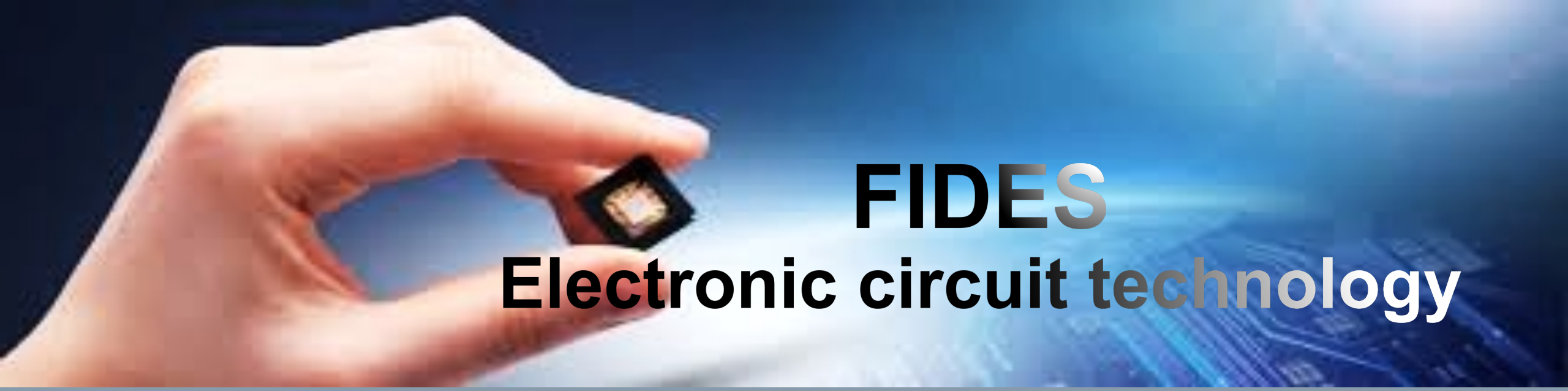


FIDES
Electronic circuit technology

Disruptive Innovation to smart home IoT sustainability

Novel Methodology of AC - DC Solid States Valley fill with Standby Power saving

Tangible benefits in terms of reliability, Free maintenance, Small size and operating in extreme temperature environments

La FRENCH TECH

FIDES
info@standbyzero.org
http://www.standbyzero.com

1. FIDES Innovation

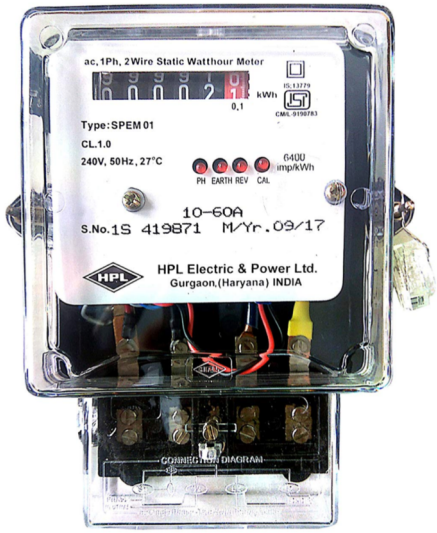
Novel circuit technology reliable electronic IoT, Based on AC-DC Power

FIDES technology provides tangible benefits for Reliability, availability, maintain free, and durability. Change AC-DC converter, Realize SMART CITY.

2. AC-DC Power Market

1. AC-DC converter are used everywhere

❖ **All home appliance and extreme environment AC-DC powerconverter reliability problem**



FIDES AC Power for IoT
Sustainability for long life,
Reliability, Small size
Extreme temperature

3. Standby power saving

EX, standby power consumption = 138W/years (0.5MW electric energy save!)

