

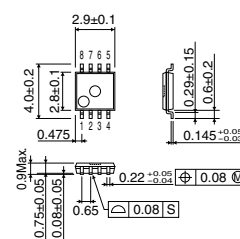
Voltage converter IC for cellular phones

BH6040FVM

●Description

The BH6040FVM is an IC having the charging-pump type voltage converter for white LED. Maximum output current is 80mA and the internal oscillating frequency is 650kHz. The reduction of power ripple can be realized due to the built-in regulator on the primary side. Output (ON/OFF) can be controlled by the external signal and current consumption at OFF is 1 μ A (Max).

●Dimension (Units : mm)



MSOP8

●Features

- 1) Switched capacitor type voltage converter (5.0V output)
- 2) Easy to solve the noise problems in the VIN side (input side)
- 3) Built-in SHUTDOWN SW (ON/OFF control)
- 4) Very small MSOP8 package

●Applications

Cellular phones, Overseas cellular phones

●Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	Vcc	6.5	V
Power dissipation	Pd	350	mW
Operating temperature range	Topr	-30 ~ +75	°C
Storage temperature range	Tstg	-55 ~ +125	°C

Derating : 3.5mW/°C for operation above Ta=25°C

●Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	VIN	3.0	3.6	4.5	V

●Electrical characteristics (Unless otherwise noted; Ta=25°C, Vcc=3.6V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Circuit current 1	IQ1	—	0	1	μA	Stand-by mode
Circuit current 2	IQ2	—	3.0	4.5	mA	Voltage converter : Operating, No load (SHUTDOWN:H)
Output voltage	VO	4.85	5.00	5.15	V	3.2V VIN, IO=60mA
Load stability	VO	—	50	100	mV	IO=1~60mA
Oscillating frequency	fosc	470	650	850	kHz	IO=60mA
Maximum output current	IOMAX	80	—	—	mA	3.2V VIN, VO 4.5V
Output voltage temperature	TCVO	—	100	—	ppm/°C	IO=60mA

●Application Circuit

