

3850 Group

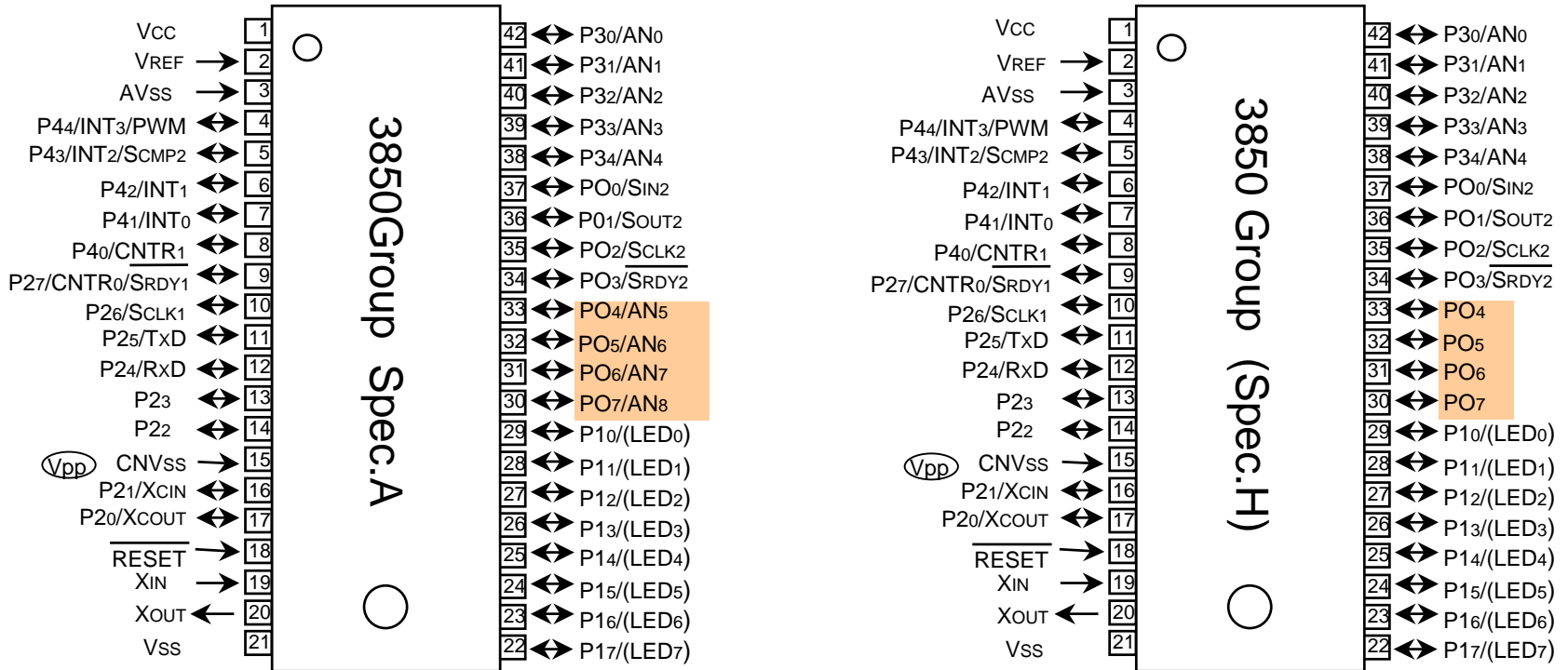
Difference between Spec.H and Spec.A

Difference among 3850 Groups (Spec.A and Spec.H)

