MICROCHIP

Product Change Notification - SYST-11STMR599

Date:
12 Feb 2020

Product Category:
Bluetooth Module; Bluetooth Silicon

Affected CPNs:
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Notification subject:
ERRATA - IS2062/IS2064/BM62/BM64 Data Sheet Errata

Notification text:
SYST-11STMR599
Microchip has released a new Product Documents for the IS2062/IS2064/BM62/BM64 Data Sheet Errata of devices. If you are using one of these devices please read the document located at IS2062/IS2064/BM62/BM64 Data Sheet Errata.

Notification Status: Final

Description of Change:
This revision includes the following updates to Data Sheet Clarifications:
1) Updated Figure 1-3

Impacts to Data Sheet: None

Reason for Change: To Improve Productivity

Change Implementation Status: Complete

Date Document Changes Effective: 12 Feb 2020

NOTE: Please be advised that this is a change to the document only the product has not been changed.

Markings to Distinguish Revised from Unrevised Devices: N/A
Attachment(s):
IS2062/IS2064/BM62/BM64 Data Sheet Errata

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Affected Catalog Part Numbers (CPN)

BM62SPKA1MC2-0001AA
BM62SPKS1MC2-0001AA
BM62SPKS1MC2-000CFG
BM62SPKS1MC2-R002AA
BM64SPKA1MC1-0001AA
BM64SPKA1MC2-0001AA
BM64SPKS1MC1-0001AA
BM64SPKS1MC1-00M2AA
BM64SPKS1MC1-H0M1AA
BM64SPKS1MC1-M0M1AA
BM64SPKS1MC1-Y001AA
BM64SPKS1MC2-0001AA
BM64SPKS1MC2-0002AA
BM64SPKS1MC2-A0M1AA
BM64SPKS1MC2-H0M1AA
BM64SPKS1MC2-T001BA
BM64SPKS1MC2-Y001AA
BM64SPKS1MC2-Y003AA
BM64SPKS1MC2-Y004AA
BM64SPKS1MC2-Y005AA
BM64SPKS1MC2-Y007AA
BM64SPKS1MC2-Y0M2AA
IS2062GM-012
IS2062GM-012-TRAY
IS2062UM-012
IS2062UM-012-TRAY
IS2064B-114SM
IS2064B-114SM-TRAY
IS2064GM-012
IS2064GM-012-TRAY
IS2064GM-013
IS2064GM-013-TRAY
IS2064GM-0L3
IS2064GM-0L3-TRAY
IS2064S-114SM
IS2064S-114SM-TRAY

IS2062/IS2064/BM62/BM64

IS2062/IS2064/BM62/BM64 Data Sheet Errata

IS2062/IS2064/BM62/BM64 Data Sheet Errata

The IS2062/IS2064/BM62/BM64 family of devices that you have received conform functionally to the current device data sheet except for the anomalies described in this document. Refer to the Microchip website for data sheets:

- https://www.microchip.com/wwwproducts/en/IS2062
- https://www.microchip.com/wwwproducts/en/IS2064
- https://www.microchip.com/wwwproducts/en/BM62
- https://www.microchip.com/wwwproducts/en/BM64

Affected Devices

| Erratum	Affected Devices
EEPROM Content Corruption During Power Drop	IS2062, IS2064, BM62, and BM64

Table of Contents

1.   Errata Details

1.1   EEPROM Content Corruption During Power Drop

Under certain conditions, EEPROM content within the IS206x Bluetooth® Audio SoC can be corrupted with a specific pattern, a 64-byte sequence of 0xFF.

EEPROM write operations are typically performed within the IS206x SoC at runtime during, but not limited to, device pairing, shut down or while resetting to default configuration.

