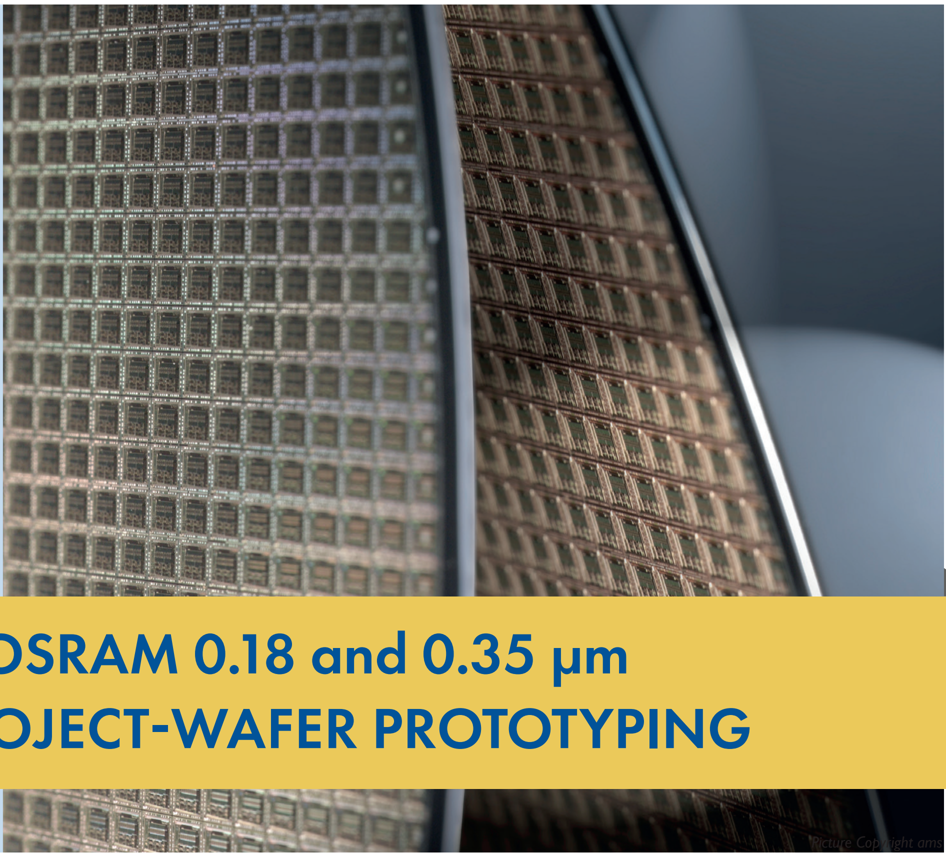
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ams OSRAM 0.18 and 0.35 µm
MULTI-PROJECT-WAFER PROTOTYPING

Through Europractice, customers from academia and their spinouts can gain access to Multi-Project-Wafer (MPW) runs of ams OSRAM.

Why Europractice?

- Affordable and easy access to Prototyping, Design Tools, and Training for universities, research institutes, and their spinouts.
- MPW runs for multiple technologies, including ASICs, Photonics, TFT, and more.
- Advanced packaging and system integration support.

Why ams OSRAM?

- State-of-the-art 8-inch fab offering high-performance process technologies with more than 30 years of experience in wafer processing.
- Benchmark PDK (Process Design Kit) providing all the building blocks required to create complex analog mixed-signal designs.
- 350nm and 180nm technologies with standard CMOS, HV, and Opto Process fabricated in Austria.

Technology Highlights

ams OSRAM 180nm CMOS atC18 and atC18D

The 0.18µm CMOS Mixed-Signal process (C18) is the base process for ams OSRAM advanced 0.18µm process family.

The process has reliable low-voltage NMOS and PMOS devices with 1.8V, 3.3V and 5V operating voltages optimised for mixed-signal applications. A low-leakage device library option is available. Fully characterised passives include capacitors, resistors and voltage controlled varistors. The technology has an extended set of well and substrate based diodes, bipolar vertical transistors, and user-friendly design environment with unparalleled and efficient design support.

The C18 process is well-suited for a wide variety of applications, including smart sensors, sensor interface devices, smart metering devices, industrial and building applications.

ams OSRAM OPTO Processes C35OA, C35O1 & H35O1

ams OSRAM has a broad portfolio of optoelectronic device types and back-end processes that enable designers of advanced analog/mixed-signal products to optimise important parameters of their integrated circuits, such as wavelength, quantum efficiency, responsivity, dark current and device response time.

In addition, C35O1, C35OA, and H35O1 technologies are using P-Epitaxial layer to lower the dark current.

The optoelectronic foundry platform is ideally suited for a wide variety of optical applications, including ambient light sensors, RGG pixel sensors, IR sensors, Proximity sensors and LCD backlight colour adjustments.

Technology Details

180nm CMOS atC18

Met. layers: 4 to 6 metals
Poly: 1, high resistive poly
Core: 1.8 V/3.3V
I/O: 1.8 V/3.3V
MIM 2 fF/ µm^2 capacitictor
Schottky diode
Integration density: up to 150kGates/mm^2
Temp. range: -40° C. / +125° C

180nm CMOS atC18D

Met. layers: 4 to 6 metals
Poly: 1, high resistive poly
Core: 1.8V/5V
I/O: 1.8V/5V
MIM 2 ff/ µm^2 capacitor
Schottky diode
Integration density: up to 1 50kGates/mm^2
Temp. range: -40° C. / + 125° C

C35 Standard CMOS

Metal layers: 4
Poly: 2
Core: 3,3 V/5V
I/O: 3,3 V/5V
HIRES Poly
PIP
RAM, ROM and EEPROM Module (on request)

C35 Opto Process with Barc

C35B4OA and C35B4O1
Anti-Reflecting Coating
Bottom-Anti-Reflecting Coating
P- Epitaxial wafers
Metal layers: 4
Poly: 2
Core: 3,3 V/5V
I/O: 3,3 V/5V
PIP
PN and PIN photo diodes

H35 HV Process

High Voltage module
Metal layers: 4
Poly: 2
Core: 3,3 V/5V/20V/50V/120V
I/O: 3,3 V/5V/20V/50V/120V
HIRES Poly
Substrate logic module:
  p-wellmand n-well for
  3.3V / 5V NMOS and PMOS
Thick metal 4 (3µm thick top metal)
RAM, ROM and EEPROM Module (on request)

H35 Opto Process with BARC

H35B4O1
Anti-Reflecting Coating
Bottom-Anti-Reflecting Coating
P-Epitaxial wafers
Metal layers: 4
Poly:2
Core: 1,8 V/5V
I/O: 3,3 V/5V
PIP
PIN photo diodes

www.europractice.com

Would you like to discover more?

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