



Recommended Process Flow for SIC279

2018/08/08

silicon craft technology Co.,Ltd.

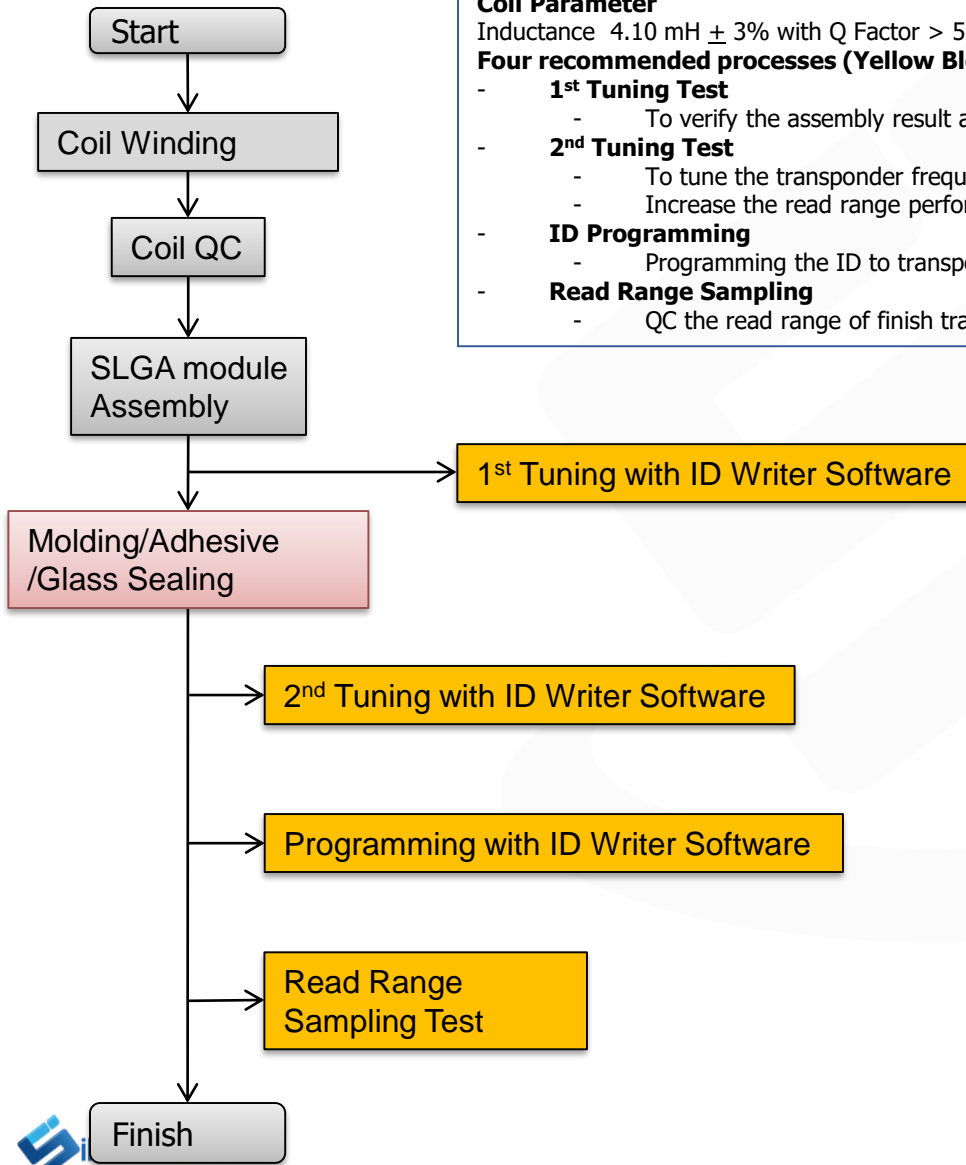
www.sic.co.th

PROPRIETARY & CONFIDENTIAL



Overall Process for Coil Maker

Recommended Process Flow

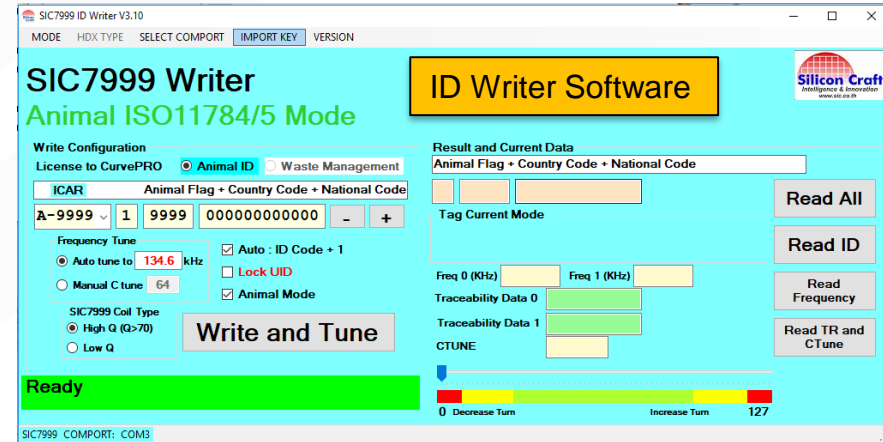


Coil Parameter

Inductance 4.10 mH \pm 3% with Q Factor > 50 for SIC279

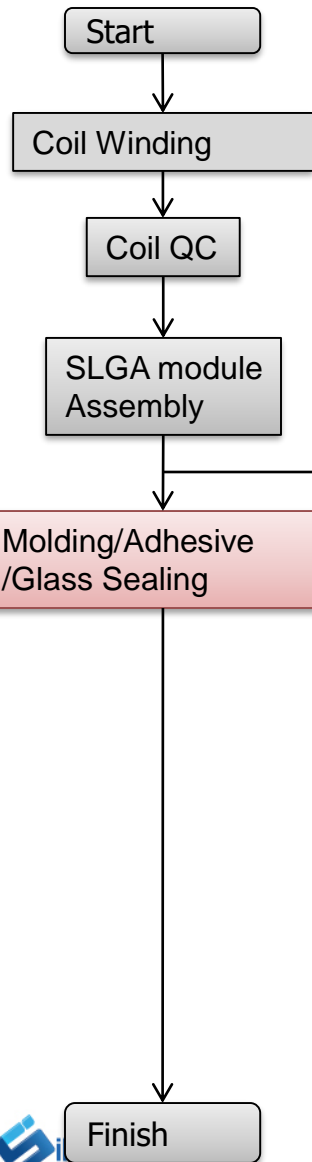
Four recommended processes (Yellow Block)

- **1st Tuning Test**
 - To verify the assembly result and coil winding performance before go to molding process
- **2nd Tuning Test**
 - To tune the transponder frequency to match the target frequency.
 - Increase the read range performance
- **ID Programming**
 - Programming the ID to transponder
- **Read Range Sampling**
 - QC the read range of finish transponder.



