

ACST GmbH

Your Partner for Innovative THz Solutions

www.acst.de

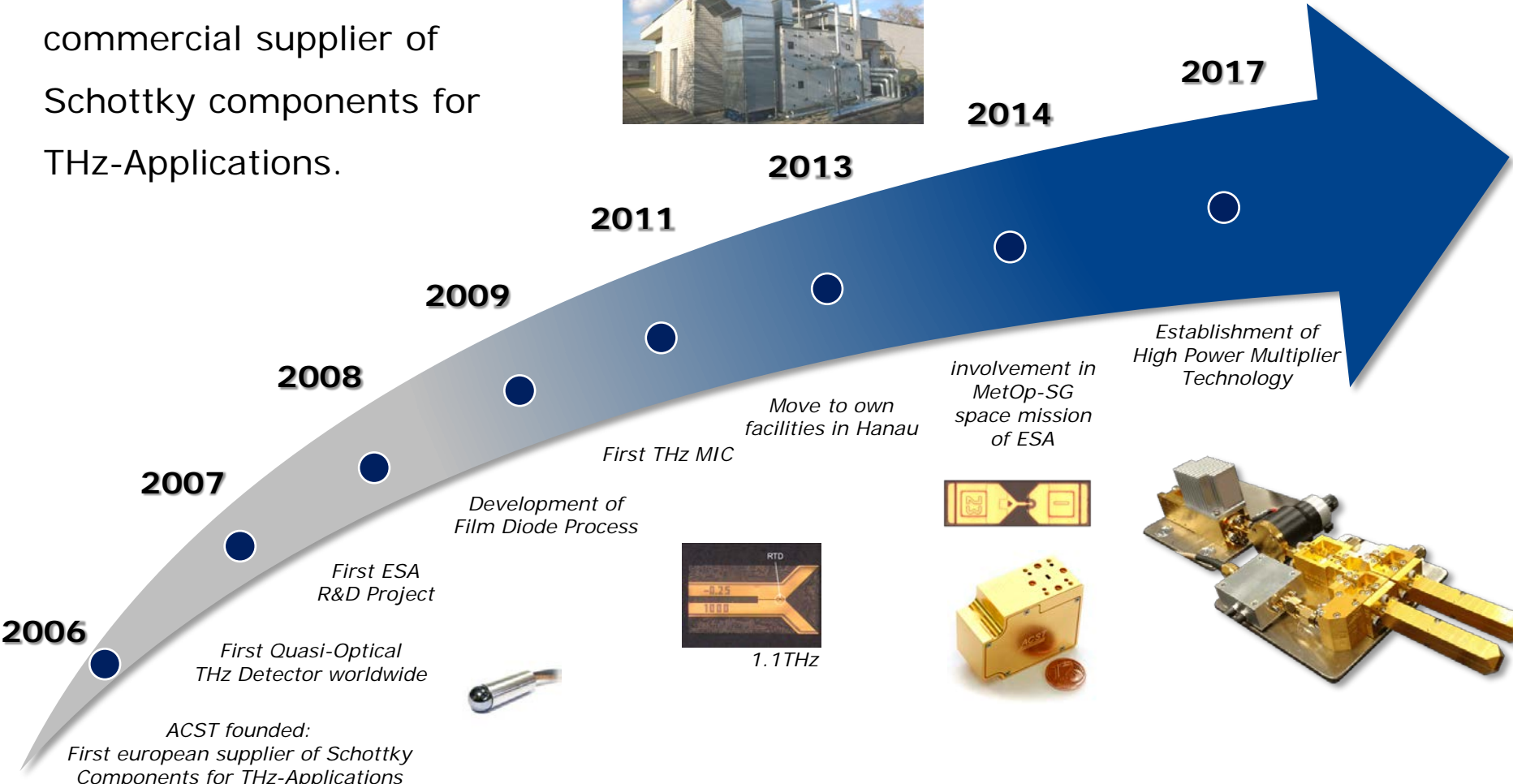
ACST GmbH

Josef-Bautz-Str. 15

63457 Hanau

Germany

2006: ACST first European commercial supplier of Schottky components for THz-Applications.



