AVN-20211202 Problematic MEMS Oscillator

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Company	Trenz Electronic GmbH
AVN Number	AVN-20211202
Title	Problematic MEMS Oscillator
Subject	Information and remedy concerning problematic MEMS Oscillator
Issue Date	2021-12-09

Description:

Due to component shortage from June to August 2021 some Trenz Electronic products were assembled with datasheet compatible DSC6111MI2A-025.0000 instead of SiT8008BI-73-18S-25.000000E. Although there is no evidence for any performance issues from the datasheets at least one batch of DSC6111MI2A-025.0000 has been identified to be root of issues in specific applications.

Issues:

Following two board depended issues have been reported:

1. Ethernet communication with online available standard reference design is unreliably:
    a. Standard ping test in separated environment results in package loss of up to 10% or
    b. unexpected link up/down switches.
2. MGT communication fails, known to work designs showed no link.

Remedy:

If a Trenz Product shows one of the issues described above and the assembled MEMS oscillator is identified as DSC6111MI2A-025.0000 (see Method of Identification) please contact Trenz Electronic (see Contact Information). Please send the serial number of the affected product and choose one of the possible solutions below:

1. Trenz Electronic opens a RMA and the affected MEMS is replaced at Trenz Electronic.
2. Trenz Electronic sends a SiT8008BI-73-18S-25.000000E for substitution to the customer.

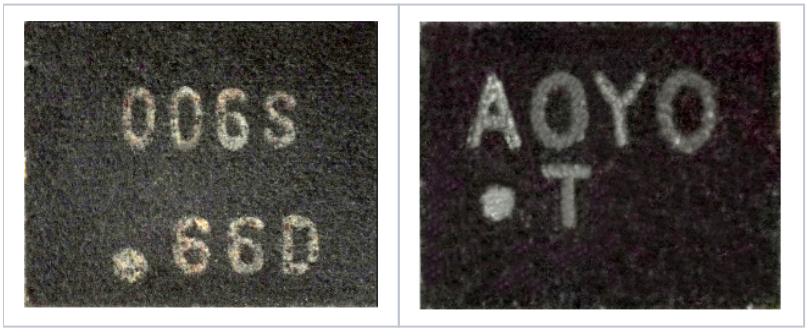
Products Affected

This note affects Trenz Electronic SoMs produced from June to August 2021.

Method of Identification

If you encounter any of the above described issues please use Schematic (SCH-TE....pdf) and Assembly Diagram (AD-TE....pdf) for the corresponding product to locate the MEMS oscillator. Mentioned documents are accessible via Trenz Electronic download area. The table below shows example chip markings of MEMS oscillators. Letters may differ, but arrangement is specific for the used part.

possibly affected	not affected
DSC6111MI2A-025.0000	SiT8008BI-73-18S-25.000000E



Contact Information

If you have any questions related to this design note, please contact Trenz Electronics Technical Support at

- forum.trenz-electronic.de
- wiki.trenz-electronic.de
- support%trenz-electronic.de (subject = AVN-20211202)
- phone
    - national calls: 05741 3200-0
    - international calls: 0049 5741 3200-0

Disclaimer

Any information in this advisory note are based on the most current information at the time this note is being issued. For the latest dates and any other information, please contact your local Trenz Electronic sales office, technical support or local distributor.