

Journal of Semiconductors

Volume 34 Number 1 January 2013

SEMICONDUCTOR PHYSICS

- 012001 **Properties of a polaron in a quantum dot: a squeezed-state variational approach (5 pages)**

Yin Jiwen, Li Weiping, and Yu Yifu

- 012002 **Calculation of surface acoustic waves in a multilayered piezoelectric structure (6 pages)**

Zhang Zuwei, Wen Zhiyu, and Hu Jing

SEMICONDUCTOR MATERIALS

- 013001 **Ultrasonic spray pyrolysis deposition of SnSe and SnSe₂ using a single spray solution (4 pages)**

Jorge Sergio Narro-Rios, Manoj Ramachandran, Dalia Martínez-Escobar, and Aarón Sánchez-Juárez

- 013002 **First-principles calculation on the concentration of intrinsic defects in 4H-SiC (4 pages)**

Cheng Ping, Zhang Yuming, and Zhang Yimen

- 013003 **Cu doped AlSb polycrystalline thin films (3 pages)**

Wu Lili, Jin Shuo, Zeng Guanggen, Zhang Jingquan, Li Wei, Feng Lianghuan, Li Bing, and Wang Wenwu

SEMICONDUCTOR DEVICES

- 014001 **Effect of tunneling current on the noise characteristics of a 4H-SiC Read Avalanche diode (5 pages)**

Deepak K. Karan, Pranati Panda, and G. N. Dash

- 014002 **Analysis of the subthreshold characteristics of vertical tunneling field effect transistors (7 pages)**

Han Zhongfang, Ru Guoping, and Ruan Gang

- 014003 **Capacitance and conductance dispersion in AlGaN/GaN heterostructure (4 pages)**

Yan Dawei, Wang Fuxue, Zhu Zhaomin, Cheng Jianmin, and Gu Xiaofeng

- 014004 **Transconductance bimodal effect of PDSOI submicron H-gate MOSFETs (6 pages)**

Mei Bo, Bi Jinshun, Bu Jianhui, and Han Zhengsheng

- 014005 **SPT⁺-IGBT characteristics and optimization (4 pages)**

Chu Weili, Zhu Yangjun, Zhang Jie, and Hu Aibin

- 014006 **Increasing substrate resistance to improve the turn-on uniformity of a high-voltage multi-finger GG-nLDMOS (4 pages)**

He Chuan, Jiang Lingli, Fan Hang, and Zhang Bo

- 014007 **A novel latch-up free SCR-LDMOS with high holding voltage for a power-rail ESD clamp (5 pages)**

Pan Hongwei, Liu Siyang, and Sun Weifeng

- 014008 **Influence of Cu_xS back contact on CdTe thin film solar cells (3 pages)**

Lei Zhi, Feng Lianghuan, Zeng Guanggen, Li Wei, Zhang Jingquan, Wu Lili, and Wang Wenwu

(Continued on inside back cover)

SEMICONDUCTOR INTEGRATED CIRCUITS

- 015001 A novel broadband power amplifier in SiGe HBT technology (5 pages)**
Li Wenyuan and Zhang Qian
- 015002 A fully integrated multi-standard frequency synthesizer for GNSS receivers with cellular network positioning capability (8 pages)**
Li Bin, Fan Xiangning, Li Wei, Zhang Li, and Wang Zhigong
- 015003 A wideband current-commutating passive mixer for multi-standard receivers in a $0.18 \mu\text{m}$ CMOS (9 pages)**
Bao Kuan, Fan Xiangning, Li Wei, and Wang Zhigong
- 015004 A wideband $0.13 \mu\text{m}$ CMOS LC-VCO for IMT-advanced and UWB applications (6 pages)**
Tang Xin, Huang Fengyi, Tang Xusheng, and Shao Mingchi
- 015005 Design of a novel mixer with high gain and linearity improvement for DRM/DAB applications (5 pages)**
Wu Yiqiang, Wang Zhigong, Xu Jian, Wang Jian, Zhang Ouli, and Tang Lu
- 015006 Total ionizing dose effects on a radiation-induced BiMOS analog-to-digital converter (6 pages)**
Wu Xue, Lu Wu, Wang Yiyuan, Xu Jialing, Zhang Leqing, Lu Jian, Yu Xin, Zhang Xingyao, and Hu Tianle
- 015007 Monolithic quasi-sliding-mode controller for SIDO buck converter with a self-adaptive free-wheeling current level (7 pages)**
Wu Xiaobo, Liu Qing, Zhao Menglian, and Chen Mingyang
- 015008 A wideband frequency synthesizer with VCO and AFC co-design for fast calibration (6 pages)**
Lou Liheng, Sun Lingling, Gao Haijun, and Zhan Haiting
- 015009 A new LTPS TFT AC pixel circuit for an AMOLED (5 pages)**
Zhang Yongwen and Chen Wenbin
- 015010 An 11-bit ENOB, accuracy-programmable, and non-calibrating time-mode SAR ADC (11 pages)**
Fan Hua, Han Xue, Wei Qi, and Yang Huazhong