

November 22, 2021

Sumitomo Electric Industries, Ltd

Sumitomo Electric Device Innovations USA, Inc.

GaN Semiconductors are Enabling New X-band Radars

San Jose, CA – November 22, 2021 - Sumitomo Electric Industries, Ltd. and its Group company Sumitomo Electric Device Innovations USA, Inc., a leading provider of advanced radiofrequency (RF), wireless and optical communications solutions, introduce Sumitomo Electric’s line of high-power gallium nitride (GaN) products for X-Band radar applications for Ground based and shipborne radars.

Next-generation X-Band radars face significant size, weight, power, and cost (SWAP-C) challenges. Among the challenges are the RF power amplifier designs used in these radar systems. Sumitomo Electric has developed a line of high-power GaN X-Band devices that enable RF solid-state power amplifiers to meet the SWAP-C challenges of these new radars while also improving reliability versus tube amplifiers. GaN provides very high power and bandwidth that improves performance, and is a proven and reliable technology for radar applications.

Sumitomo Electric remains the leader in GaN and continues to lead in innovation and technology to help customers with lower costs and improved performance for next-generation radar systems.

Features of five new X-Band GaN devices:

	<u>SGC8595-300B-R</u>	<u>SGC0910-300B-R</u>	<u>SGC1011-300B-R</u>	<u>SGM6906VU</u>	<u>SGM6901VU</u>
Freq. (GHz)	8.5-9.5	9.0-10.0	9.8 - 10.5	9.2-9.5	8.5-10.1
Power (W)	270W <= 9.17 GHz 235 W >9.17 GHz	270 W <= 9.6 GHz 235W >9.6 GHz	250 W <= 10.3 GHz 220 W >10.3 GHz	43.7 W	24 W<= 10.1 GHz 21.4 W >10.1 GHz
Gain (dB)	8.3 dB <=9.17 GHz 7.7 dB >9.17 GHz	8.3 dB <=9.6 GHz 7.7 dB >9.6 GHz	8.0 dB <=10.3 GHz 7.4 dB >10.3 GHz	21.4 dB	23.3 dB
Efficiency	38 %	38 %	37 %	37 %	38 %
Package	Hermetic Metal/Ceramic Flange Mount	Hermetic Metal/Ceramic Flange Mount	Hermetic Metal/Ceramic Flange Mount	Hermetically Sealed SMT	Hermetically Sealed SMT

- Reference :

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<https://www.sei-device.com>