Figure 1-1. EEPROM Corrupted Data
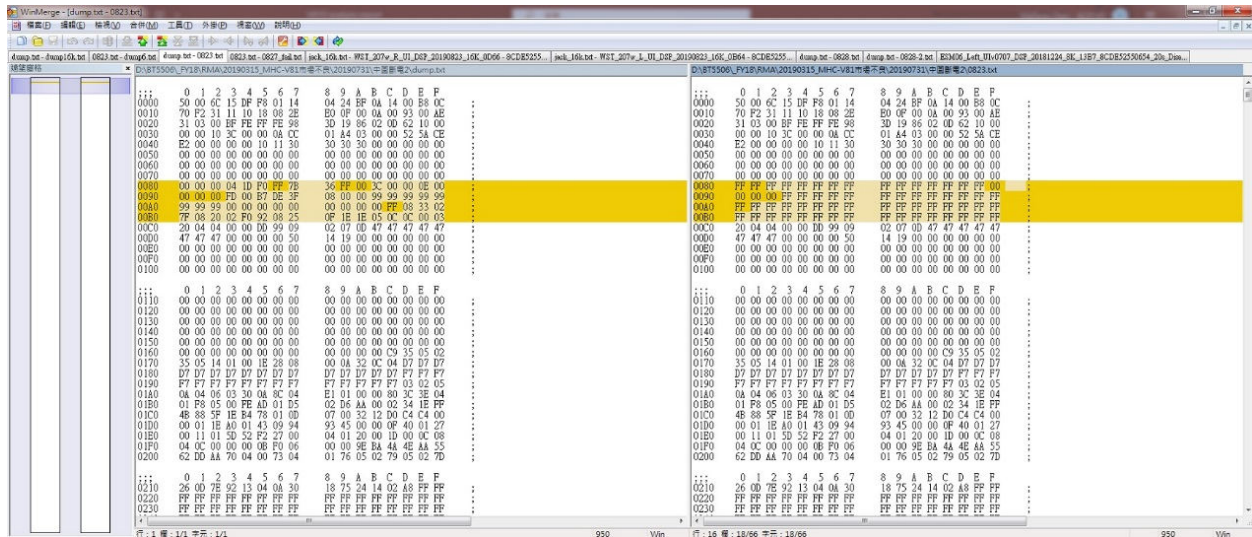
Root Cause

If power goes down during the EEPROM write operation before it is completed, then a page of data in EEPROM may be corrupted. The first operation in an EEPROM write is a page-erase operation and typical evidence of EEPROM corruption is a 64-byte sequence of 0xFF.

TWC (Total Write Time Cycle) for the EEPROM to complete an EEPROM write operation is 5 ms. A sudden power drop during the EEPROM write operation can result in corruption of EEPROM data in the page where the data byte resides since the writing of the data has not completed after the page erase process due to insufficient time allowed (5 ms). The page erase action will cause 64 bytes to become 0xFF before the data writing inside the page has concluded.

Work Around

Add a capacitor on the VDDIO power pin to delay the power drop to the EEPROM voltage supply line so that the TWC requirement may be met.

Both IS2062/IS2064 and BM62/BM64 data sheets specify an external Reset IC to protect the system from power drop. In addition to this protection IC, a 22 uF to 100 uF capacitor is suggested to add on the VDD_IO pin for delaying the power drop timing.

Figure 1-2. IS2062/IS2064/BM62/BM64 with Capacitor
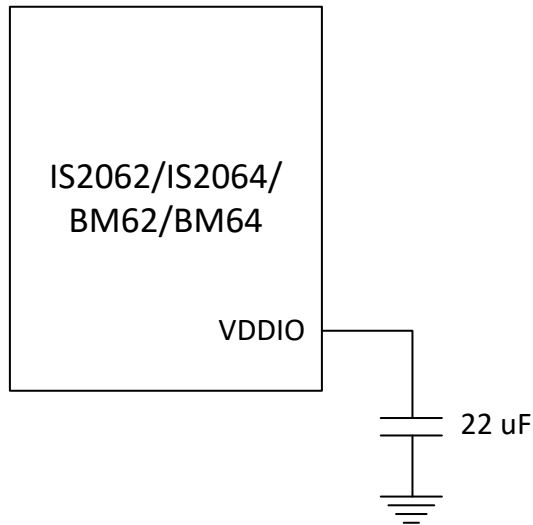
Timing sequence for the RST_N signal and VDDIO drop is shown in the following figure.

Figure 1-3. RST_N Signal and VDDIO Drop Timing Sequence
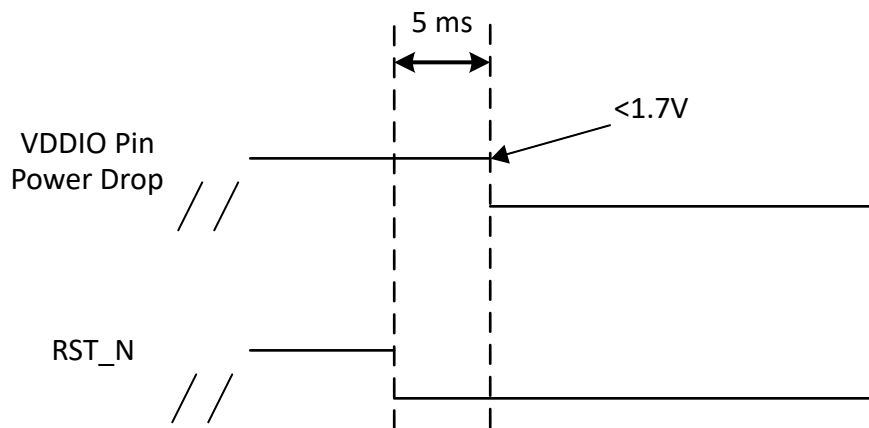
2.   Document Revision History

Revision	Date	Section	Description
B	01/2020	Figure 1-3	Updated figure
A	11/2019	Document	Initial Release

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