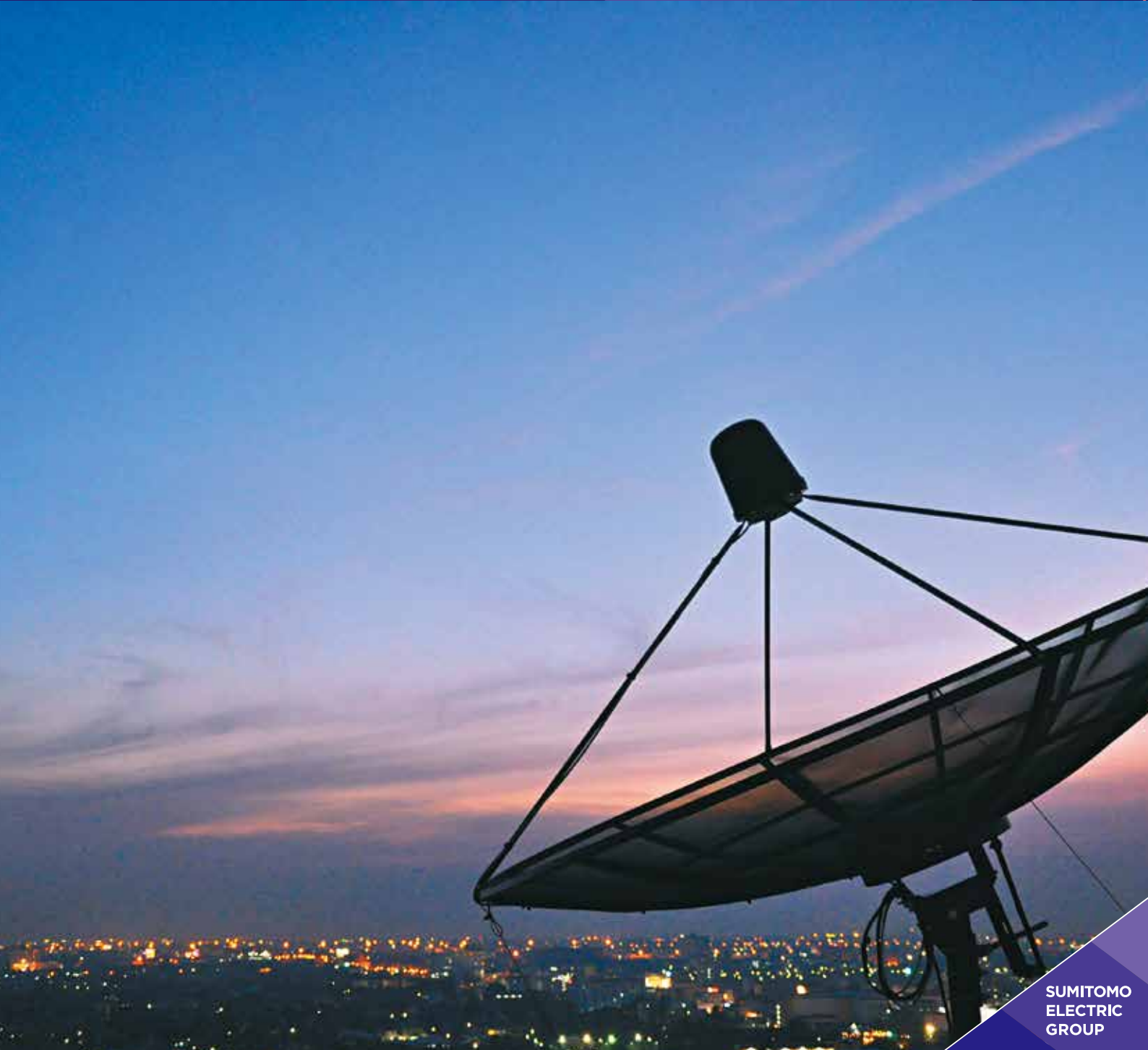


Wireless Device Products 2023

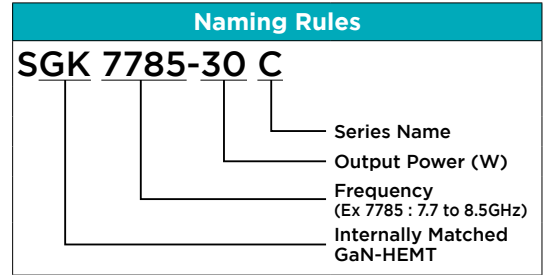
June 2023



GaN HEMTs for Radio Link and SATCOM

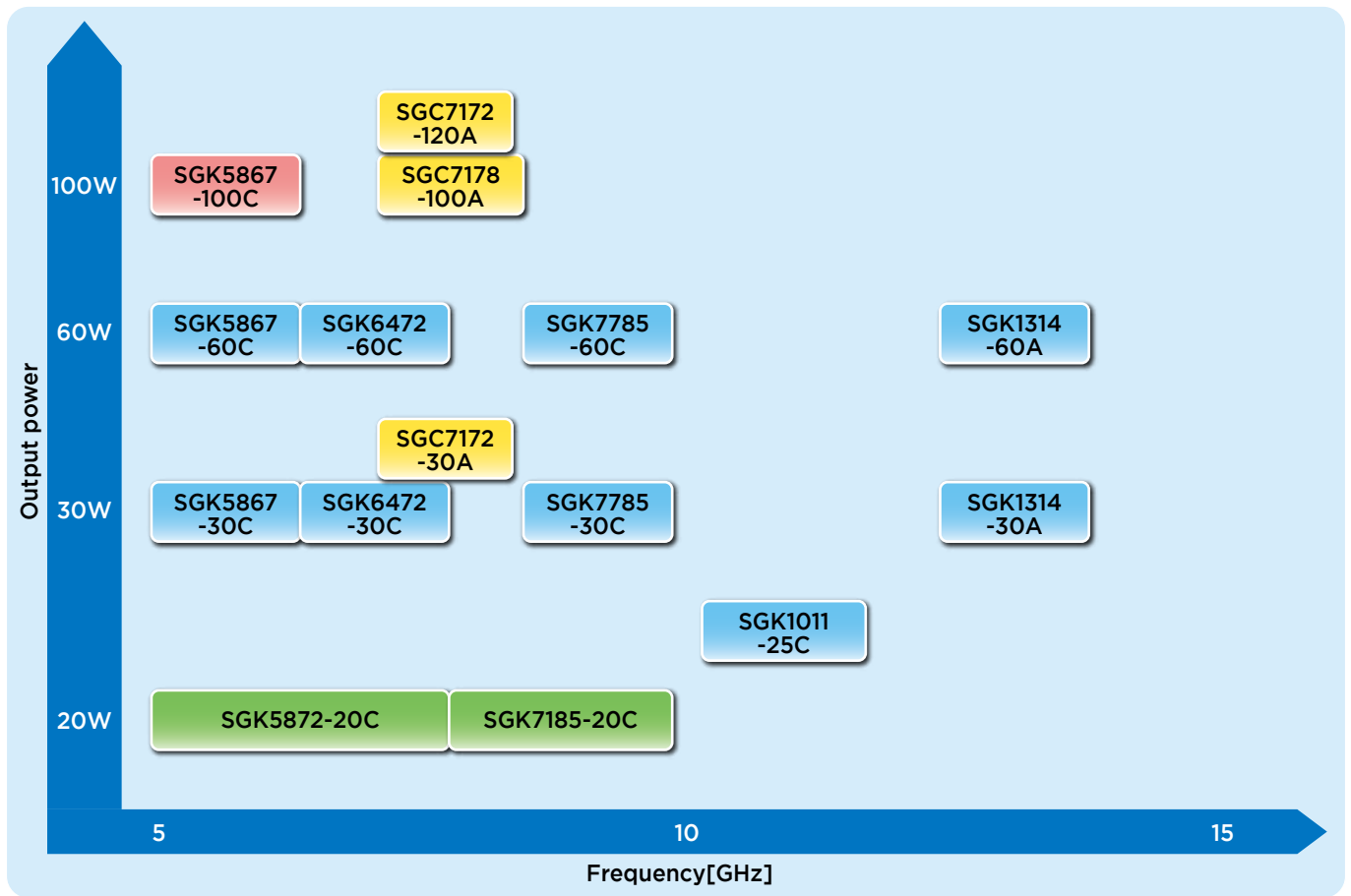
Features

- High Output Power
- High Gain
- High Efficiency
- Internally Matched

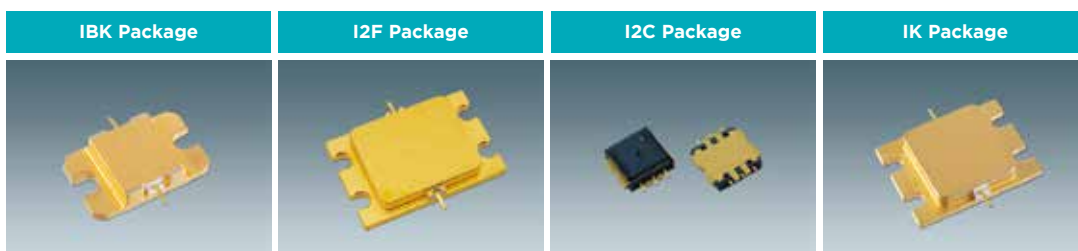


GaN HEMTs for Satcom Lineup

- I2F Package
 ■ IBK Package
 ■ I2C Package
 ■ IK Package



Product Photo



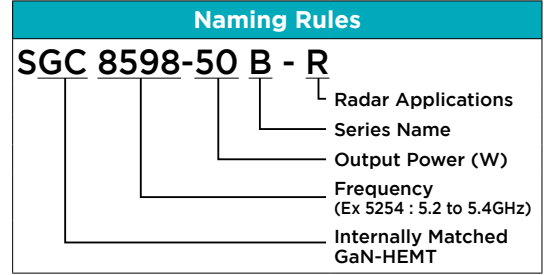


Part Number	Freq. (GHz)	IM3 (dBc)	SCL Pout (dBm)	Pout (dBm)	GL (dB)	η_{add} (%)	VDS (V)	IDS(DC) (A)	IDS(RF) (A)	Rth ($^{\circ}$ C/W)	Pkg
