# PRESS RELEASE

## Global Communication Semiconductors, LLC (GCS) Announces a GaAs based Super-Low-Barrier Terahertz Mixer Diode to Further Expand its THz Diode Process Portfolio for Millimeter-Wave Transceiver Systems

May 4, 2015, TORRANCE, CALIF. - - - Global Communication Semiconductors, LLC (GCS), a pure-play III-V compound semiconductor wafer foundry announced today that its proprietary super-low-barrier Terahertz mixer diode MMIC foundry process will now be offered to address the millimeter-wave transceiver applications that require low LO drive.

"Up until now, low-barrier diode with a forward voltage ($V_f$) of 0.3V was mainly dominated by Silicon technology. However, the drawback of Silicon technology is its low electron mobility and high diode resistance, resulting in high mixer conversion loss, which limits its operation to below 6 GHz. Through bandgap engineering we have developed a GaAs-based Super-Low-Barrier (SLB) THz Schottky diode with a $V_f$ of 0.3V that is comparable to Silicon technology but offers the advantages of low series resistance and MMIC compatibility" commented Brian Ann, President and CEO of GCS. "This latest technology breakthrough combines the advantages of low $V_f$ and a high fco of 1.5 THz, which has enabled one of our customers to demonstrate broadband MMIC mixers that cover 6-26.5 GHz and 25-67GHz bands with low conversion losses of 6 dB and 8dB, respectively. The addition of this SLB diode further expands our THz diode process offering for mixer and multiplier applications where either higher linearity or low LO power is required," continued Mr. Ann.

***Global Communication Semiconductors LLC, an ISO 9100 certified company, based in Torrance, California, provides compound semiconductor foundry services to the wireless telecommunication, high-speed network and fiber optical communication industries. GCS currently offers foundry services for GaN/SiC HEMT, InGaP and InP HBT, Power and Switch PHEMT processes and various optoelectronics processes such as PIN PD, APD, VCSEL and Edge-Emitting Lasers. Additional information may be found at www.gcsincorp.com.***

To learn more about our foundry offering, please visit us at the 2015 IMS at booth 1730. For more information please visit us at http://www.gcsincorp.com, or contact:

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