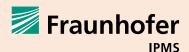


FRAUNHOFER INSTITUTE FOR PHOTONIC MICROSYSTEMS IPMS

# **EMIC - ENERGY HARVESTING**





# Fraunhofer Institute for Photonic Microsystems IPMS

Maria-Reiche-Str. 2 01109 Dresden Germany

#### **Contact**

Marcus Pietzsch Phone +49 351 88 23 - 355 marcus.pietzsch@ipms.fraunhofer.de

Dr. Frank Deicke Phone +49 351 88 23 - 385 frank.deicke@ipms.fraunhofer.de

www.ipms.fraunhofer.de

# **IPMS-EMIC**

## 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

#### **DELIVERABLES**

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

### **BENEFITS**

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

## APPLICATIONS

- IoT devices
- Wireless modules
- Sensor modules

Energy AC/DC Voltage
Harvester Converter Limitation