

5.3 ASSEMBLY AND TEST HOUSES (ATH)

5.3.1 FIRST SENSOR LEWICKI, GERMANY

The Process Capability Approval (PCA) of ATH services from First Sensor Lewicki in Oberdisingen, Germany, has been certified by ESA in accordance with the requirements of ESCC Basic specification No. [2567000](#).

5.3.1.1 *Contact Information*

Address	ESCC Chief Inspector
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5.3.1.2 *Process Capability Approval*

Certificate No.	Certified since:	Type Designation
379	March 2022	Hermetically Encapsulated Discrete Semiconductor Components in SMD and TO Packages

5.3.1.3 *Capability Abstract ATH service for hermetic discrete components*

First Sensor Lewicki’s assembly and test capabilities are defined within the associated Process Identification Document (PID) FSL797000-002 PID Issue D.

This PID describes discrete components assembly, packaging, screening, test and quality assurance processes for hermetic encapsulated n-channel power MOSFETs in SMD and TO packages.

Hermetic power MOSFETs form a key component in many applications such as general power supply of systems and sub-systems, DC-DC converter, motor control, etc.

The selection, definition and procurement of bare dice and packages, as well as the performance of incoming inspection and LAT tests are carried out according to customer-specific specifications or PID procedures.

For n-channel power MOSFETs, FSL predefined levels of service to our customers according to the Process Identification Document (PID) FSL797000-002 PID Issue D:

-Service level A contains the assembly and process capability approval testing in accordance with the requirements of ESCC Basic specification No. 2567000.

-Service level B supplements service level A with an addition screening in accordance with the requirements of ESCC Basic specification No 5000.

-Service level C includes a lot validation testing in accordance with the requirements of ESCC Basic specification No 5000 to service level B.

Only service level A is covered by the ESA certification.

In-house process capabilities:

- Bare dices components: automatic pick-and-place assembly
- Solder die attach
- Automatic wire bonding
- Application of die coat for high voltage components
- Parallel seam sealing (for SMD and rectangular TO packages)
- Projection welding (for circular TO packages)

Screening of n-channel power MOSFETs according to ESCC5000 including environmental and mechanical tests, electrical tests, endurance tests and assembly tests.