

EMIC – Energy harvesting

ENERGY HARVESTING MODULE WITH AC-DC CONVERTER FOR X-FAB 180 NM

Fraunhofer IPMS offers an energy harvesting module with integrated AC-DC converter and voltage limitation. Energy can be harvested from piezoelectric sources. Frequency input is from 10 Hz to 10 kHz. The energy conversion rate is up to 65%. The output voltage is up to 5 V dependent on load.

Features

- Silicon proven in X-FAB XT018 FD-SOI
- Input frequency: 10 Hz to 10 kHz
- Power conversion rate: up to 65%
- Output voltage (DC): up to 5 V
- No external components

Applications

- IoT devices
- Wireless modules
- Sensor modules

Benefits

- Battery-free IoT devices
- Wireless sensor modules
- Sensor modules with long lifetime
- No maintenance

Deliverables

- Datasheet & integration guide
- HDL model
- GDSII layout
- Customer support

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FD EMIC block diagram