STANDBY POWER
0.5MW/Years

0.007%

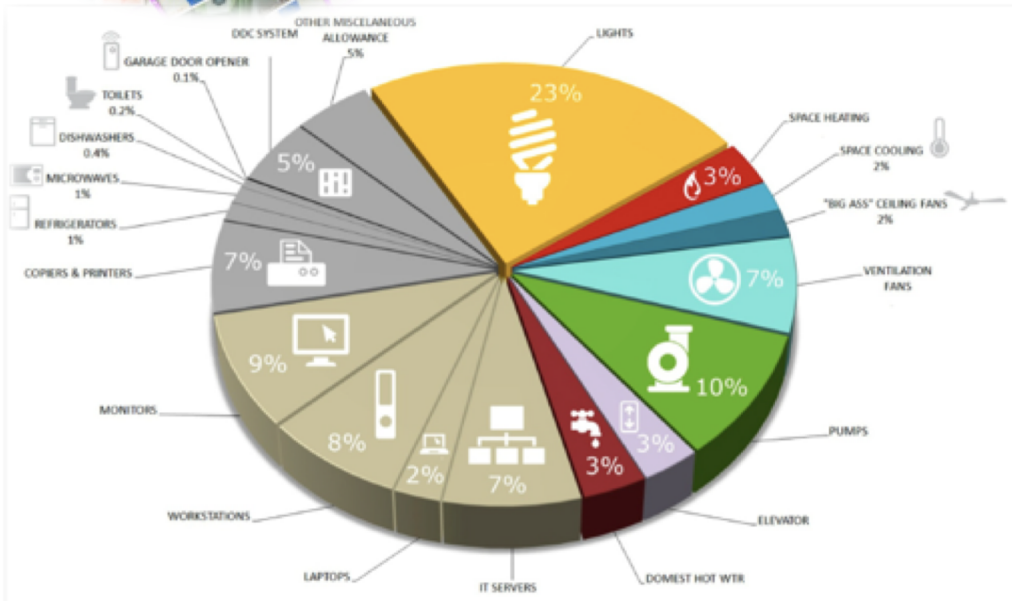


Figure 1: Bullitt Center - Energy Use

67% SAVE More...