SGK5867-30C	5.85-6.75	-42	29.5	45	15	41	24	1.75	3.2	2.2	IBK
SGK5867-60C	5.85-6.75	-42	32	48	14	39	24	2.6	6.4	1.3	
SGK5867-100C	5.85-6.75	-25	44	50.5	14.5	45	24	4	10	0.55	I2F
SGK5872-20C	5.85-7.2	-43	27.5	43	14	41	24	1	2	2.7	I2C
SGK6472-30C	6.4-7.2	-42	29.5	45	14.5	40	24	1.75	3.2	2.2	IBK
SGK6472-60C	6.4-7.2	-42	32	48	13.5	41	24	2.6	6.4	1.3	
SGK7185-20C	7.1-8.5	-42	27.5	43	13	35	24	1	2	2.7	I2C
SGK7785-30C	7.7-8.5	-42	29.5	45	14	44	24	1.75	3.2	2.2	IBK
SGK7785-60C	7.7-8.5	-42	32	48	13	40	24	2.6	6.4	1.3	
SGK1011-25C	10.7-11.7	-42	29	45.5	11	40	24	1.2	3	1.9	IBK
SGK1314-30A	13.75-14.5	-30	38.5	45	8.5	32	24	0.9	3.3	1.5	
SGK1314-60A	13.75-14.5	-30	41.5	48	8.5	32	24	1.8	6.6	0.8	
SGC7178-100A	7.1-7.8	-27	44	50	12	36	35	0.8	6	0.65	IK
SGC7172-30A	7.14-7.24	-30	38	45.15	12.15	45	50	0.2	1.4	2.3	
SGC7172-120A	7.14-7.24	-33	44	51.3	12.3	43	50	1.3	5.9	0.65	

GaN HEMTs for Radar C/X-band

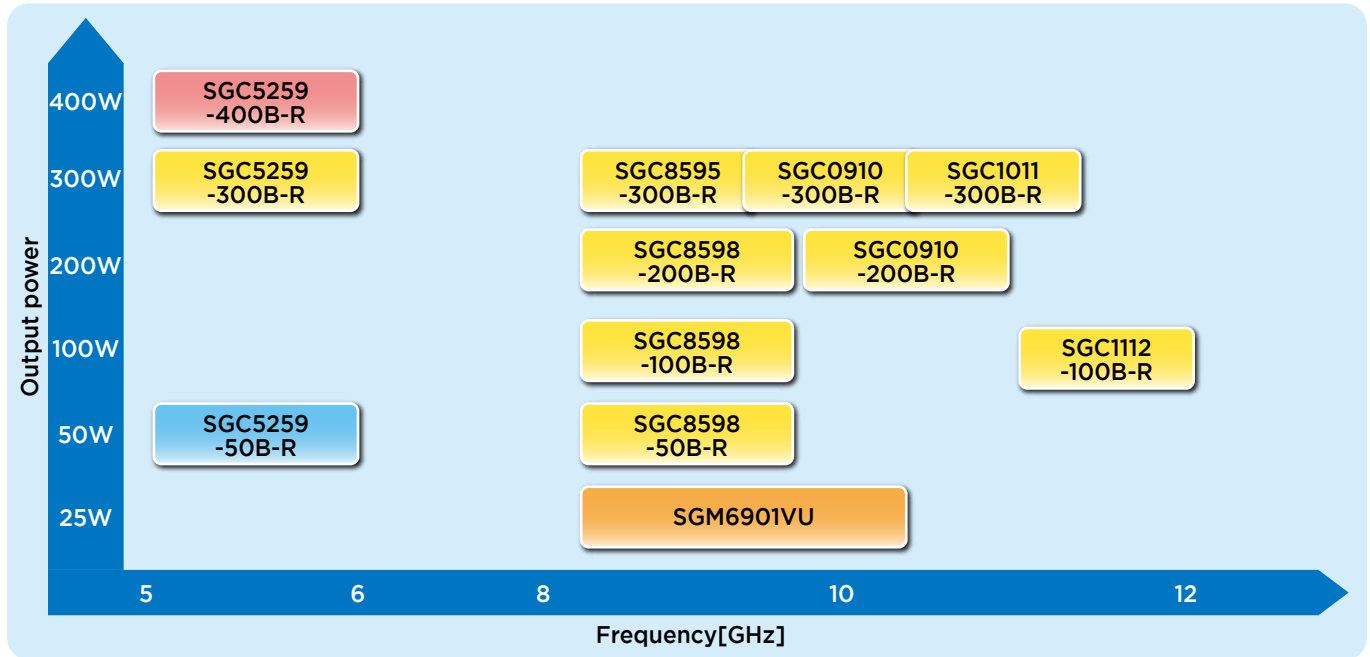
Features

- High Power up to 520W(Typ.)
- High Gain
- High Efficiency
- Broad Band
- Impedance Matched Z in/Z out = 50ohm



