

## MB91460

### ds91460c-ds07-16610-1e-errata-x1-01

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#### Errata sheet, MB91460 Datasheet (ds91460c-ds07-16610-1e)

This is the errata sheet for the Datasheet ds91460c-ds07-16610-1e.pdf of the MB91460C microcontroller series. It describes all known discrepancies and corrections of the MB91460C microcontroller series datasheet.

Ref. Number (Text Link)	Date dd.mm.yy	Version No.	Chapter/Page	Description/Correction
<a href="#">DS91460001</a>	07.05.08	1.00	Chapter "Embedded Program/Data Memory (FLASH)"	Note regarding the selection of MCU operations modes.
<a href="#">DS91460002</a>	28.04.09	1.00	Chapter "I/O Map"	Corrected I/O Map for Reload Timer 0 and Reload Timer 1
<a href="#">DS91460003</a>	26.05.09	1.00	Chapter "DC characteristics"	Added Icch current for RTC 32 kHz mode
<a href="#">DS91460004</a>	04.09.09	1.01	Chapter "Electrical Characteristics"	Min. INITX input time corrected
<a href="#">DS91460005</a>	04.09.09	1.01	Chapter "Electrical Characteristics"	Typo
<a href="#">DS91460006</a>	04.09.09	1.01	Chapter "Features"	Not available feature (DMA fly-by) listed

DS91460007	04.09.09	1.01	Chapter "Electrical Characteristics"	Wrong symbol name corrected
DS91460008	04.09.09	1.01	Chapter "CPU and Control Unit"	Typo
DS91460009	04.09.09	1.01	Chapter "Electrical Characteristics"	Typo

Chapter: Embedded Program / Data Memory

Paragraph 2: Operations modes

NOTE:

The operation mode of the MCU can be selected using a Boot-ROM function. The function start address is 0xBF60. The parameter description is given in the Hardware Manual in chapter 54.6 "Flash Access Mode Switching".

(PHu, MBo, MHz)

Chapter: I/O Map

Corrected I/O Map for Reload Timer 0 and Reload Timer 1

Incorrect:

0001B0 <sub>H</sub> to 0001BC <sub>H</sub>	Reserved		Reload Timer 0 + 1
0001C0 <sub>H</sub>	TMRLR2 [W] XXXXXXXX XXXXXXXX	TMR2 [R] XXXXXXXX XXXXXXXX	Reload Timer 2

Correct:

0001B0 <sub>H</sub>	TMRLR0 [W] XXXXXXXX XXXXXXXX	TMR0 [R] XXXXXXXX XXXXXXXX		Reload Timer 0
0001B4 <sub>H</sub>	Reserved	TMCSRH0 [R/W] ---00000	TMCSRL0 [R/W] 0-000000	
0001B8 <sub>H</sub>	TMRLR1 [W] XXXXXXXX XXXXXXXX	TMR1 [R] XXXXXXXX XXXXXXXX		Reload Timer 1
0001BC <sub>H</sub>	Reserved	TMCSRH1 [R/W] ---00000	TMCSRL1 [R/W] 0-000000	
0001C0 <sub>H</sub>	TMRLR2 [W] XXXXXXXX XXXXXXXX	TMR2 [R] XXXXXXXX XXXXXXXX		Reload Timer 2

(JRo, MBo, MHz)

## Chapter: DC characteristics

Added  $I_{cch}$  for RTC 32 kHz mode and footnote \*6

For MB91F467Cx

Before:

Power supply current MB91-F467Cx	$I_{cch}$	$V_{DD5R}$	$T_A = +25\text{ }^\circ\text{C}$	—	100	500	$\mu\text{A}$	RTC : 4 MHz mode *5
			$T_A = +105\text{ }^\circ\text{C}$	—	500	2400	$\mu\text{A}$	
			$T_A = +25\text{ }^\circ\text{C}$	—	50	250	$\mu\text{A}$	RTC : 100 kHz mode *5
			$T_A = +105\text{ }^\circ\text{C}$	—	450	2200	$\mu\text{A}$	
	$I_{LVE}$	$V_{DD5}$	—	—	70	150	$\mu\text{A}$	External low voltage detection

