

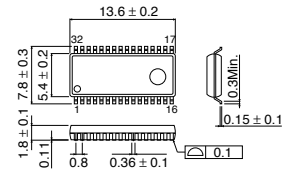
# Three-phase motor pre-driver for LBP

## BA6680FS

● Description

BA6680FS is a three-phase motor pre-driver. PWM driving system is adopted in this IC as well as incorporation of a booster to drive N-channel (upper and lower) MOS FET. Current limit, FG amplifier, FG hysteresis amplifier and charge-pump are incorporated as other functions.

● Dimension (Unit : mm)



**SSOP-A32**

● Features

- 1) Three-phase motor pre-driver
- 2) Upper and lower N-channel MOS FET driving
- 3) PWM driving
- 4) Built-in charge-pump circuit
- 5) Built-in FG amplifier and hysteresis amplifier
- 6) Built-in current limit circuit

● Applications

Paper feed motor for LBP, Motor for OA appliances

● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	Vcc	36	V
Power dissipation	Pd	950 *	mW
Operating temperature range	Topr	-10 ~ +75	°C
Storage temperature range	Tstg	-40 ~ +150	°C

\*Derating : 7.6mW/°C for operation above Ta=25°C

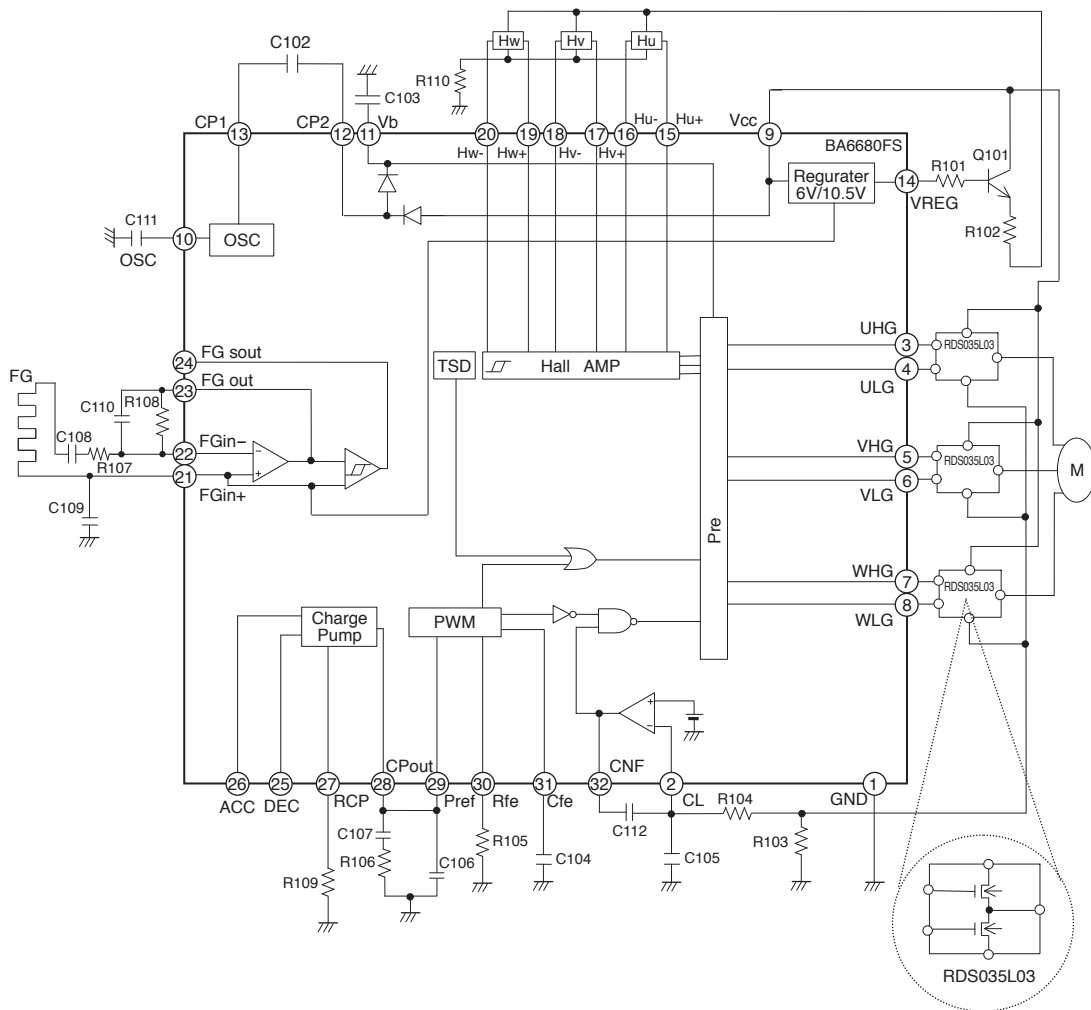
● Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	Vcc	16	-	28	V

● Electrical characteristics (Unless otherwise noted; Ta=25°C, Vcc=25.5V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current	I <sub>CC</sub>	11.7	15.7	19.7	mA	
VREG voltage	VREG	5.4	5.9	6.4	V	IVREG=-1mA
Hall input bias current	I <sub>HA</sub>	-3.0	-0.7	-	μA	
Hall common-mode input voltage range	V <sub>HAR</sub>	1.0	-	4.9	V	
Boost voltage	V <sub>G</sub>	V <sub>CC</sub> +6	V <sub>CC</sub> +7	V <sub>CC</sub> +8	V	
Upper gate High voltage	V <sub>HG</sub>	V <sub>CC</sub> +6	V <sub>CC</sub> +7	V <sub>CC</sub> +8	V	
Lower gate High voltage	V <sub>LG</sub>	9.5	10.5	11.5	V	
Current detection voltage	V <sub>CL</sub>	0.342	0.380	0.413	V	
FG amplifier open loop gain	G <sub>VFG</sub>	45	54	-	dB	f=3kHz

● Application Circuit



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