GaN HEMTs for Radar C/X Lineup

■ I2F Package
 ■ IBK Package
 ■ IK Package
 ■ VU Package



Part Number	Freq. (GHz)	Pout Typ. (dBm)	Gp Typ. (dB)	η_D Typ. (%)	VDS (V)	IDS(DC) (A)	Rth (°C/W)	Conditions Pulse Width/Duty	Pkg
SGC5259-50B-R	5.2-5.9	48	13	51	50	0.17	2.4	100μs/10%	IBK
SGC5259-300B-R	5.2-5.9	55.8(~5.7) 55.4(5.7~)	13.8(~5.7) 13.4(5.7~)	51	50	1	0.7		IK
SGC5259-400B-R	5.2-5.9	57.2	14.2	50	50	1.3	0.55		I2F
SGC8598-50B-R	8.5-9.8	48	11	41	50	0.17	2.4		IK
SGC8598-100B-R	8.5-9.8	51	10	41	50	0.33	1.4		
SGC8598-200B-R	8.5-9.8	54	10	39	50	0.66	0.6		
SGC8595-300B-R	8.5-9.5	55.3(~9.17) 54.7(9.17~)	9.3(~9.17) 8.7(9.17~)	38	50	1	0.7		
SGC0910-200B-R	9.2-10.5	53.5(~10.1) 52.5(10.1~)	9.5(~10.1) 8.5(10.1~)	39	50	0.66	0.6		
SGC0910-300B-R	9-10	55.3(~9.6) 54.7(9.6~)	9.3(~9.6) 8.7(9.6~)	38	50	1	0.7		
SGC1011-300B-R	9.8-10.5	55(~10.3) 54.4(10.3~)	9.0(~10.3) 8.4(10.3~)	37	50	1	0.7		
SGC1112-100B-R	11.4-12	51	9	37	50	1	1.4		
SGM6901VU	8.5-10.1	45.3(~9.8) 44.8(9.8~)	23.3(~9.8) 22.8(9.8~)	38	50	0.2	2.1		

GaN HEMTs for Marine Radar

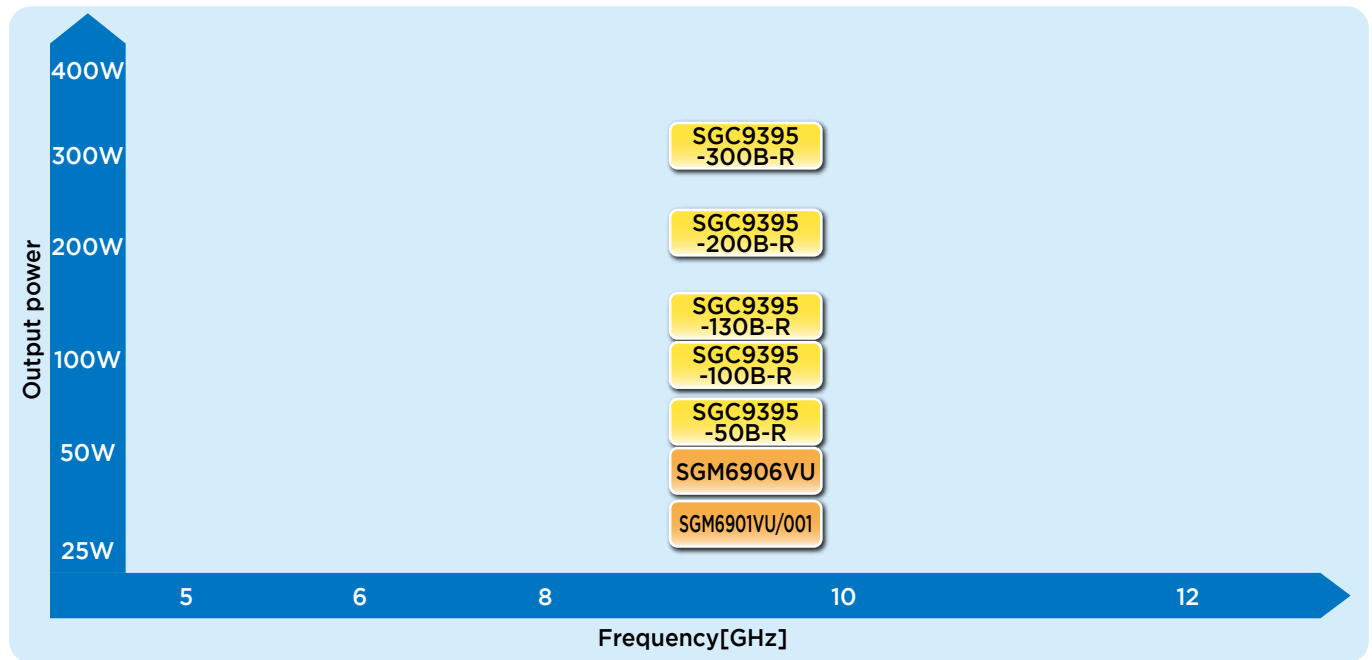
Features

- High Power up to 340W(Typ.)
- High Gain
- High Efficiency
- For Marine Radar
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$



