

Migrating from FM25V02 to FM25V02A – KBA96042

Question : Is FM25V02A a drop-in replacement for the FM25V02 device? What are differences between the new (FM25V02A) and the old (FM25V02) parts?

Answer: The FM24V01A is a new silicon revision of the existing FM24V01 device and is a drop-in replacement for the FM24V01 device. The software can read the device ID to differentiate between FM25V02A and FM25V02. The device ID for the FM25V02A is 7F7F7F7F7F7FC22208h and for the FM25V02 is 7F7F7F7F7F7FC22200h. Apart from this no other changes are required in firmware to migrate. However, the two silicon revisions have the following features/parameters differences, which should be evaluated before migrating from the older silicon to the newer silicon.

Features/ Parameters	FM25V02	FM25V02A
Reserved opcode	No specified	11000011b 11000010b 01011010b 01011011b
Device ID	7F7F7F7F7F7FC22200h	7F7F7F7F7F7FC22208h
Electrostatic discharge voltage (Human Body Model)	1000 V	2000 V
Electrostatic discharge voltage (Charged Device Model)	1250 V	500 V
Electrostatic discharge voltage (Machine Model)	200	Not specified
Input resistance (/HOLD pin), for $V_{IN} = V_{IH}$ (min)	40 k Ω	30 k Ω
Input resistance (/HOLD pin), for $V_{IN} = V_{IL}$ (max)	1000 k Ω	800 k Ω
Thermal resistance (θ_{JA} , junction to ambient), 8-pin TDFN	21 $^{\circ}\text{C/W}$	31 $^{\circ}\text{C/W}$
Colck HIGH time (t_{CH})	20 ns	18 ns
Colck LOW time (t_{CL})	20 ns	18 ns
Output data valid time (t_{ODV})	18 ns	16 ns
Power-up V_{DD} (min) to first access (/CS LOW)	250 μs	1000 μs