4. Smart Power Meter Market

1. Sustainable smart city

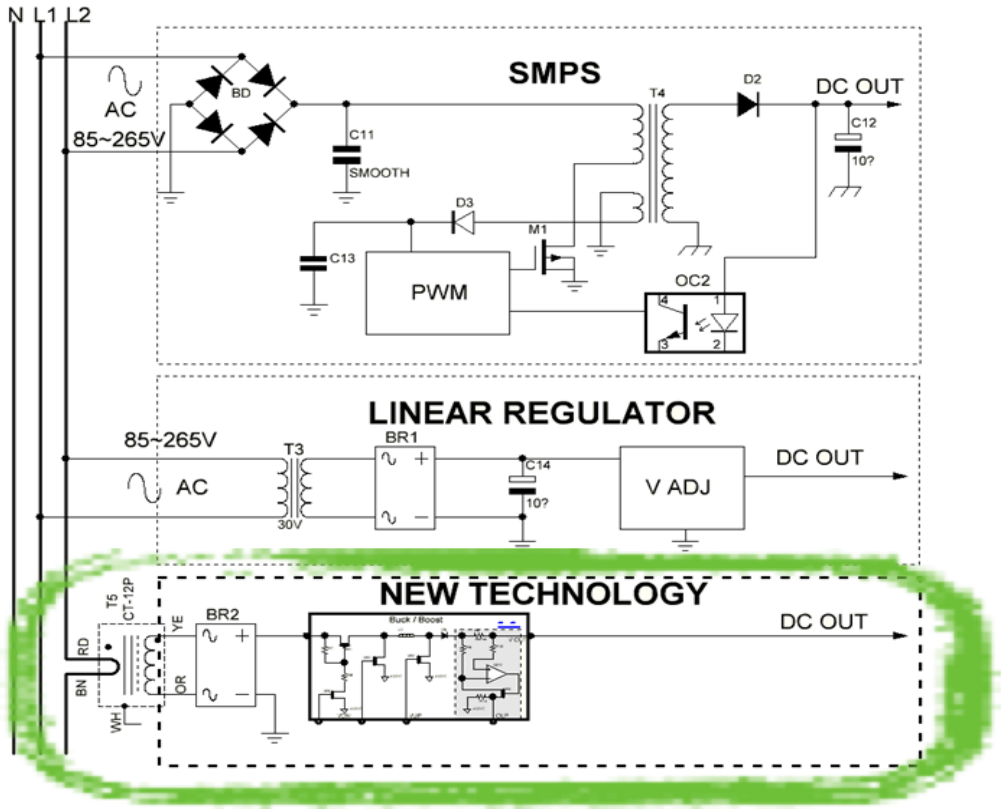
FIDES AC-DC conversion technology

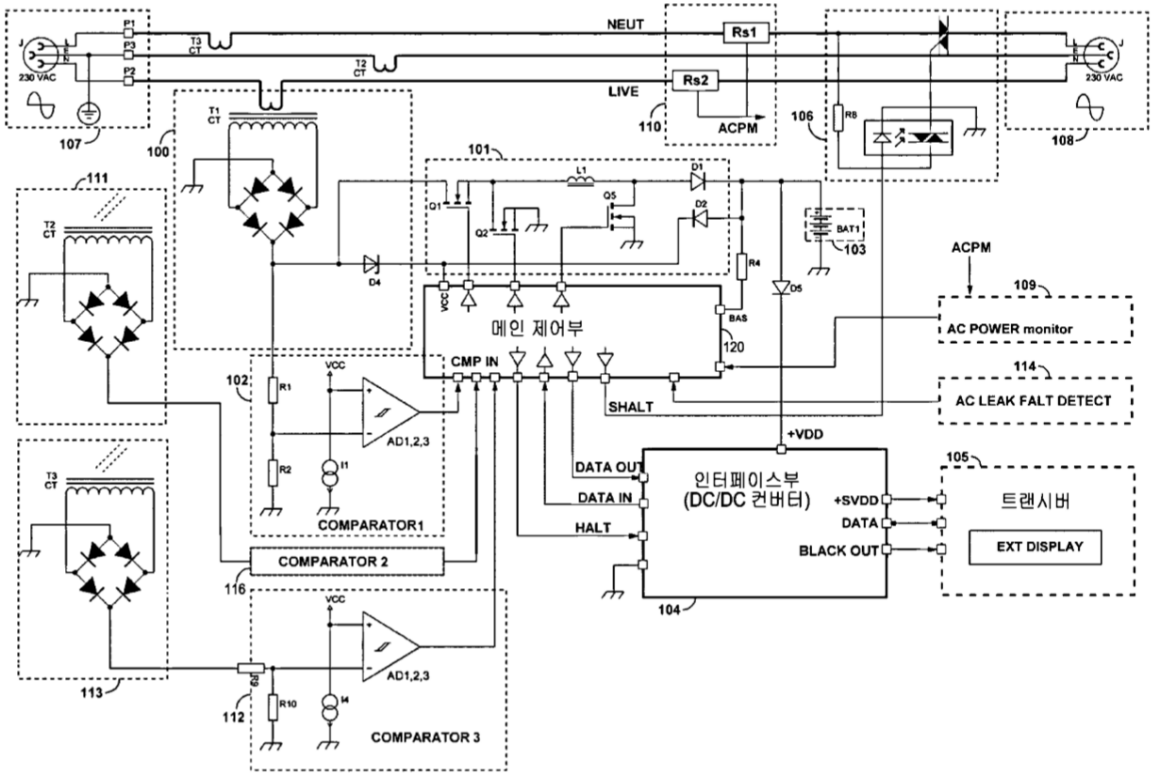
support real sustainable IoT

5. Sustainable Power Supply & Meter

1. Novel Sustainable Magnetic Field Harvesting Power Supply Technology

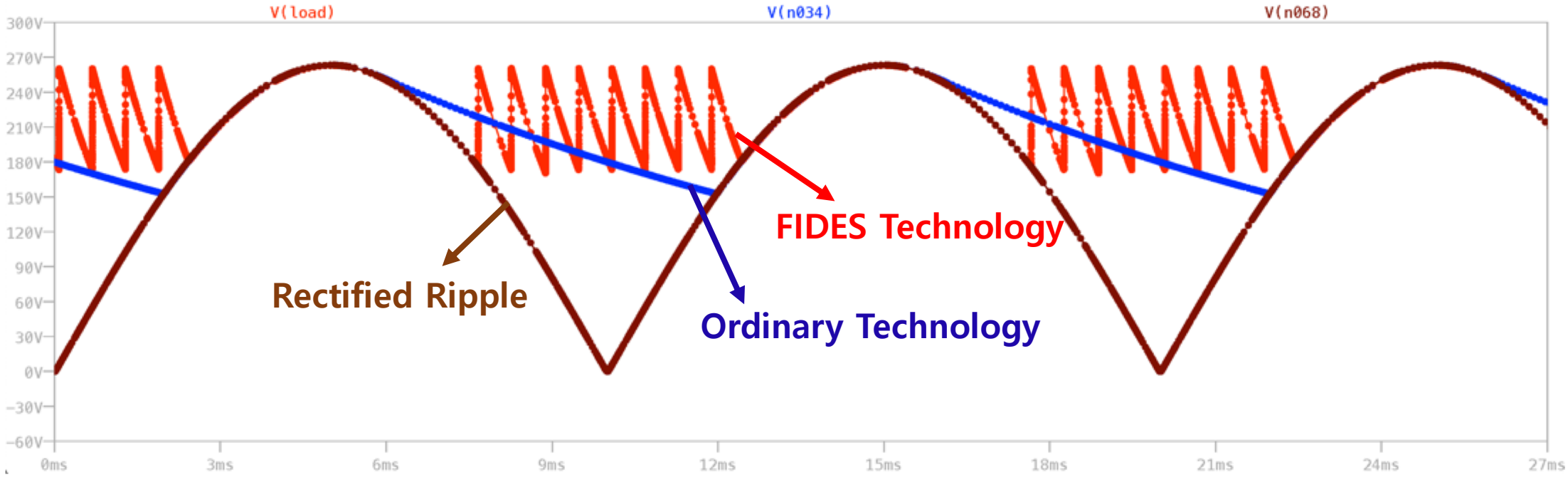
Surge immunity for harsh environments





6. Sustainable Power Supply & Meter

1. Novel DC smooth filter circuit Power Supply Technology



- 230V/50Hz 500Ω AEC24uF VS Solid cap 8uF
- Generally aluminum electrolytic cap 105℃ /2000h, ½ service life short over 10℃ each.
- This solid type smooth filter technology are 100Kh MTBF at -30 ℃ ~105 ℃ 100Kh.

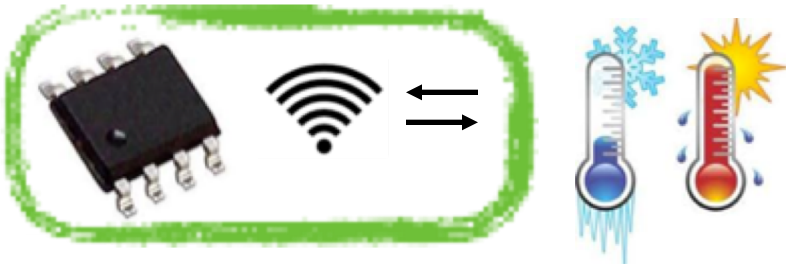
7. Roll Change Market

1. Intelligent solid state HVDC Capacitor

Ordinary technology

Thermal Stress

FIDES technology



- High reliability
- Wide operating temperature
- Long service life