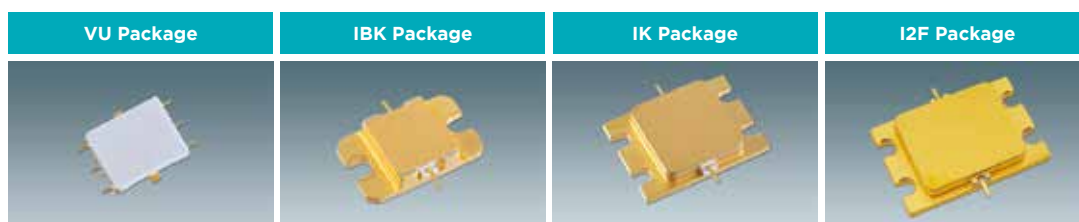
GaN HEMTs for Marine Radar Lineup

IK Package
 VU Package



Part Number	Freq. (GHz)	Pout Typ. (dBm)	Gp Typ. (dB)	η_D Typ. (%)	VDS (V)	IDS(DC) (A)	Rth ($^{\circ}C/W$)	Conditions Pulse Width/Duty	Pkg
SGC9395-50B-R	9.3-9.5	48	11	41	50	0.17	2.4	100 μ s/10%	IK
SGC9395-100B-R	9.3-9.5	51	10	41	50	0.33	1.4		
SGC9395-130B-R	9.3-9.5	52	10	39	50	0.5	1.2		
SGC9395-200B-R	9.3-9.5	54	10	39	50	0.66	0.6		
SGC9395-300B-R	9.3-9.5	55.3	9.3	38	50	1	0.7		
SGM6906VU	9.2-9.5	47.5	22.5	37	50	0.2	-	50 μ s/5%	VU
SGM6901VU/001	9.3-9.5	45.3	23.3	38	50	0.2	2.1	100 μ s/10%	

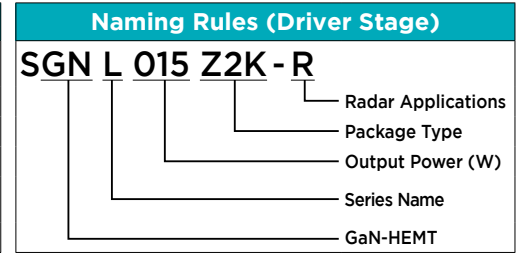
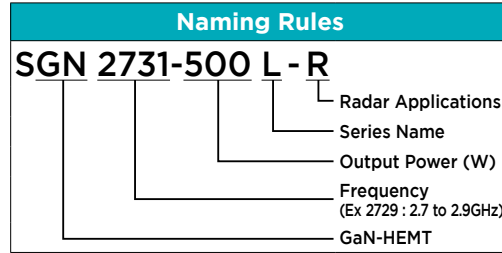
Product Photo



GaN HEMTs for Radar L/S-band

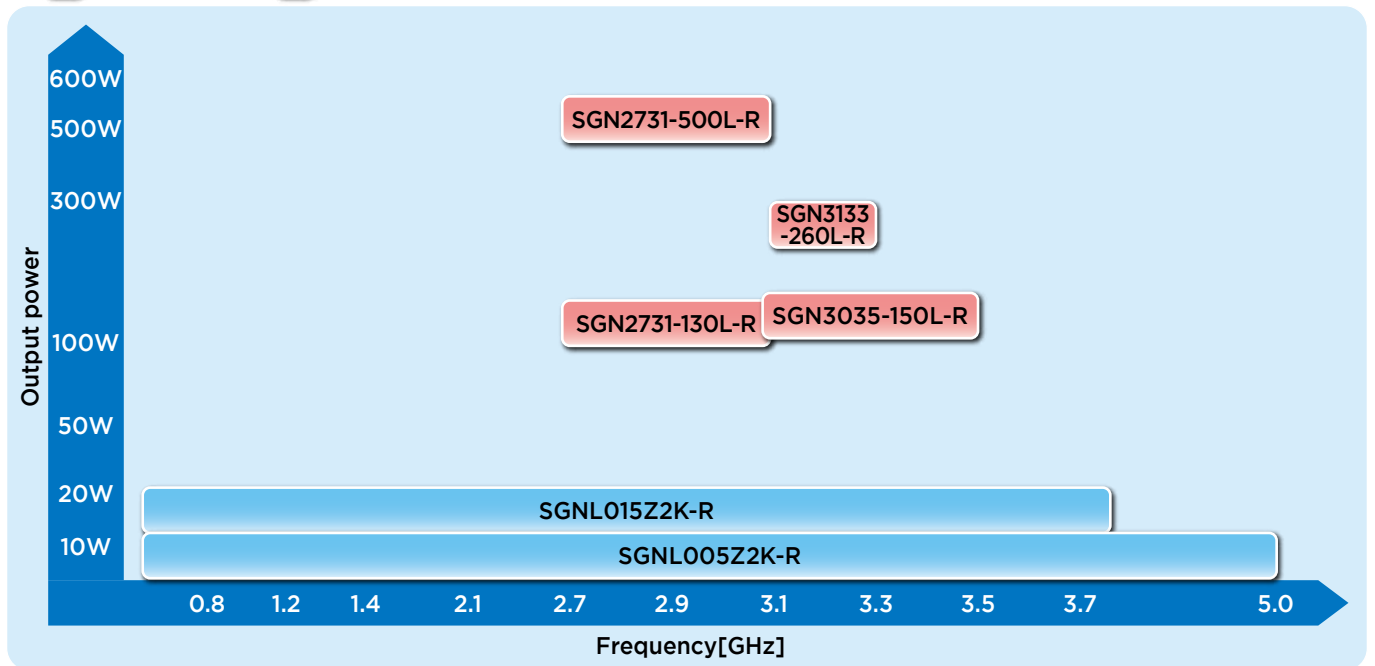
Features

- High Power up to 570W(Typ.)
- High Gain
- High Efficiency
- Broad Band
- Impedance Matched $Z_{in}/Z_{out} = 50\Omega$