After:

Power supply current MB91-F467Cx	$I_{cch}$	$V_{DD5R}$	$T_A = +25\text{ }^\circ\text{C}$	—	30	150	$\mu\text{A}$	At stop mode *5
			$T_A = +105\text{ }^\circ\text{C}$	—	400	2000	$\mu\text{A}$	
			$T_A = +25\text{ }^\circ\text{C}$	—	100	500	$\mu\text{A}$	RTC : 4 MHz mode *5
			$T_A = +105\text{ }^\circ\text{C}$	—	500	2400	$\mu\text{A}$	
			$T_A = +25\text{ }^\circ\text{C}$	—	50	250	$\mu\text{A}$	RTC : 100 kHz mode *5 32 kHz mode *6
			$T_A = +105\text{ }^\circ\text{C}$	—	450	2200	$\mu\text{A}$	
							External low volt	

For MB91F465

Before:

Power supply current MB91-F465CA	I <sub>CC</sub> H	V <sub>DD</sub> 5R	T <sub>A</sub> = + 25 °C	-	30	150	At stop mode *5
			T <sub>A</sub> = + 105 °C	-	300	2000	
			T <sub>A</sub> = + 25 °C	-	100	500	RTC : 4 MHz mode *5
			T <sub>A</sub> = + 105 °C	-	500	2400	
			T <sub>A</sub> = + 25 °C	-	50	250	RTC : 100 kHz mode *5
			T <sub>A</sub> = + 105 °C	-	400	2200	
							External low volt-

After:

Power supply current MB91-F465CA	I <sub>CC</sub> H	V <sub>DD</sub> 5R	T <sub>A</sub> = + 25 °C	-	30	150	At stop mode *5
			T <sub>A</sub> = + 105 °C	-	300	2000	
			T <sub>A</sub> = + 25 °C	-	100	500	RTC : 4 MHz mode *5
			T <sub>A</sub> = + 105 °C	-	500	2400	
			T <sub>A</sub> = + 25 °C	-	50	250	RTC : 100 kHz mode *5 32 kHz mode *6
			T <sub>A</sub> = + 105 °C	-	400	2200	
							External low volt-

Added Footnote \*6

- Main regulator OFF, sub regulator set to 1.2V, Low voltage detection disabled, RC oscillator enabled. Additional current consumption of Sub oscillator I<sub>OSC</sub> has to be taken into account.

(JF1, JWa)

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Chapter: Electrical Characteristics

Paragraph 7.2: Reset input ratings

Wrong:

INITX input time (at power on) Min.: 8 ms

Correct:

INITX input time (at power on) Min.: 10 ms

(JWa, JF1)

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Chapter: Electrical Characteristics

Paragraph 2: Recommended operating conditions

Typo: „Look-up time PLL“ must be „Lock-up time PLL“

(JWa, JF1)

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Chapter: Features

Paragraph 2: Internal peripheral resources

The feature “Fly-by transfer support (between external I/O and memory)” is listed by mistake. The MB91460C series does not have an external bus interface and does therefore not offer the DMA fly-by transfer.

(JWa, JF1)

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Chapter: Electrical Characteristics

Paragraph 3: DC characteristics

Table part: “Output ‘L’ voltage”, column “Condition”

The symbol name “ $I_{OH}$ ” is wrong, it must be “ $I_{OL}$ ” instead.

(JWa, JF1)

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Chapter: CPU and Control Unit

Paragraph 3.1: Basic programming model

Typo: „Program status RS“ must be „Program status PS“

(JWa, JF1)

Chapter: Electrical Characteristics

Paragraph 7.3: LIN-USART Timings at VDD5 = 3.0 to 5.5 V

Typo: „T<sub>a</sub>” (for ambient temperature) must be „T<sub>A</sub>” instead.

(JWa, JF1)