2006

ACST founded:
First european supplier of Schottky Components for THz-Applications

First Quasi-Optical THz Detector worldwide



2008

First ESA R&D Project

Development of Film Diode Process

2011

First THz MIC



1.1THz

2013

Move to own facilities in Hanau

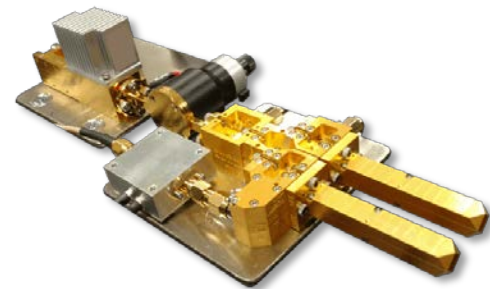
2014

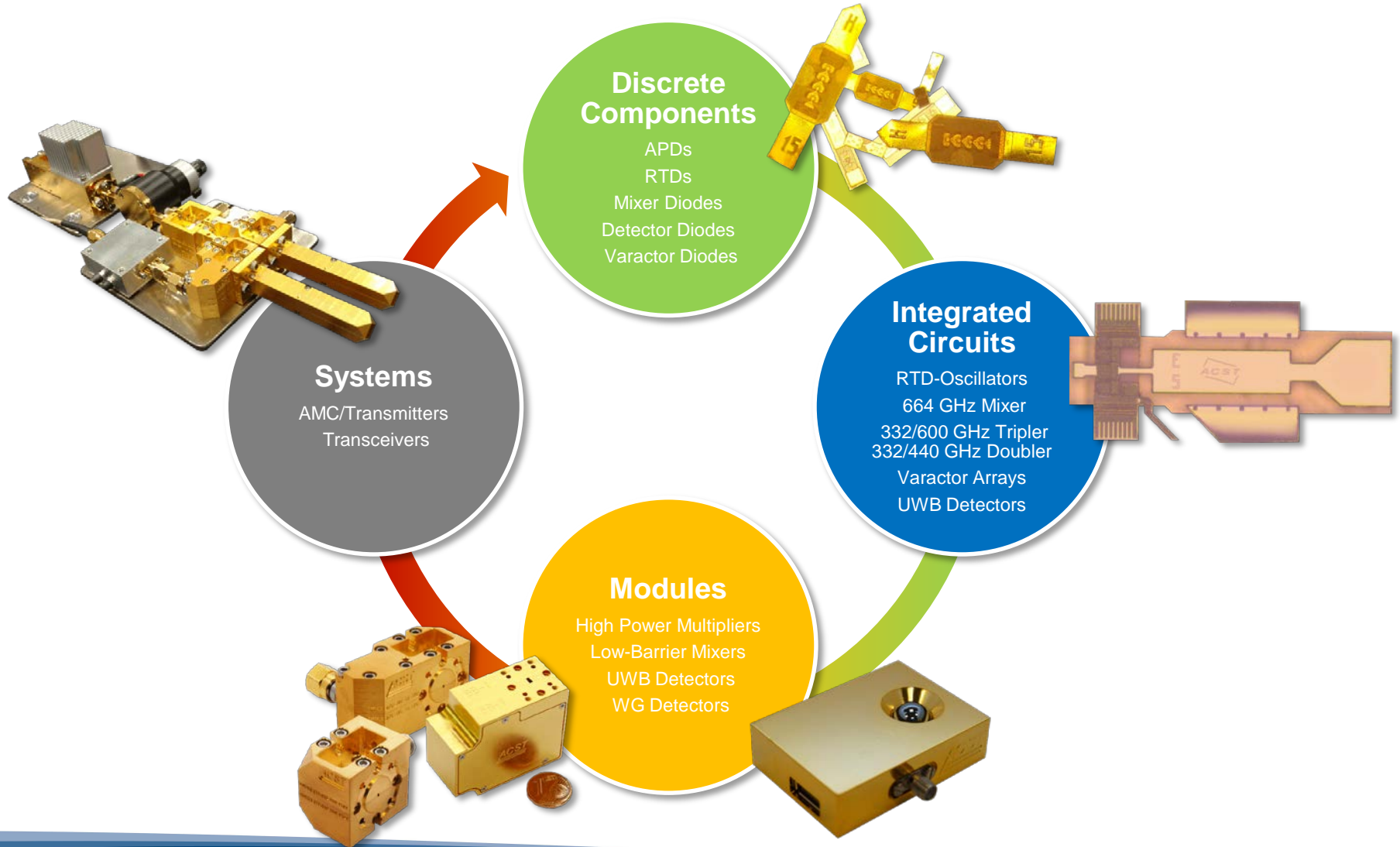
involvement in MetOp-SG space mission of ESA