GaN HEMTs for Radar L/S Lineup

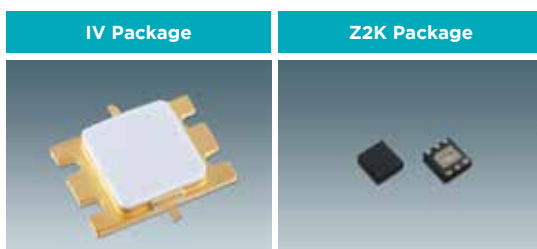
■ IV Package
 ■ Z2K Package



	Part Number	Freq. (GHz)	Pout Typ. (dBm)	Gp Typ. (dB)	η_D Typ. (%)	VDS (V)	IDS (DC)	Rth (°C/W)	Conditions Pulse Width/Duty	Pkg
*	SGNL015Z2K-R	DC-3.8	42.4	15.8	56	50	0.06	7.2	5μs/10%	Z2K
*	SGNL005Z2K-R	DC-5.0	38.3	16.0	52	50	0.02	9.5		
	SGN2731-130L-R	2.7-3.1	52.2	14.2	62	50	0.5	1.1	400μs/25%	IV
	SGN2731-500L-R	2.7-3.1	57.4	12.4	57	50	1.5	0.55	120μs/10%	
	SGN3035-150L-R	3.0-3.5	52.8	13.8	62	50	0.5	1.1	200μs/10%	
	SGN3133-260L-R	3.1-3.3	55.1	11.4	57	32	1	0.55		

* : Impedance un-matched

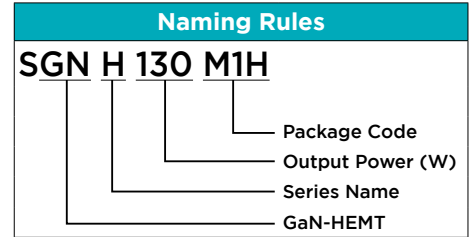
Product Photo



GaN HEMTs for General Purpose

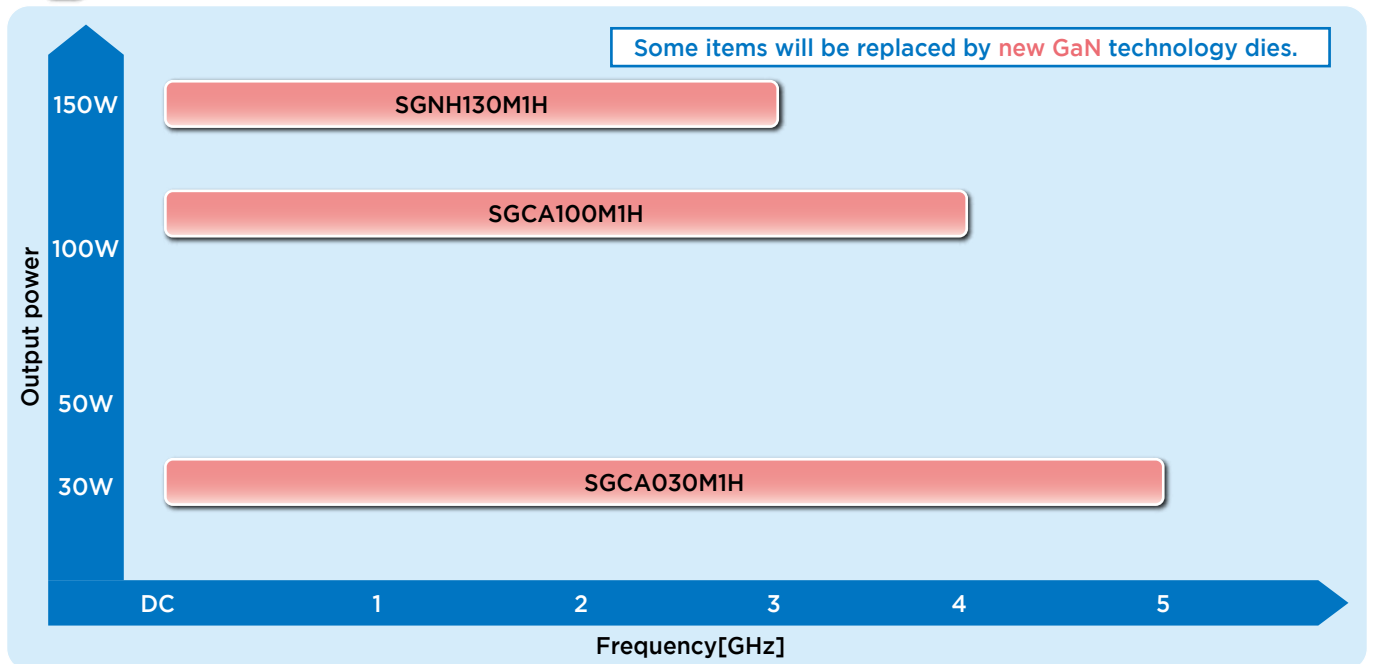
Features

- High Power up to 150W(Typ.)
- High Efficiency
- CW Operable
- Concurrent Broadband Operation
- Small Flangeless Package



GaN HEMTs for General Purpose Lineup

M1H Package



Part Number	Freq. (GHz)	Operation	VDS (V)	Spec. frequency	Pout Typ. (dBm)	Gp Typ. (dB)	η_D Typ. (%)	Pkg
SGCA030M1H	DC-5	CW	50	5	45.5	9.5	53	M1H
SGCA100M1H	DC-4	CW	50	3.9	50.5	14.5	48	
* SGNH130M1H	DC-3.0	CW	50	3	51.9	13.9	56.5	

* : To be replaced by new GaN technology dies.

