Thermobility Wireless Power Generator (WPG-1) Data Sheet

Description:

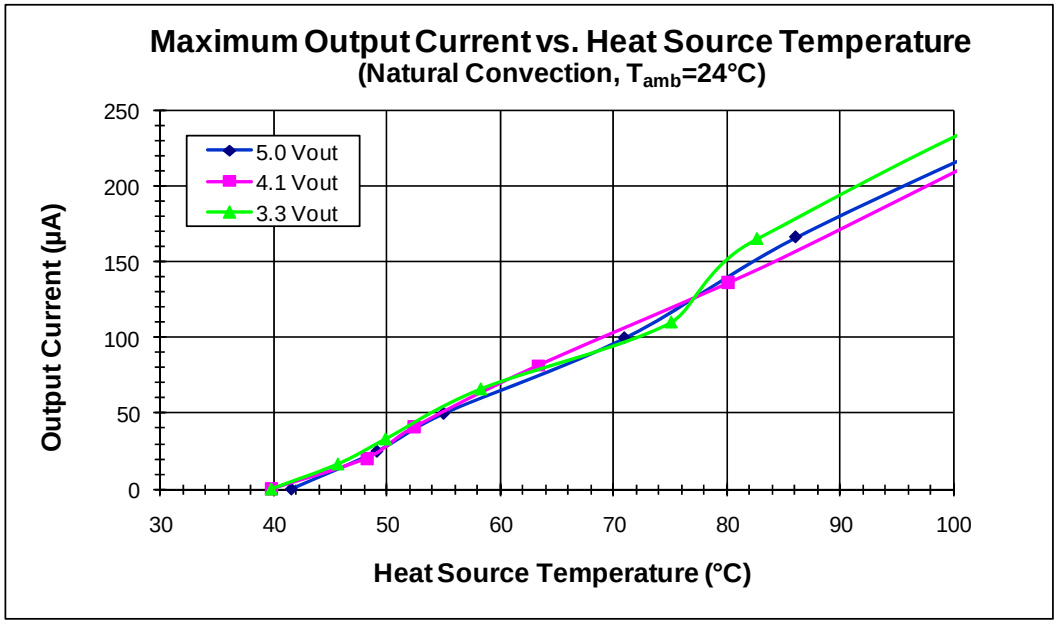
The WPG-1 is a self-contained energy harvesting system that converts heat into electrical power at a regulated output voltage of either 3.3V, 4.1V or 5.0V. The WPG-1 pairs Nextreme's proprietary HV thermoelectric technology with the Linear Technologies LTC®3108 Ultralow voltage step-up converter to provide useable electrical power at temperature differentials as low as 15-20K relative to ambient.

Features:

- Regulated V_{out} of 3.3V, 4.1V or 5.0V
- P_{out} up to 1mW depending on ΔT
- Compatible with thin film batteries
- Small form factor (~2 in^3)
- Ideal for wireless sensor nodes
- Wide range of load resistances (15kΩ or higher)

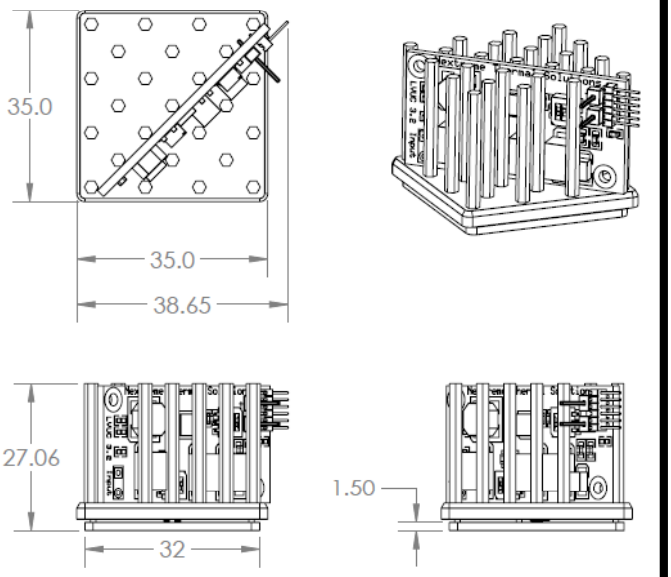
Shown with available TI EZ430 SEH transmitter

Thermobility WPG-1
Wireless Power Generator



Contact info@Nextreme.com for more information

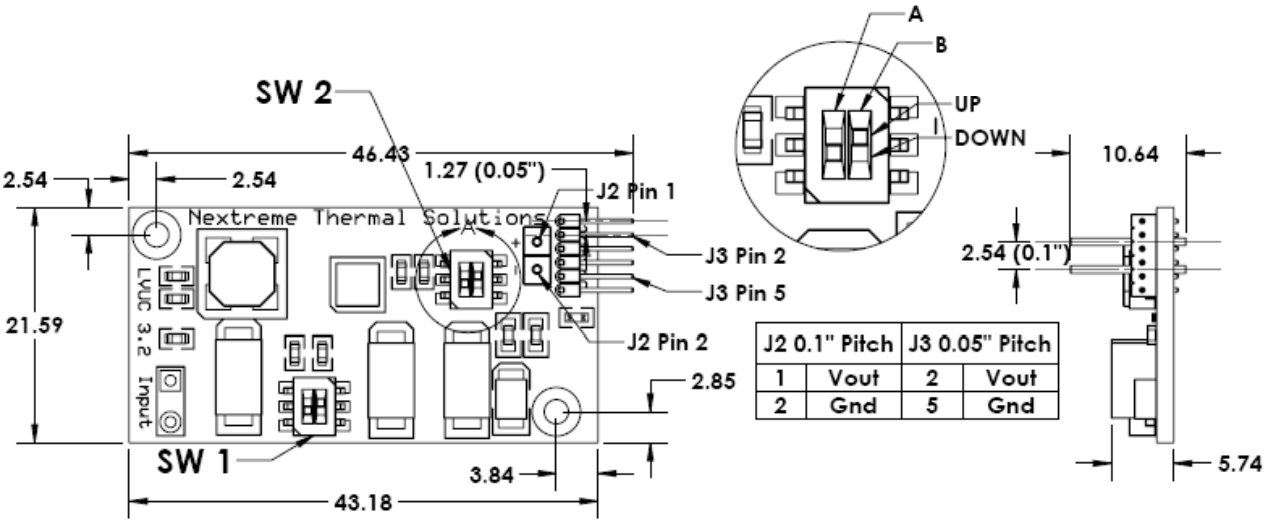
Preliminary – Subject to change without notice



Cautions

- Keep areas around the heat sink clear for optimal air flow.
- Avoid excessive shock or vibration.
- Avoid exposure to water or high moisture environments.

Operating Range		
Maximum Heat Source Temperature	T_{hot}	100°C
Nominal Ambient Temperature	T_{cold}	24°C
Delta T	DT	15 – 76°C



Output Voltage Setting		
SW1	A	B
2.35†	down	down
3.3	up	down
4.1	down	up
5.0	up	up

Output Load Setting		
SW2	A	B
LED Low	down	down
LED High	down	up
2 or 6 Pin Connector*	up	NA

† No test data provided for this setting.
* 2 Pin and 6 Pin are connected in parallel.

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