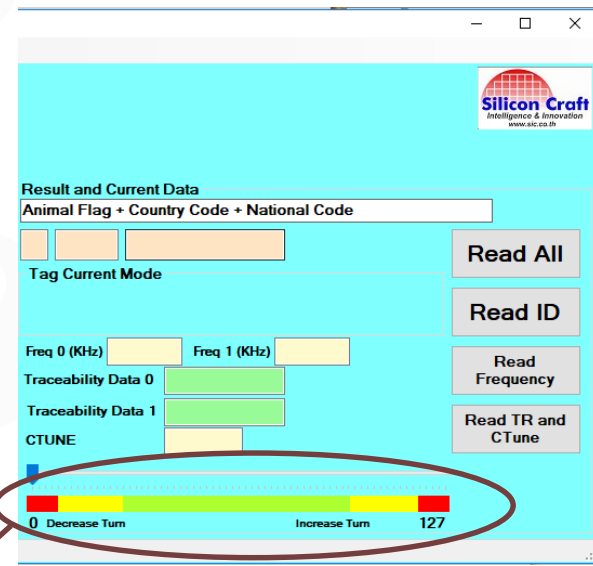
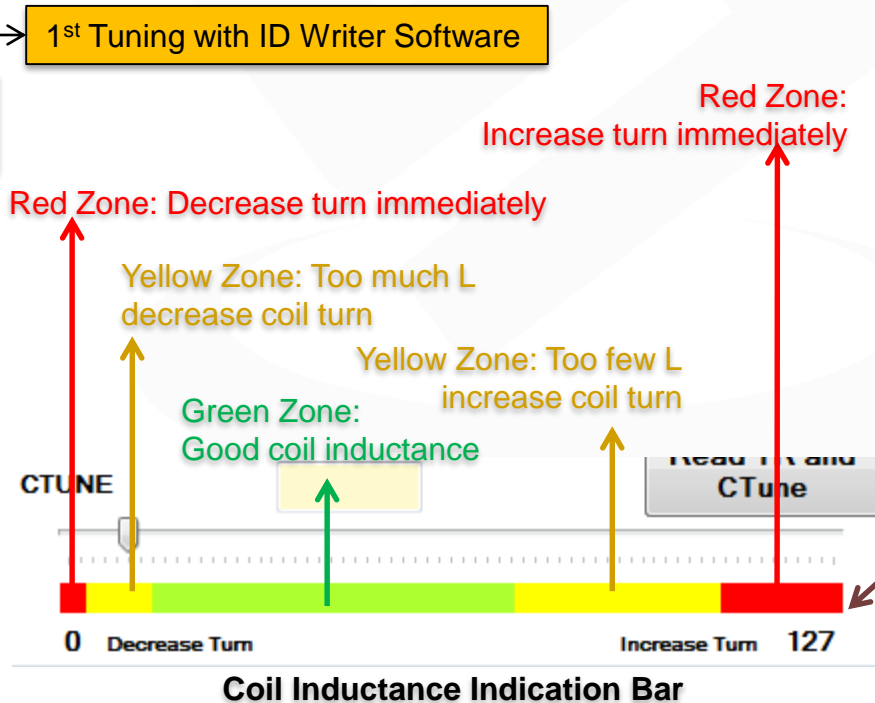
Overall Process for Coil Maker

Recommended Process Flow #1: 1st Tuning Test



1st Tuning Test

- To verify the assembly result and coil winding inductance before go to molding process
- Three zones of coil performance
 - **"Red Zone"** -> Coil inductance value is very poor. The coil resonance frequency is off from center frequency too much. The coil winding machine need to adjust immediately.
 - **"Yellow Zone"** -> Coil inductance value is fare good. The coil resonance frequency is off from center frequency but still able to tune back to center frequency. For this zone, it is recommended to change or adjust the coil winding machine at next production lot.
 - **"Green zone"** -> Coil inductance value is good. The resonance frequency is close to center frequency.