		3850Group(Spec.A)	3850 Group(Spec.H)
Related Products		M38503M2A-XXXFP/SP M38503M4A-XXXFP/SP M38504M6A-XXXFP/SP M38507M8A-XXXFP/SP M38507F8AFP/SP M38507ARLSS	M38503M2H-XXXFP/SP M38503M4H-XXXFP/SP M38504M6-XXXFP/SP M38507M8-XXXFP/SP M38507F8FP/SP M38504E6-XXXFP/SP M38504E6FP/SP M38504E6SS M38517RSS
A-D channels		9 channels(Port P30 – P34,P04-P07)	5 channels(P3 – P34)
Software pull-up resistor		Built in (Port P0 – P4)	–
Max.f(XIN)		12.5MHz	8MHz
ROM size		Mask: 8K,16K,24K,32K Flash: 32K PROM: –	Mask: 8K,16K,24K,32K Flash: 32K PROM:24K
Absolute maximum ratings	V _I CNV _{SS}	-0.3 to V _{CC} +0.3V(Mask ROM version) -0.3 to 6.5V(Flash Memory version)	-0.3 to V _{CC} +0.3V(Mask ROM version) -0.3 to 13 V(PROM version) -0.3 to 6.5 V(Flash Memory version)

Differences in Pin configuration

Differences Spec.A and Spec.H

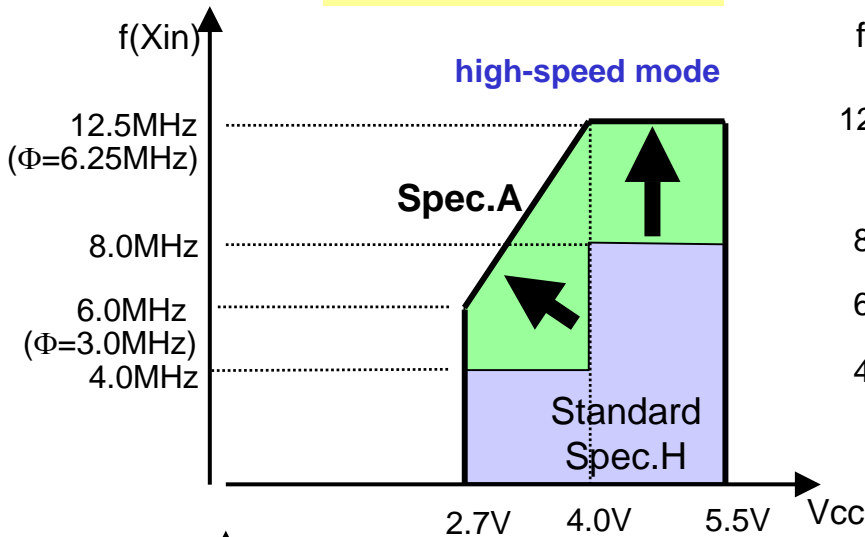


Outline : 42P2R-A/E, 42P4B

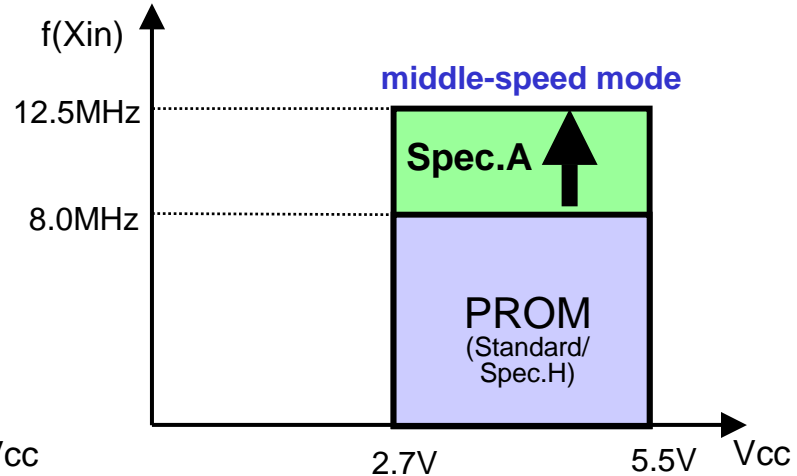
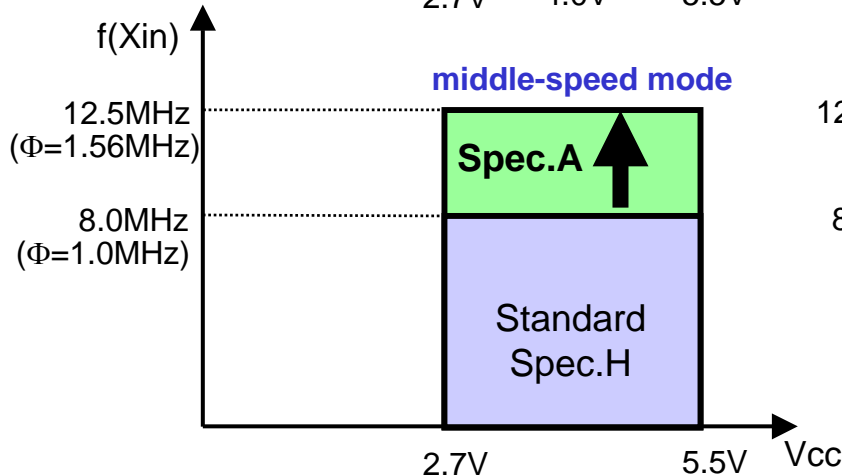
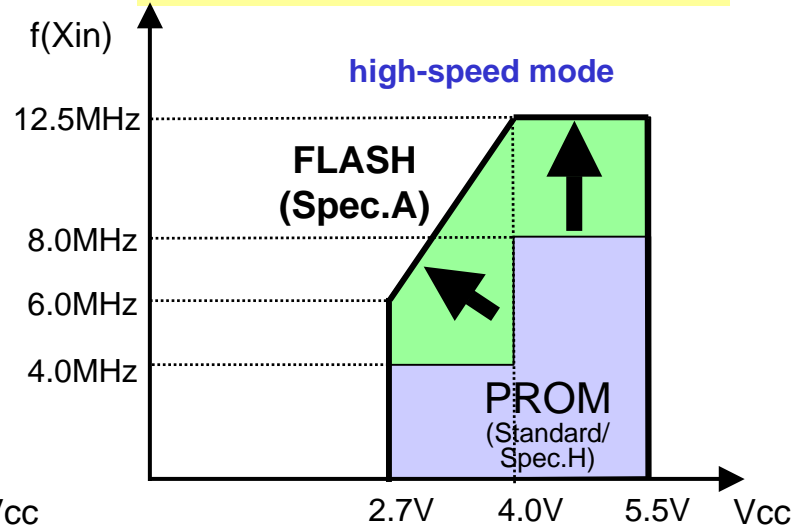
(Vpp) : Flash memory version, PROM version

Improvement of Operating Frequency Characteristics in 3850 Groups

Mask version



Flash/PROM version



Notes on converting Spec.H into Spec.A (1)

1. There are additional registers in Spec.A as following table. These are used for additional function in Spec.A, software pull-up resistor and an increase of analog input pin number .

When not using the additional functions in Spec.A, take the following (1) or (2)

