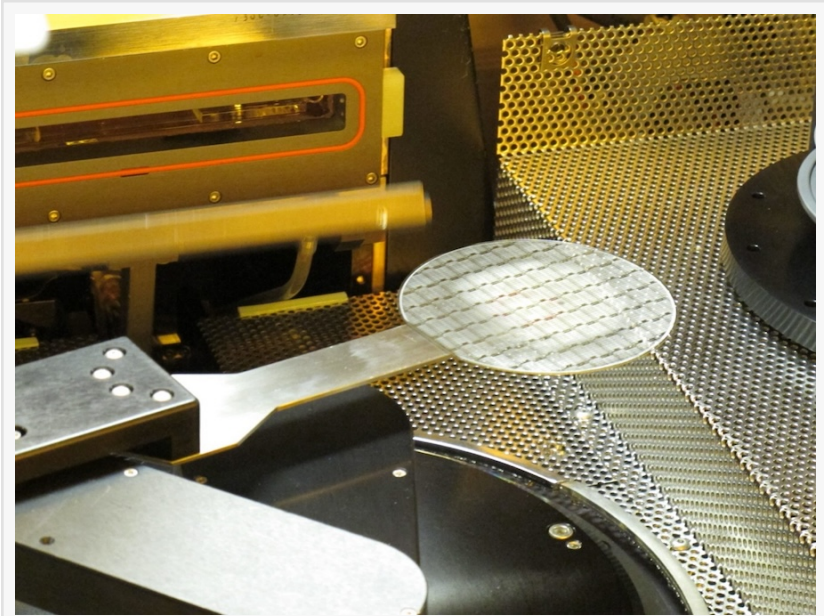


WIN Semiconductors Announces High Ruggedness mmWave RF GaN on SiC Technology

NP12-0B platform provides rugged RF, DC performance with added moisture resistance enabling the use of plastic packages for high performance power applications

TAO YUAN, TAIWAN, June 14, 2024
/EINPresswire.com/ -- WIN

Semiconductors Corp (TPEX:3105), the world's largest pure-play compound semiconductor foundry, has expanded its portfolio of RF GaN technologies with the beta release of a highly robust mmWave gallium nitride (GaN) on silicon carbide (SiC) technology, NP12-0B. Core to this platform is a 0.12 μ m gate RF GaN HEMT technology incorporating multiple refinements to enhance DC and RF ruggedness and add die-level moisture resistance. NP12-0B integrates multiple transistor improvements providing high ruggedness when operated in deep-saturation/high-compression pulsed and CW conditions. This new rugged technology eliminates the pulse droop behavior observed in GaN HEMT power amplifiers thereby improving the range and sensitivity of pulsed mode radar systems. Additionally, NP12-0B is available with the Enhanced Moisture Ruggedness option and provides excellent humidity resistance when used in plastic packages.



WIN NP12-0B Platform



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Supporting full MMICs, the NP12-0B platform allows customers to develop compact pulsed or

CW saturated power amplifiers for applications through 50GHz. This process is qualified for 28V operation, and in the 29GHz band generates saturated output power of 4.5 watts/mm with 12 dB linear gain and over 40% power added efficiency. The NP12-0B technology is ideal for rugged pulsed-mode high power amplifiers used in advanced radar systems.

NP12-0B has reached beta release and is available for early access MPW runs. Qualification testing is complete and final modeling/PDK generation is expected to conclude in August 2024 with full production release scheduled for late Q3 '24.

Contact a WIN Semiconductors regional sales manager for information about sample kits and timing of MPW runs.

WIN Semiconductors Corp at the 2024 IEEE MTT-S International Microwave Symposium 2022, booth 531

WIN Semiconductors Corp. will be showcasing its compound semiconductor RF and mm-Wave solutions in booth 531 at the 2022 IEEE International Microwave Symposium (IMS) being held at the Walter E. Washington Convention Center in Washington, DC, June 16th through June 21st.

For more information, visit WIN Semiconductors Corp. at <https://www.winfoundry.com/>

About WIN Semiconductors Corp

WIN Semiconductors Corp. is the leading global provider of pure-play GaAs and GaN wafer foundry services for the wireless, infrastructure, and networking markets. WIN provides its foundry partners a diverse portfolio of Hetero-junction Bipolar Transistor and Pseudomorphic High Electron Mobility Transistor, Gallium Nitride High Electron Mobility Transistor, PIN Diode and Optical Device technology solutions that support leading edge products for applications from 50 MHz to 170 GHz and through light-wave. Custom products built by WIN Semiconductors Corp. are found in a vast array of markets, including smartphone, mobile infrastructure, 3-D sensing, optical communications, CATV, aerospace, defense, satellite, and automotive applications.

For over 25 years, WIN has provided foundry services from its state of the art, ISO9001/14001 certified 150mm GaAs facility headquartered in Taoyuan City, Taiwan. This multi-site manufacturing facility has approximately 3000 employees and provides WIN customers with a diverse array of device technology platforms and value-added services, including DC/RF product testing, Cu wafer bumping and advanced package solutions for accelerated product development.

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