

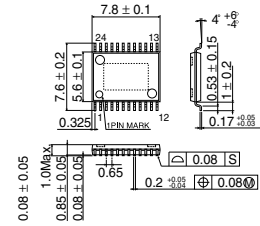
# Stepping Motor Driver

## BD6775EFV

### ● Description

BD6775EFV is a general-purpose stepping motor driver for OA Equipment. This driver is a bipolar type, available for 2 phase, 1-2 phase, and W1-2 phase motors.

### ● Dimension (Unit : mm)



**HTSSOP-B24**

### ● Features

- 1) MOS FET output(External diode is not necessary.)
- 2) Output OFF time is determined by external C, R value
- 3) High efficiency due to synchronous rectifier drive
- 4) Small and High power package(Exposed PAD)

### ● Applications

OA Equipment(Printer, Scanner etc...)

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

Parameter	Symbol	Limits	Unit
Supply voltage $V_{CC}$	$V_{CC}$	7	V
Supply voltage $V_M$	$V_M$	40	V
Input voltage	$V_{IN}$	$V_{CC}$	V
Power dissipation	$P_d$	1.1 <sup>1</sup>	W
Operating temperature range	$T_{opr}$	-20 to +75	°C
Storage temperature range	$T_{stg}$	-55 to +150 <sup>2</sup>	°C
Junction temperature	$T_j$	+150	°C
Maximum output current	$I_{out}$	800	mA

<sup>1</sup> Debating in done at 8.8mW/°C for operating above Ta=25°C. 70mmX70mmX1.6mm glass epoxy board.

<sup>2</sup> Do not, however exceed  $P_d$ , ASO and  $T_j=150^\circ\text{C}$ .

● Recommended Operating Conditions (Ta=25°C)

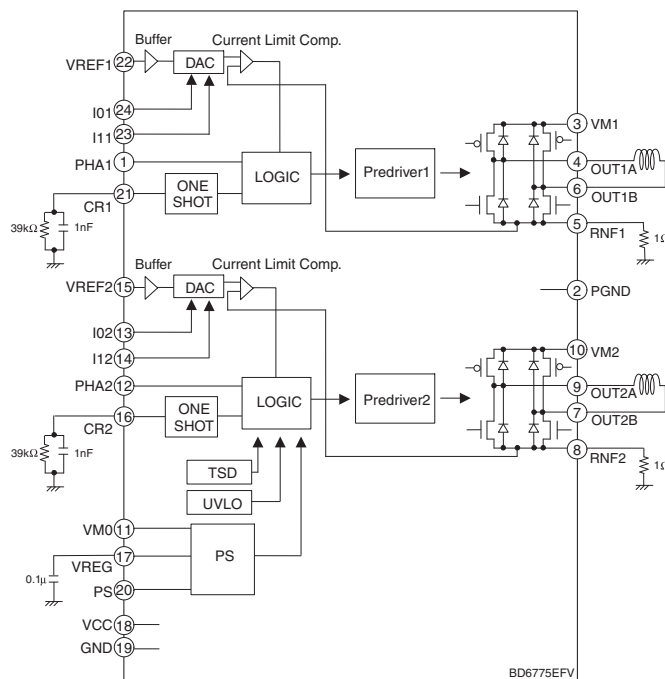
Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage V <sub>CC</sub>	V <sub>CC</sub>	4.5	—	6.0	V
Supply voltage V <sub>M</sub>	V <sub>M</sub>	10	—	37	V

This product described in this specification isn't judged whether it applies to COCOM regulations.  
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● Electrical characteristics (Ta=25°C, V<sub>CC</sub>=5V, V<sub>M</sub>=35V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current at standby	I <sub>CCST</sub>	250	360	400	μA	PS=0V
Circuit current	I <sub>CC</sub>	4.4	5.8	7.2	mA	PS=H
V <sub>M</sub> current at standby	I <sub>VMST</sub>	—	0	10	μA	PS=0V
V <sub>M</sub> Circuit current	I <sub>VM</sub>	2	3	4	mA	PS=H
[Control input]						
H level input voltage	V <sub>INH</sub>	2.0	—	—	V	PHA1, PHA2, I01, I11, I02, I12
L level input voltage	V <sub>INL</sub>	—	—	0.8	V	PHA1, PHA2, I01, I11, I02, I12
[Output]						
Output ON Resistance	R <sub>ON</sub>	—	3	3.6	Ω	I <sub>o</sub> =±300mA, Sum of on-resistance of upside and bottom side
Output leak current	I <sub>LEAK</sub>	—	0	10	μA	
[Current Control Part]						
RNFX input current	I <sub>RNF</sub>	-2	-0.6	—	μA	RNF=0V
VREFX input current	I <sub>VREF</sub>	-1	-0.1	—	μA	
VREFX input voltage	V <sub>REF</sub>	0	—	2.0	V	
Comparator threshold (100%)	C <sub>THLL</sub>	0.34	0.4	0.46	V	V <sub>REF</sub> =2V, I <sub>o</sub> =L, I <sub>1</sub> =L
Comparator threshold (67%)	C <sub>THHL</sub>	0.227	0.267	0.307	V	V <sub>REF</sub> =2V, I <sub>o</sub> =H, I <sub>1</sub> =L
Comparator threshold (33%)	C <sub>THLH</sub>	0.133	0.133	0.153	V	V <sub>REF</sub> =2V, I <sub>o</sub> =L, I <sub>1</sub> =H
Minimum ON time	T <sub>MINON</sub>	0.3	0.5	1.0	μS	R=39kΩ, C=1nF

● Application Circuit



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