- Intelligent AC line standby zero
- On/Off with galvanic communication
- Small size
- Reasonable Price

8. Problem and Resolve

1. AC-DC Rectify Smooth Filter Compare

	Aluminum electrolytic capacitor	FIDES capacitor	
Service life time	2K	100K	hours
Operating temperature	-20℃ ~ 85℃	-40℃~125℃	℃
Power Factor	~0.5	~0.85	PFC
Capacitance efficiency	10μF vs 3μF Reduced 70%		μF
Control communication	No	YES	I2C
Size compare	100	30	%
* AC Zero Standby	No	>50	mW

* IEC62301 Standby power regulation

Substitution

Aluminum electrolytic capacitor failure.

Catastrophic explosive venting of aluminum electrolytic capacitor Fails open or shorted. Aluminum Electrolytic Capacitors are sensitive low or high temperature environment are degradation capacitance with relatively shorter life spans.

9. Customers

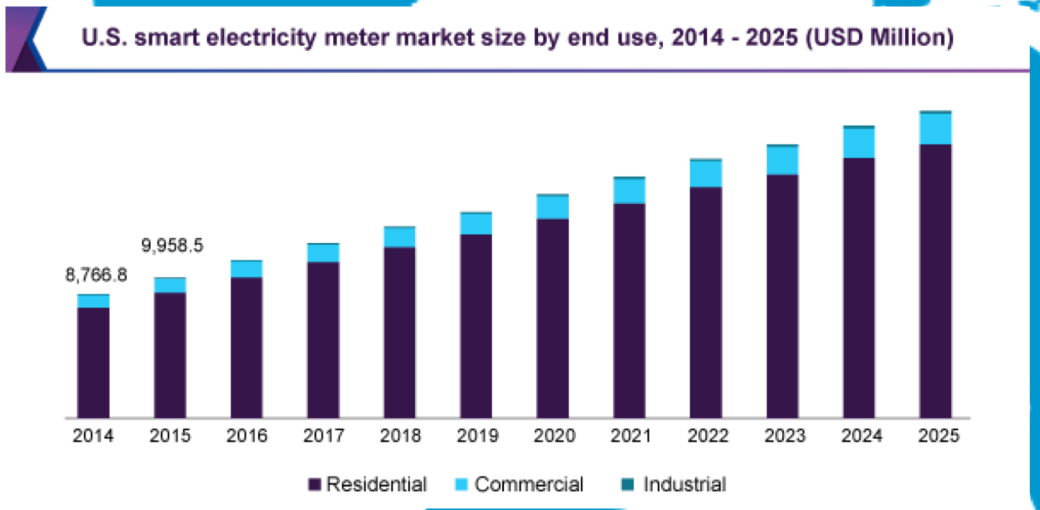
1. AC-DC High voltage aluminum electrolytic capacitors are used everywhere

