Structure Silicon Monolithic Integrated Circuit

Product Name 6-Parallel white-LED Driver for mobile phone

Type **BD1606MVV**

Under Development

Features Automatically transition to each mode (x1,x1.5,x2) charge pomp type DC/DC converter
6 channels LED Driver (0.5mA-32mA, 64 steps)

○ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit	Condition
Power supply voltage	VCC	7.0	V	
Power Dissipation	Pd	(750(*1))	mW	
Input voltage	VIN	0.3 ~ 6.0	V	
Operating Temperature Range	Topr	-30 ~ +85	°C	
Storage Temperature Range	Tstr	-55 ~ +150	°C	

(*1) This value is the measurement value that was mounted on the PCB by ROHM.
(50mm×58mm×1.75mm glass epoxy Board)
Temperature deleting: 13.5mW/deg from Ta>25deg

○ Recommended operating conditions (Ta=-30 °C~+85 °C)

Parameter	Symbol	Rating			Unit	Condition
		Min.	Typ.	Max.		
Power supply voltage	VCC	2.7	3.6	5.5	V	

This product isn't designed to protect itself against radioactive rays.

Status of this document
The Japanese version of this document is the formal specification.
A customer may use this translation version only for a reference to help reading the formal version.
If there are any differences in translation version of this document, formal version takes priority.

Application example
- ROHM cannot provide adequate confirmation of patents.
- The product described in this specification is designed to be used with ordinary electronic equipment or devices (such as audio-visual equipment,
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  Should you intend to use this product with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel
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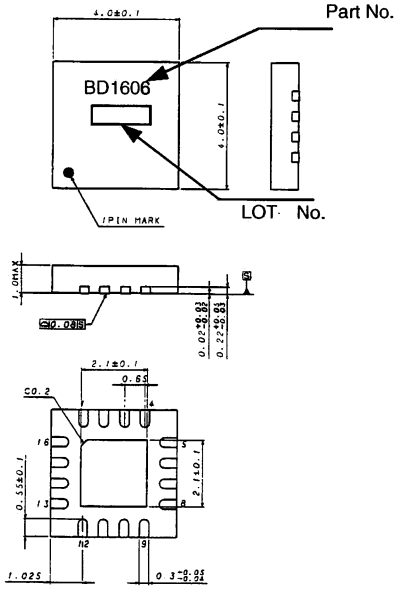
○ Electrical Characteristics

(Unless otherwise noted, Ta = +25°C, VIN=3.6V)

Parameter	Symbol	Rating			Units	Condition
		Min.	Typ.	Max.		
Overall						
Input voltage range	V_{IN}	2.7	3.6	5.5	V	
Quiescent Current	I_{DDQ}	-	0	7	μA	EN=0V, V_{IN}=3.6V
Current Consumption 1	I_{DD1}	-	1.5	2	mA	1x mode, I_{OUT}=0mA, VIN=3.6V
Current Consumption 2	I_{DD2}	-	3	4	mA	1.5x mode and 2x mode, I_{OUT}=0mA, VIN=3.6V
Charge Pump						
Output Current	I_{OUT}	-	-	120	mA	Vout=4.0V
Input current limiter						

○ External dimensions

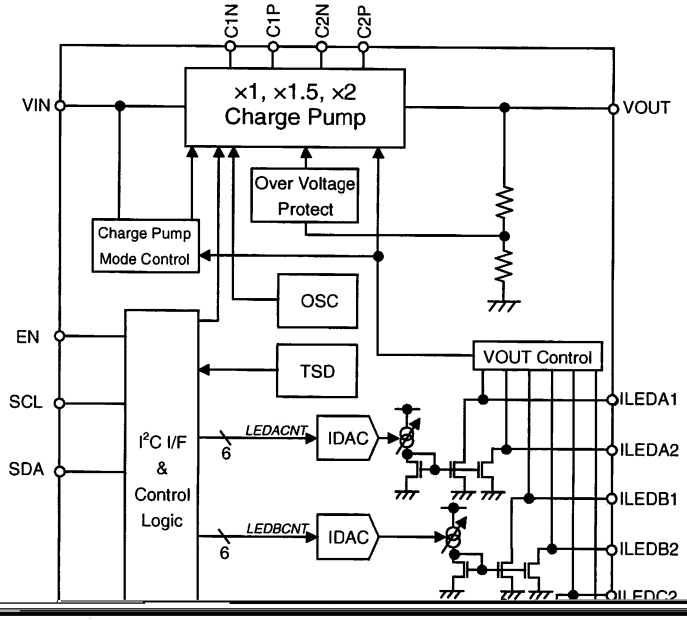


VQFN016V3030 (16PIN) (Unit: mm)

○ Terminals

PIN	Pin Name	PIN	Pin Name
1	LEDA1	9	C2N
2	SDA	10	C2P
3	SCL	11	GND
4	EN	12	LEDC2
5	VOUT	13	LEDC1
6	VIN	14	LEDB2
7	C1N	15	LEDB1
8	C1P	16	LEDA2

○ Block diagram



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