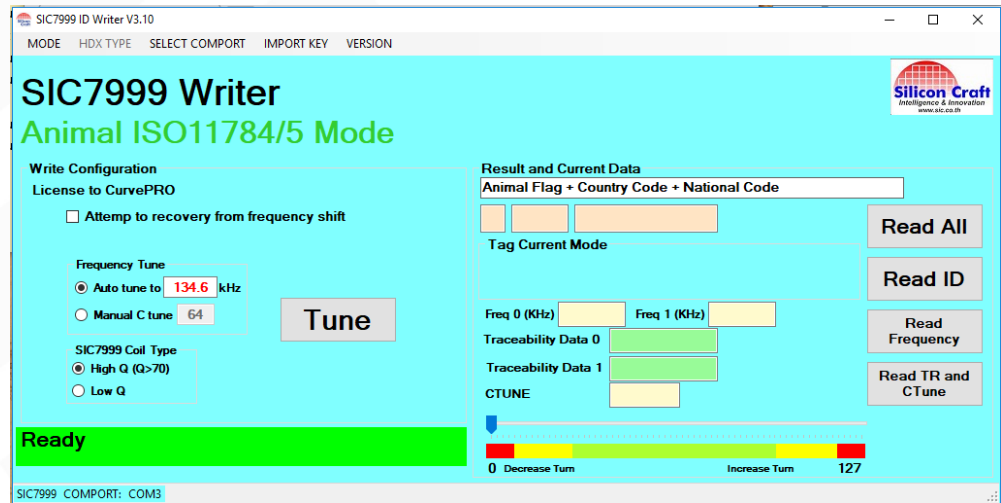
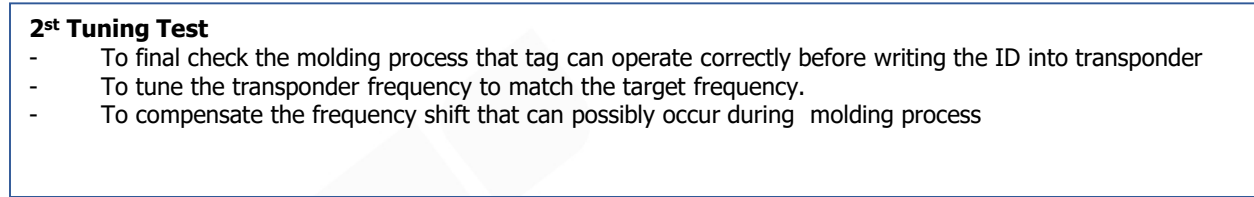
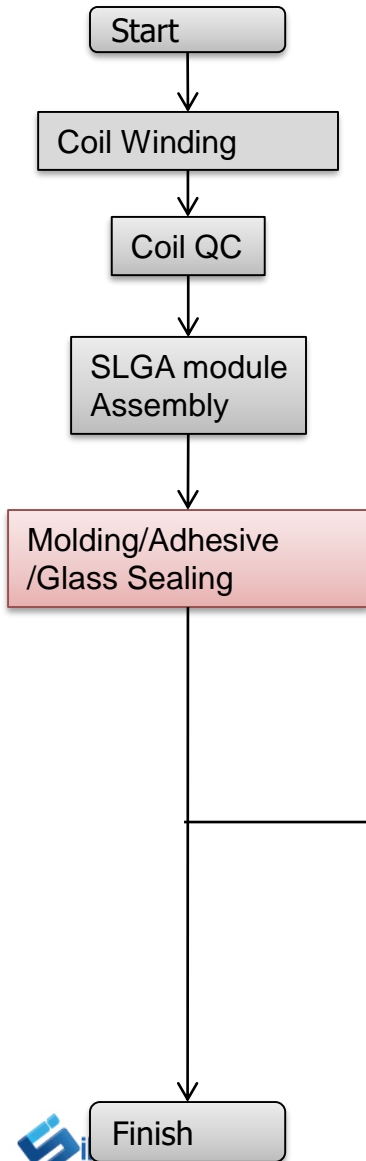


Overall Process for Coil Maker

Recommended Process Flow #2: 2nd Tuning Test

2st Tuning Test

- To final check the molding process that tag can operate correctly before writing the ID into transponder
- To tune the transponder frequency to match the target frequency.
- To compensate the frequency shift that can possibly occur during molding process

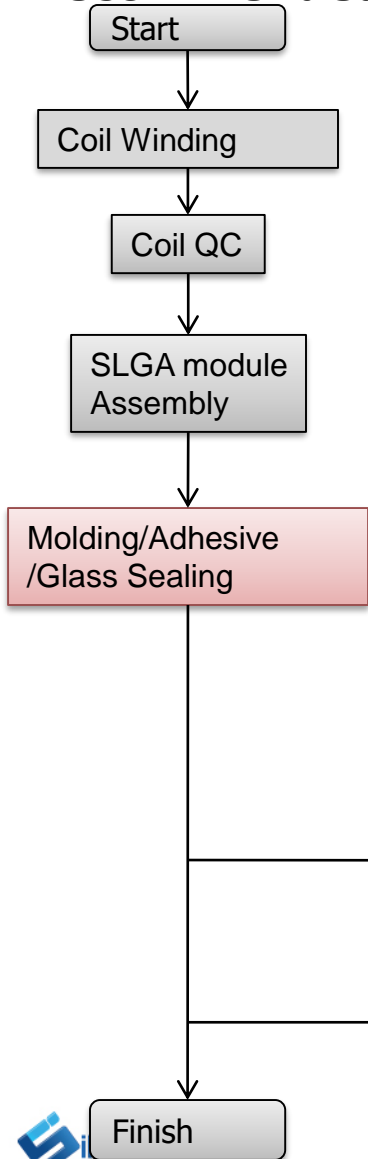


2nd Tuning with ID Writer Software



Overall Process for Coil Maker

Recommended Process Flow #3: Programming with ID Writer Software Recommended Process Flow #4: Read Range Sampling



Programming with ID Writer Software

- To program the ID into transponder/inlay
- The reject unit will be very few because the previous process flow will reject all fail unit out

Read Range Sampling

- QC the read range of finish transponder.

