



Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics)

Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw

[Download now](#)

[Click here](#) if your download doesn't start automatically

Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics)

Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw

Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw

Polycrystalline SiGe has emerged as a promising MEMS (Microelectromechanical Systems) structural material since it provides the desired mechanical properties at lower temperatures compared to poly-Si, allowing the direct post-processing on top of CMOS. This CMOS-MEMS monolithic integration can lead to more compact MEMS with improved performance. The potential of poly-SiGe for MEMS above-aluminum-backend CMOS integration has already been demonstrated. However, aggressive interconnect scaling has led to the replacement of the traditional aluminum metallization by copper (Cu) metallization, due to its lower resistivity and improved reliability.

Poly-SiGe for MEMS-above-CMOS sensors demonstrates the compatibility of poly-SiGe with post-processing above the advanced CMOS technology nodes through the successful fabrication of an integrated poly-SiGe piezoresistive pressure sensor, directly fabricated above 0.13 μm Cu-backend CMOS. Furthermore, this book presents the first detailed investigation on the influence of deposition conditions, germanium content and doping concentration on the electrical and piezoresistive properties of boron-doped poly-SiGe. The development of a CMOS-compatible process flow, with special attention to the sealing method, is also described. Piezoresistive pressure sensors with different areas and piezoresistor designs were fabricated and tested. Together with the piezoresistive pressure sensors, also functional capacitive pressure sensors were successfully fabricated on the same wafer, proving the versatility of poly-SiGe for MEMS sensor applications. Finally, a detailed analysis of the MEMS processing impact on the underlying CMOS circuit is also presented.

 [Download Poly-SiGe for MEMS-above-CMOS Sensors: 44 \(Springe ...pdf](#)

 [Read Online Poly-SiGe for MEMS-above-CMOS Sensors: 44 \(Sprin ...pdf](#)

Download and Read Free Online Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw

From reader reviews:

Linda Caron:

Reading can called head hangout, why? Because while you are reading a book especially book entitled Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) the mind will drift away trough every dimension, wandering in each and every aspect that maybe unknown for but surely can be your mind friends. Imaging each and every word written in a guide then become one type conclusion and explanation this maybe you never get before. The Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) giving you an additional experience more than blown away the mind but also giving you useful details for your better life in this era. So now let us demonstrate the relaxing pattern the following is your body and mind will likely be pleased when you are finished reading through it, like winning an activity. Do you want to try this extraordinary paying spare time activity?

Daniel Hayes:

Your reading sixth sense will not betray you, why because this Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) book written by well-known writer who really knows well how to make book that could be understand by anyone who have read the book. Written throughout good manner for you, leaking every ideas and producing skill only for eliminate your own personal hunger then you still doubt Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) as good book not just by the cover but also by the content. This is one e-book that can break don't evaluate book by its protect, so do you still needing yet another sixth sense to pick this kind of!? Oh come on your studying sixth sense already told you so why you have to listening to an additional sixth sense.

Devin Glass:

Within this era which is the greater man or woman or who has ability in doing something more are more special than other. Do you want to become considered one of it? It is just simple way to have that. What you are related is just spending your time little but quite enough to get a look at some books. On the list of books in the top record in your reading list is usually Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics). This book that is qualified as The Hungry Inclines can get you closer in getting precious person. By looking upward and review this book you can get many advantages.

Adam Carter:

As a college student exactly feel bored for you to reading. If their teacher inquired them to go to the library or make summary for some publication, they are complained. Just small students that has reading's heart or real their passion. They just do what the instructor want, like asked to go to the library. They go to there but nothing reading very seriously. Any students feel that studying is not important, boring along with can't see colorful photos on there. Yeah, it is to be complicated. Book is very important to suit your needs. As we

know that on this age, many ways to get whatever we would like. Likewise word says, ways to reach Chinese's country. So , this Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) can make you truly feel more interested to read.

Download and Read Online Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw #N2RFQZAMLIJ

Read Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) by Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw for online ebook

Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) by Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) by Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw books to read online.

Online Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) by Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw ebook PDF download

Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) by Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw Doc

Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) by Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw Mobipocket

Poly-SiGe for MEMS-above-CMOS Sensors: 44 (Springer Series in Advanced Microelectronics) by Pilar Gonzalez Ruiz, Kristin De Meyer, Ann Witvrouw EPub