system is available.

### FEATURES:

- . Driver for Hall Motor (3 phase)
- . Large Output Current (Bi-direction)
  - :  $I_O = \pm 900\text{mA}$  (average)
- . Built-in Reverse Rotation Detector and Quick Stop Circuit.
- . Regulator for External Circuits
  - :  $V_{OUT} = 10.7\text{V}$ ,  $I_O = 50\text{mA}$
- . Operating Supply Voltage :  $V_{CC} = 16 \sim 32\text{V}$

Unit in mm



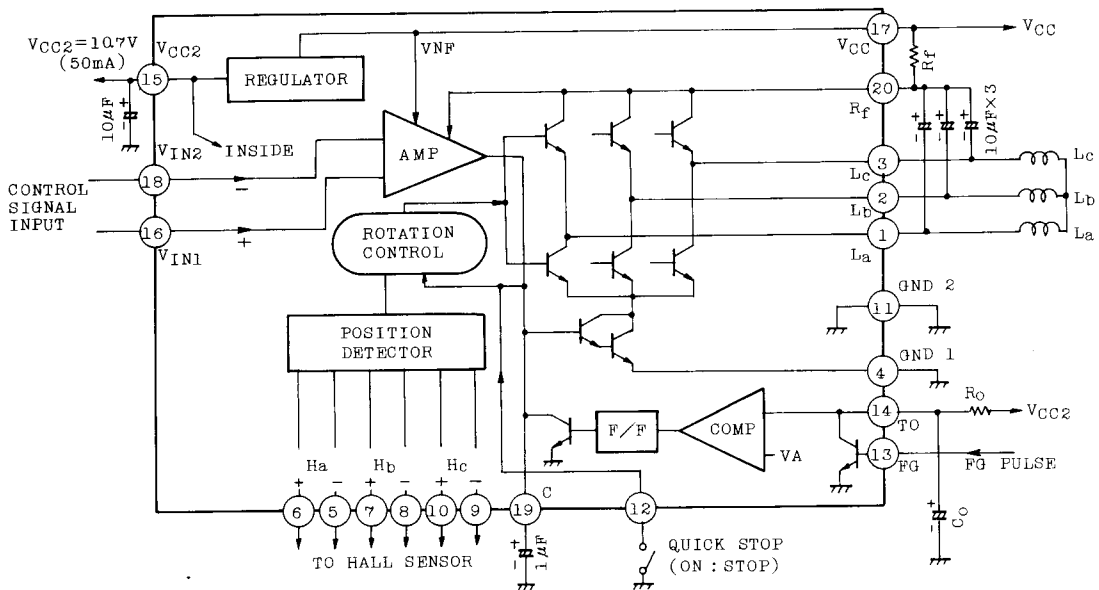
### MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	$V_{CC}$	35	V
Output Current	$I_O$	900	mA
Regulator Output Current	$I_{CC2}$	50	mA
Power Dissipation (Note)	$P_D$	25	W
Operating Temperature	$T_{opr}$	$-15 \sim 75$	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	$-55 \sim 150$	$^\circ\text{C}$

Note :  $T_c = 75^\circ\text{C}$ ,  $P_D = 3\text{W}(\text{Max.})$  at no heat sink ( $T_a = 25^\circ\text{C}$ ).

# TA7248P

## BLOCK DIAGRAM

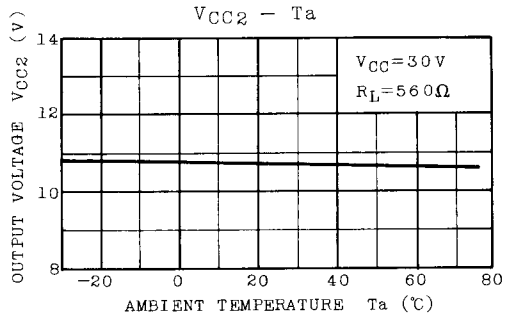
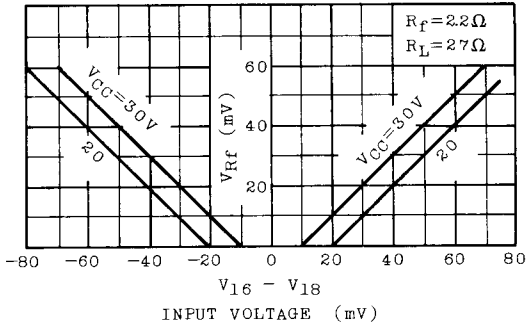


## ELECTRICAL CHARACTERISTICS

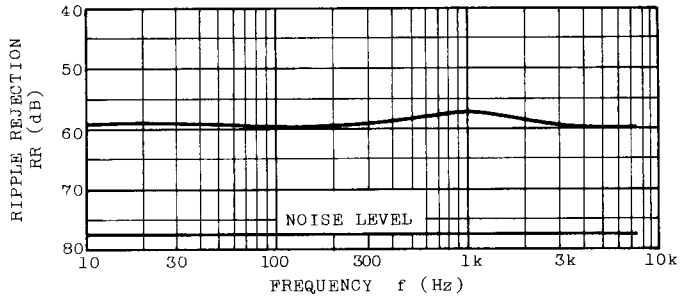
(Unless otherwise specified,  $V_{CC}=30V$ ,  $R_L=27\Omega$ ,  $R_f=2.2\Omega$ ,  $T_a=25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	$I_{CC}$	1	-	5.5	-	13	mA
Input Offset Voltage	$V_{IO}$	2	$V_{IN2}=3.5V$	-9	-	95	mV
Input Dead Band	$V_{ID}$	2		22	-	190	mV
Residual Output Voltage	$V_{OR}$	2		-	-	10	mV
Voltage Gain	$G_V$	2		0.8	-	1.2	
Saturation Voltage	Upper	$V_{SAT1}$	$V_{IN1}=4.5V$ , $V_{IN2}=3.5V$	-	-	2.1	V
	Lower	$V_{SAT2}$		-	-	3.8	
Cut-off Current	Upper	$I_{OC1}$	$V_{IN1}=4.5V$ , $V_{IN2}=3.5V$ $R_L=100k\Omega$	-	-	15	$\mu A$
	Lower	$I_{OC2}$		-	-	15	
To Threshold Voltage	$V_{TO}$	5	-	6.2	-	7.3	V
To Saturation Voltage	$V_{SAT TO}$	5	$R_L=6k\Omega$	-	-	2	V
Output Voltage	$V_{CC2}$	6	$R_L=560\Omega$	10.2	10.7	11.2	V
Load Regulation Voltage	$\Delta V_{CC2}$	6	$R_L=560\Omega \sim \infty$	-	-	60	mV
Ripple Rejection	RR	6	$R_L=560\Omega$ , $f=1kHz$	50	-	-	dB
Temperature Coefficient	$T_c V_{CC2}$	6	$R_L=560\Omega$	-2	-	2	mV/deg

INPUT OUTPUT CHARACTERISTICS



RR - f



Z\_0 - f

