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ABSTRACT

Embedded Phase Change Memories for 2020s

Based on today scenario of industry-standard Floating Gate solutions, key factors as performances, reliability and technology maturity are considered when facing more innovative memory cells. A comparative analysis of different Resistive Memories proposed as Non Volatile Memories for embedded applications is then presented. In particular the race seems to be open at 28nm, where different players are proposing different memories integrated in the Back End Of the Line. Original results obtained from multi-megabits arrays integrating Phase Change Memories are discussed covering cell scalability, High Temperature data retention and extended endurance capability, all in line with next generation eNVM application requirements.

BIO

Paola Zuliani received the Master degree in Physics from the University of Milan, Italy, in 1993. In 1997 she joined STMicroelectronics. She has more than 20 years of experience in the field of Non Volatile Memory for embedded applications, including EEPROM, Flash and since mid 2000s Phase Change Memories. She is author or co-author of around 60 papers published on International Journal or Conference proceedings and several patents in the field of Non Volatile Memory technology and design.