2017

Establishment of High Power Multiplier Technology

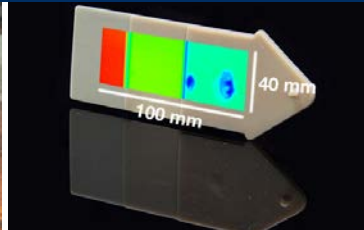




THz Generation and Detection



Scientific research



Laboratory
Instrumentation



Industry

THz Spectroscopy



Security

MM-Wave Imaging



Space



Worldwide Distribution

MetOp-SG

ESA/EUMETSAT mission support with discrete Schottky diodes, integrated structures and modules for various frequency channels from 89GHz up to 664GHz.

The following instruments are going to be equipped with ACST products.

- *Microwave Sounder MWS*
- *Microwave Imager MWI*
- *Ice Cloud Imager ICI*

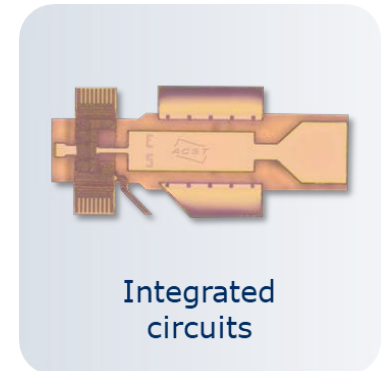


Varistor
Diodes

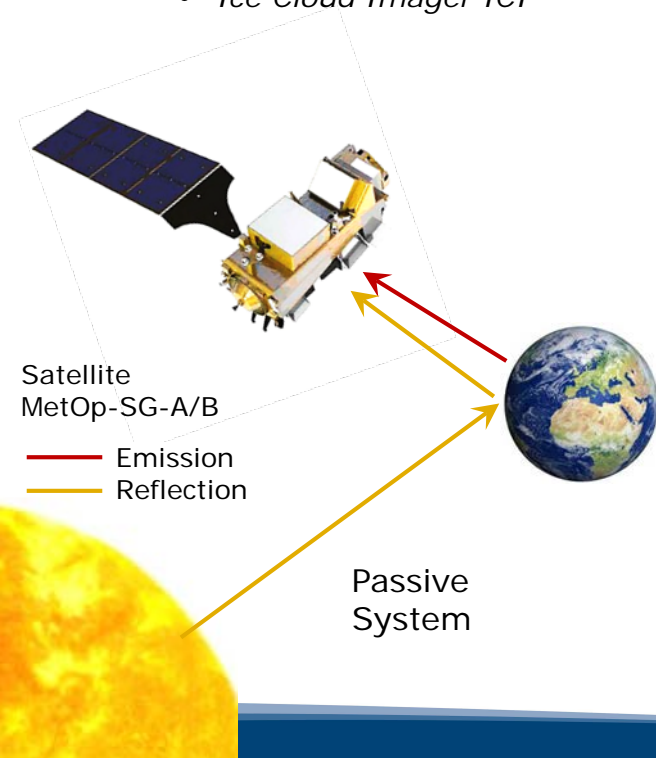


Varactor
Diodes

*Figures show similar commercial products.
MetOp-SG designs confidential.*



Integrated
circuits

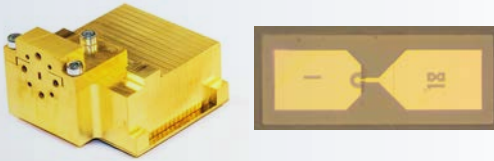


Application:
Meteorological
Earth Observation
MetOp-SG

Technology Development and Module Design for

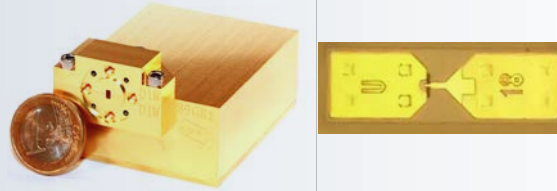
▪ Proof on Concept

2009 – 2013 „Micro and Millimeter-Wave Detectors“
ESA project nr. 2612/09/NL/GLC



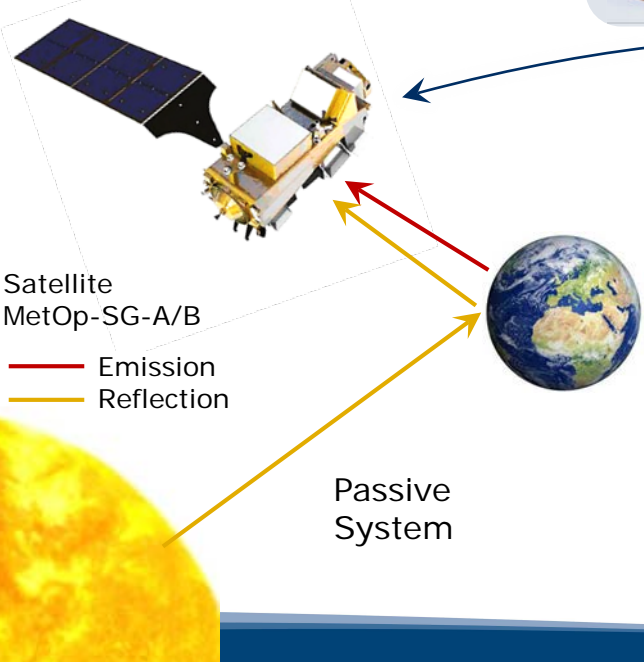
