

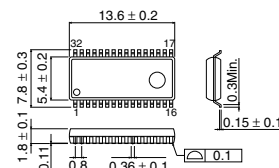
## 3-phase full-wave fan motor driver IC

# BA6425FS

### ●Description

BA6425FS is a 3-phase full-wave fan motor driver IC. Noise generated by the motor can be reduced by linear driving system. Forward/reverse rotation can be switched. This IC has current limit circuit and FG output.

### ●Dimension (Units : mm)



SSOP-A32

### ●Features

- 1) Linear driving system
- 2) Forward/reverse select switch
- 3) Built-in current limiter and thermal shut down
- 4) FG output

### ●Applications

3-phase full-wave fan motor

### ● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Maximum supply voltage	Vcc	18	V
Maximum supply voltage	VM	18	V
Power dissipation	Pd	0.95 <sup>*1</sup>	W
Operating temperature range	Topr	-30 ~ +75	°C
Storage temperature range	Tstg	-55 ~ +150	°C
Output current	Iomax	1000 <sup>*2</sup>	mA
Junction temperature	Tjmax	150	°C

\*1 Derating : 7.6mW/°C for operation above Ta=25°C. PCB (70mmx70mm, t=1.6mm) glass epoxy mounting.

\*2 However, do not exceed Pd, and ASO.

● Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating supply voltage range	V <sub>CC</sub>	5	—	17	V
Operating supply voltage range	V <sub>M</sub>	3.5	—	17 <sup>*3</sup>	V
Hall Amp in-phase voltage range	V <sub>CH</sub>	1.1	—	V <sub>CC</sub> -1.0	V

\*If V<sub>M</sub> voltage is low, this IC may not be able to flow the output current by absolute maximum ratings.

● Electrical characteristics (Unless otherwise noted: Ta=25°C, V<sub>CC</sub>=V<sub>M</sub>=12V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
V <sub>CC</sub> circuit current	I <sub>CC</sub>	—	3.7	6.0	mA	Output : Open, Input : HLH
V <sub>M</sub> circuit current	I <sub>M</sub>	—	76	120	μA	Output : Open, Input : HLH
Output saturation voltage H	V <sub>OH</sub>	0.8	1.21	1.6	V	I <sub>o</sub> =350mA
Output saturation voltage L	V <sub>OL</sub>	0.35	0.55	0.75	V	I <sub>o</sub> =350mA RNF=0.5Ω
Hall bias current H1	I <sub>BH1</sub>	-4.0	—	2.0	μA	
Hall bias current H2, H3	I <sub>BH2</sub>	—	—	2.0	μA	
Input-converted offset voltage	I <sub>SD</sub>	-10	—	10	mV	
Current limit voltage	V <sub>CL</sub>	0.38	0.5	0.62	V	RNF=0.5Ω
FR bias current	I <sub>FRL</sub>	-2.0	—	0	μA	
Forward input voltage range	V <sub>FRH</sub>	7.5	—	V <sub>CC</sub>	V	
Reverse input voltage range	V <sub>FRL</sub>	0	—	4.5	V	
FG output L voltage	V <sub>FGL</sub>	—	—	0.2	V	I <sub>o</sub> =2mA
FG hysteresis width	V <sub>HYS</sub>	±8	±18	±28	mV	

● Application Circuit