Measured under pulse condition.

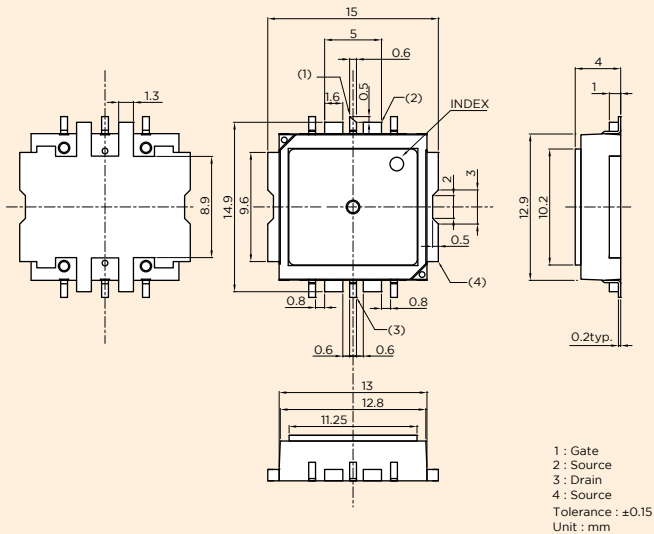
Product Photo



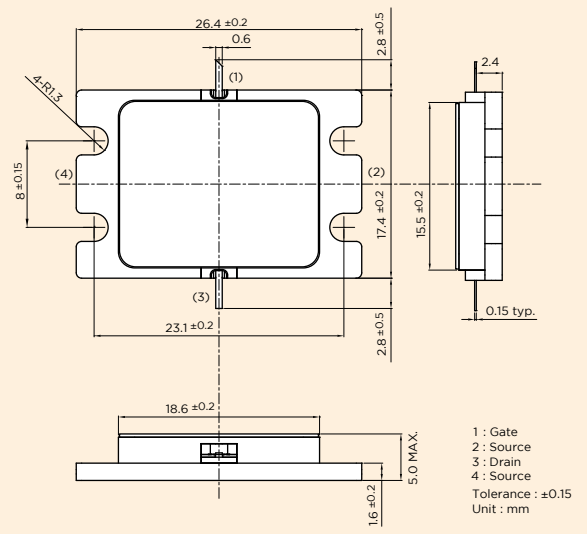
Sumitomo terminated some of GaN HEMT products manufactured by outdated equipment and plans to replace them with new GaN technology dies. Contact us if you are interested or have any questions.