▪ Reliability Study

2013 – 2017 “Preliminary Reliability Assessment of Millimeter-wave Detectors”
ESA project nr. 4000109751/13/NL/RA



▪ Flight Hardware

2015 – 2020 Qualification and Procurement Phase for für MetOp-SG
ESA project nr. 4000114388/4000111183



Application:
Meteorological
Earth Observation
MetOp-SG



89GHz Front End Receiver



Qualification according to customer needs

Design and processes for commercial diodes and modules with high similarity to space products.

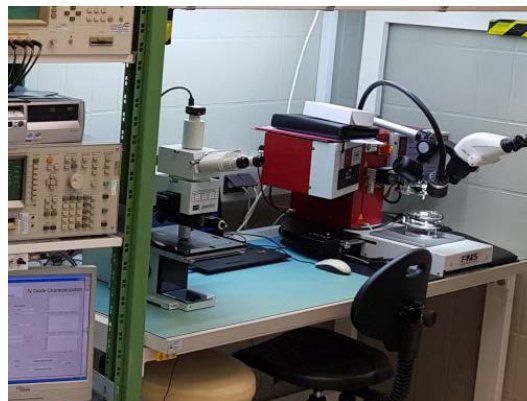
Space line products available on customer request according to ESCC Generic Spec No. 5010: Discrete Microwave Semiconductor Components (Production control, Screening, Qualification).

Available reliability tests at ACST

- High temperature storage test (max. 180 °C)
- DC life test (max. 180 °C)
- Thermal cycling test (-70 to 180 °C)
- High humidity high temperature test (HHHT) with and w/o bias



Photo-Lithography



DC-characterization & Assembly



Reliability testing



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- Interest in our products
- Project ideas
- ...