ZUMTOBEL SONY SAMSUNG LG Haier Lenovo HUAWEI General Electric

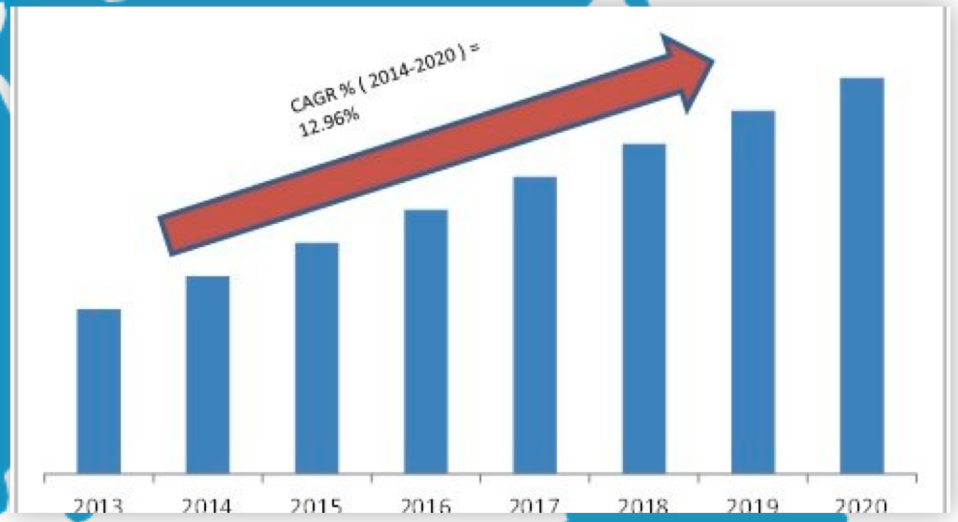
Itron

FIDES HVDC Capacitor $5Billion by 2020

ABB



Disruptive technology to change the electronics sustainability
And save standby power
IEC62301



Total market was valued at $1,310.00 million in 2013 and is expected to reach 3,890.00 million by 2020, at an estimated CAGR of 16.02% from 2014 to 2020.

http://www.marketsandmarkets.com/Market-Reports/hvdc-capacitor-market-175421495.html

10. HVDC Capacitor Market

1. HVDC Capacitor Market worth $39 Billion by 2020

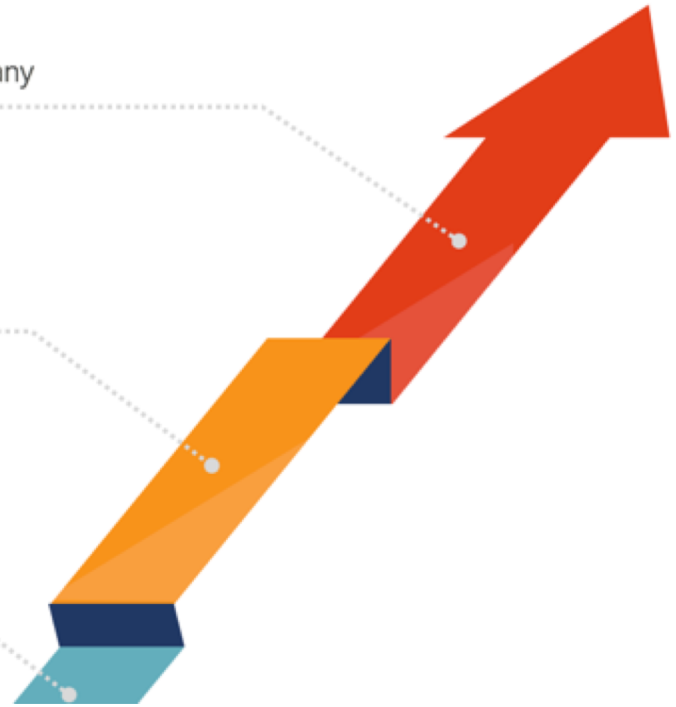
We need financing fabless semiconductor for mass production

3 One Chip Semiconductor
- General IoT power supply market
- Market to major home appliance manufacture company

2 Special ODM
- Aerospace, Military equipment
- Extreme environment electronic equipment market

WE ARE HERE

HV Chip design
Module production
- Extreme environment electronic equipment market
- LED bulb market



Market want sustainable Novel Technology

FIDES technology provides tangible benefits for
Reliability, availability, maintain free, and durability