

MM908E621, Silicon Revision A Errata

INTRODUCTION

This errata sheet applies to the following device:

- MM908E621ACDWB

Device Revision Identification

The device revision is indicated by a 1-character code after the device code. For instance the “A” in the “MM908E621ACDWB” indicates revision A. All standard devices are marked with a device identification and build information code.

Device Build Information / Date Code

Device markings indicate build information containing the week and year of manufacture. The date is coded with the last four characters of the nine character build information code (e.g. “CTKAH0429”). The date is coded as four numerical digits where the first two digits indicate the year and the last two digits indicate the week. For instance, the date code “0429” indicates the 29th week of the year 2004.

Device Part Number Prefixes

Some device samples are marked with a **PM** prefix. A **PM** prefix indicates a prototype device which has undergone basic testing only. After full characterization and qualification, devices will be marked with the **MM** prefix.

908EY16 MICROPROCESSOR, 2L31N/3L31N MASK ERRATA

Description

The MM908E621ACDWB device contains both Analog and the 908EY16 mask 3L31N is equivalent to 2L31N.

Please refer to the [68HC908EY16 Product Summary Page](#) for the latest Erratas available.

- **LIN Break Delimiter recognition** - SE91-LIN_Break
- **Internal Clock Generator Stability Bit Not Set** - SE92-ICG

ANALOG, L22W0 MASK ERRATA - LIN DOMINANT ISSUE

Description

The LIN Physical Layer Specification which is part of the LIN Specification Package 2.0 defines the VSUP supply voltage range between 7V and 18V (VBAT range 8V to 18V). On this device, the LIN bus output can get stuck in dominant state if both conditions are present:

1. The supply voltage VSUP is below 5.7V and above 4.2V ($5.7V > VSUP > 4.2V$).
2. The device is in Normal Mode and the transceiver is forcing the LIN to dominant state (TXD=0V).

If VSUP drops further below 4.2V (Low-Voltage Reset Threshold typical value), the device will reset and the LIN bus goes in recessive state or if the VSUP is increasing above 5.7V the LIN bus goes also in recessive state (Normal Operation).

Work-Around

Avoid Stuck Condition

To avoid the transceiver to transmit data in the critical VSUP area (5.7V to 4.2V), the Low-Voltage Interrupt or the on-chip voltage measurement can be used to detect the critical VSUP area and to disable (by software) the transmission. To reenable the transmission, the Low-Voltage Flag or the on-chip voltage measurement can be used to detect that the supply voltage is back high enough.

Remove Stuck Condition

To avoid having the stuck condition present for a longer period of time, it's possible to detect the dominant state by monitoring the RXD signal. The stuck in dominant state can be removed by disabling the LIN physical layer (LIN P/L). The LIN P/L is disabled by clearing the PSON bit in the system control register SYCTL (SPI register), this is also the case if device enters STOP or SLEEP mode.

ANALOG, L22W0 MASK ERRATA - STOP MODE CURRENT TO HIGH

Description

To reduce the power consumption in "standby" the device has two Low Power modes - STOP and SLEEP mode. Due to an internal floating node the stop mode current might be not stabil in STOP mode and therefore might exceed the specified value.

Work-Around

Its strongly recommended NOT to use the STOP mode. For most applications it will be sufficient to use the SLEEP mode instead of the STOP mode.

The main differences between SLEEP and STOP mode are:

- Power consumption
- Voltage regulator on/off (MCU supply on/off)
- Wake-up sources
- Wake-up timing
- Wake-up procedure (reset or interrupt)

For further details please refer to the datasheet.

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