Packages

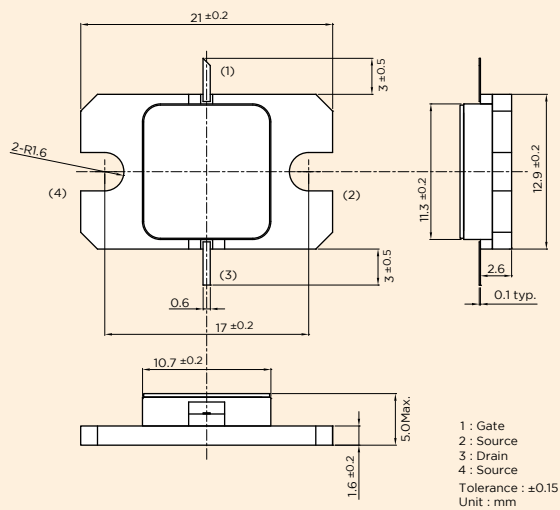
I2C



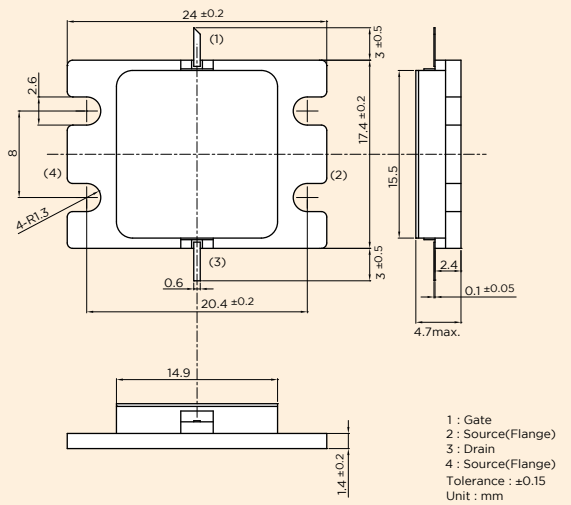
I2F



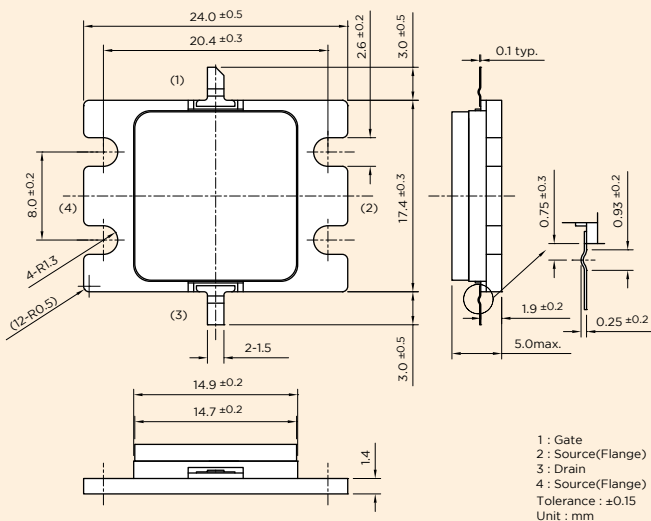
IBK



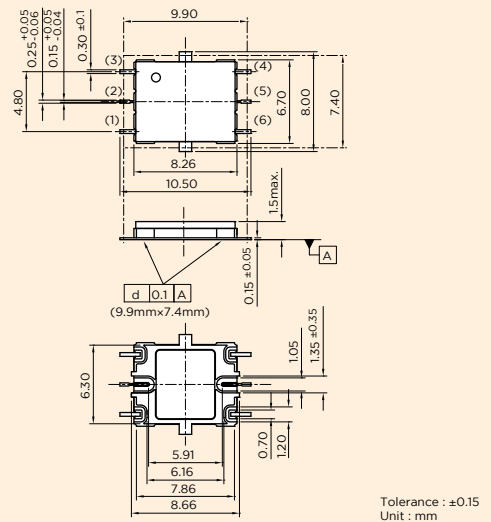
IK



IV



VU



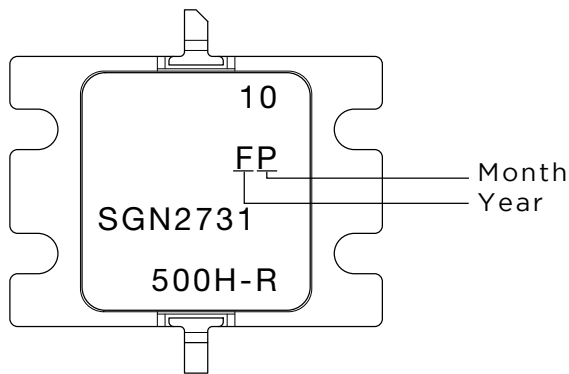
Sealing Rules

■ Year/Month code

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Code	W	X	Y	Z	A	B	C	D	E	F	G	H

Note: Code letter is cycling 25 alphabet without Q.

Month	1	2	3	4	5	6	7	8	9	10	11	12
Code	H	M	N	P	R	S	T	U	W	X	Y	Z

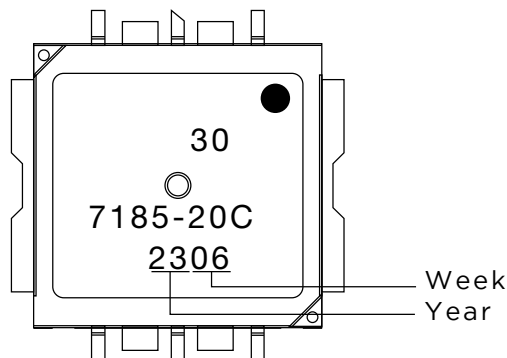


Note:

Year/Month code consist of two digit alphabet shown at the above table.

(e.g. "FP" stands for the device is manufactured in year 2023 (Year code "F") and April (Month code "P"). See the above table.)

■ Year/Week code



Note:

Year/week code consist of four digit number. The first two digits are last two digits of the year and last two digits show the week code following European International Standard.

(e.g. "2306" stands for the device is manufactured in year 2023, week 06. The week has first Thursday in the year is defined as week 1.)

Creating Value for Customers

Corporate Quality Assurance

Sumitomo Electric strives to achieve the highest quality and reliability performance on all the products it supplies. This is accomplished through a systemic approach that emphasizes quality at every stage of product development through the manufacturing process. Quality is built into the product from design to wafer fabrication, test, and assembly. Sumitomo Electric has a Quality Management System that is certified to ISO9000 (ISO9001: 2008) and Aerospace Quality Management System JIS Q 9100. This system assures customers the highest quality product with long term reliability required for their applications.

Quality Management

ISO9001 : 2015/JIS Q 9001 : 2015 (Certificate Number : JMI-0278)

Registration Date : September 17, 1993
Last Renewal Date : September 15, 2021
Expiry Date : September 14, 2024



JIS Q 9100:2016(AS9100D, prEN9100:2018) (Certificate Number : JQA-AS0068)

Registration Date : August 20, 2010
Last Renewal Date : September 15, 2021
Expiry Date : September 14, 2024
OASIS Identification Number : 6131093485



Environmental Management

ISO14001 Record (Certificate Number : EC98J1050)

Aug. 1998	ISO14001
Aug. 2004	Expansion to Eudyna Microwave Assembly (Kofu)
Aug. 2007	Expansion to Eudyna Microwave Assembly (Matsushiro)
Aug. 2010	ISO14001: 2004 (Sumitomo Electric Device Innovations, Inc.)
Jul. 2018	ISO14001: 2015 Transfer





Sumitomo Electric

Reliable, Advanced Technology Generating Value for the Customer

As an industry pioneer for over 30 years, Sumitomo Electric has overcome many technical challenges to become the most respected supplier of compound semiconductor products.

Our advanced technologies and solutions continue to meet the demand of growing and diverse markets in the area of information/communications and sensor/radar. At Sumitomo Electric, we are committed to providing the best value for our customers while protecting the global environment.

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ATTENTION

Information in this document is subject to change without notice.
