



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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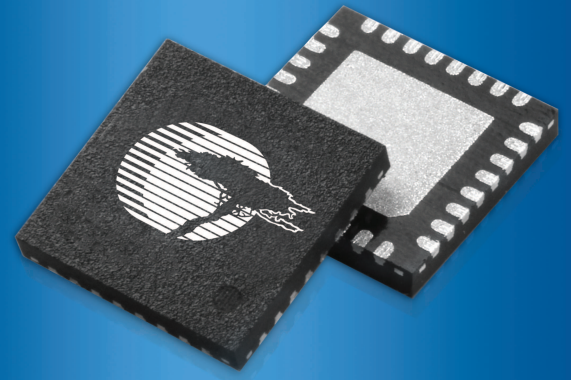
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Ultra Low Power Buck Power Management IC for Solar and Vibrations Energy Harvesting MB39C811



Ultra Low Power Management, For Battery-less Sensor Nodes

MB39C811 integrates dual full wave bridge rectifier with low loss high efficiency buck convertor for energy harvesting, and provide complete solution optimized for high output impedance energy sources such as piezoelectric transducers.

MB39C811 has 8 preset output voltage as 1.5V, 1.8V, 2.5V, 3.3V, 3.6V, 4.1V, 4.5V and 5.0V and also covers the continuous output current up to 100mA.

Feature

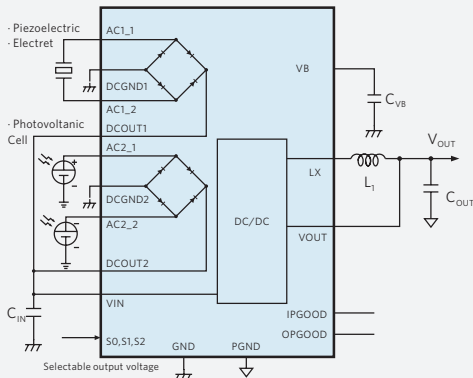
- Input Quiescent Current:
 - 1.5uA (Output in Regulation-No Load)
 - 550nA (VIN=2.5V in UVLO)
- Integrated Dual Full Wave Bridge Rectifiers
- Input Voltage Range: 2.6V to 23V
- Preset Output Voltages:
 - 1.5V, 1.8V, 2.5V, 3.3V, 3.6V, 4.1V, 4.5V, 5.0V
- Output Current: Up to 100mA
- Input Protective Shunt:
 - VIN<21V, Up to 100mA Pull-Down
- Power good output signal at input and output voltage
- QFN40: 6.0mm x 6.0mm x 0.85mm (Pin pitch 0.5mm)

Item	Conditions	Min	Typ	Max	Unit
Input Voltage	VIN	2.6	–	23	V
Output Voltage Select	S[2:0]=0h-7h	1.5	–	5.0	V
Quiescent Current	VIN=2.5V(UVLO)	–	550	775	nA
	VIN=4.5V(Sleep mode)	–	1.5	2.25	uA
	VIN=18V(Sleep mode)	–	1.9	2.85	uA
Operating Ambient Temperature	Ta	-40	–	+85	°C

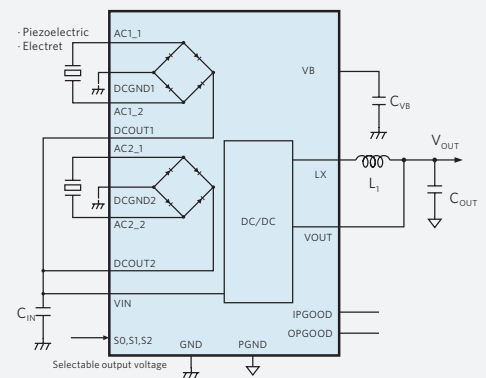
Note: Green IT Award is an Japanese Prize.



Block diagram

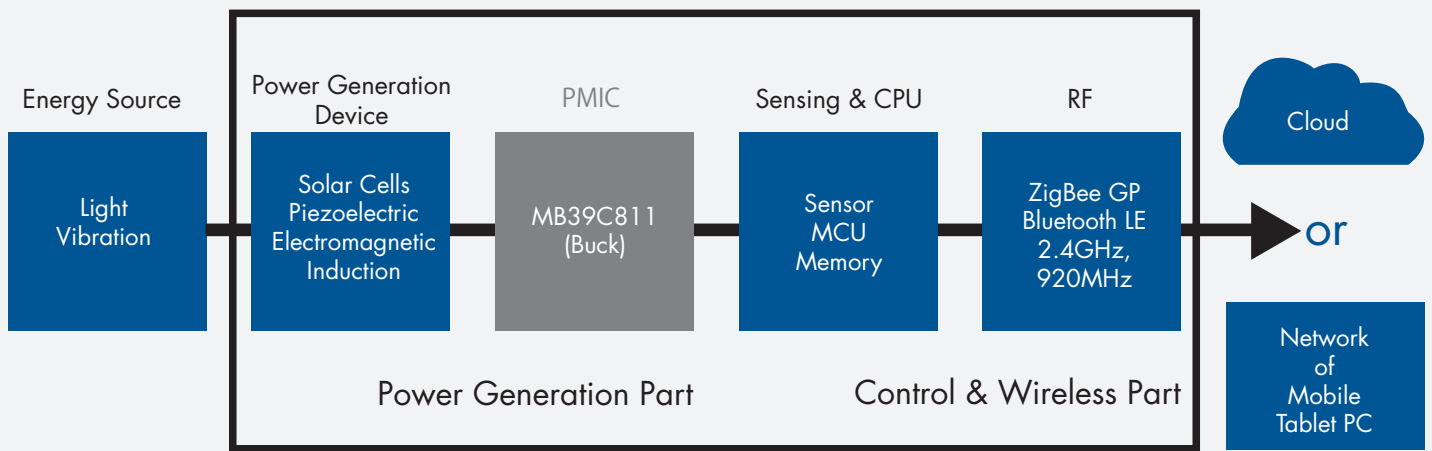


Power source: Power generator from vibrations + solar-cells



Power source: Power generator from vibrations

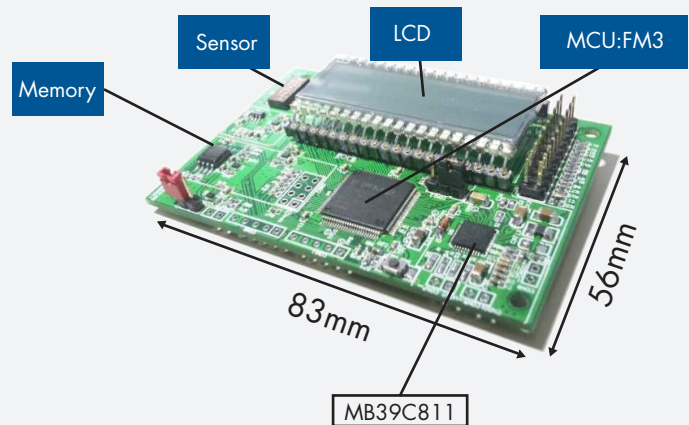
System diagram



Application

- Light Energy Harvesting
- Piezoelectric Energy Harvesting
- Electro-Mechanical Energy Harvesting
- Wireless HVAC Sensors
- Standalone Nanopower Buck Regulator

Starter kit



Web design simulation service



URL: <http://www.cypress.com/easy-design-sim>

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