- (1) Don't write any data to the additional registers(or bit). (Keep the initial state after releasing Reset)
- (2) Write the initial state to the additional registers(or bit) after releasing Reset

Additional Registers in Spec.A

Address	Spec.A	Spec.H
0012 ₁₆	Port P0P1P2 pull-up control register	Reserved
0013 ₁₆	Port P3 pull-up control register	Reserved
0014 ₁₆	Port P4 pull-up control register	Reserved
0037 ₁₆	Analog input selection register	Reserved

- If in the program for Spec.H any data have been not written to the additional registers' addresses which are reserved in Spec.H, this program can be used for Spec.A as it is (not requiring to change program codes).

Notes on converting Spec.H into Spec.A (2)

2. Spec.A's emulator MCU is M38507ARLSS which is under development.
When not using the additional functions, it is possible to develop program using M38517RSS
3. In Spec.A, the built-in pull-up resistors can be used for termination of unused pins.
4. There are differences in electric characteristics, operation margin, noise immunity and noise radiation between Spec.A and Spec.H due to the difference in the manufacturing processes.
When manufacturing an application system with Spec.H switching to use of Spec.A, please perform sufficient evaluations for the commercial samples of Spec.A Mask ROM version.

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April 1st, 2010
Renesas Electronics Corporation

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