

Wireless Device Products 2025



Power GaN

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
- Small Flangeless Package

Naming Rules

SGC 8598-50 B - R

SGC

8598

50

B

R

Radars Applications

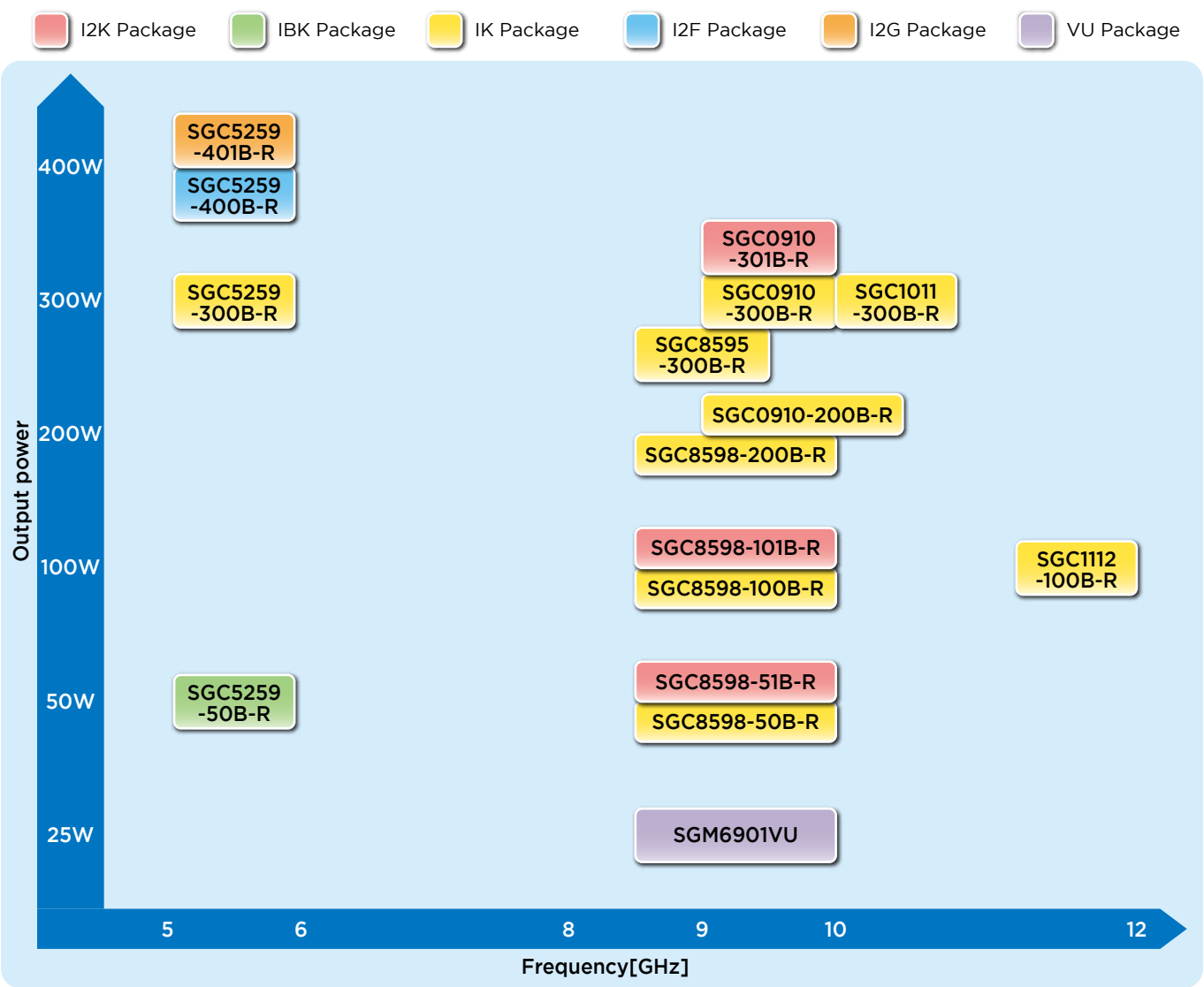
Series Name

Output Power (W)

Frequency
(Ex 5254 : 5.2 to 5.4GHz)

Internally Matched
GaN-HEMT

GaN HEMTs for Radar C/X Lineup



Product Photo





Part Number	Freq. (GHz)	Pout Typ. (dBm)	Gp Typ. (dB)	Efficiency (%)	VDS (V)	IDS(DC) (A)	Conditions Pulse Width/Duty	Pkg
SGC5259-50B-R	5.2-5.9	48	13	51	50	0.17	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		IK
SGC5259-400B-R	5.2-5.9	57.2	14.2	50	50	1.3		I2F
SGC5259-401B-R	5.2-5.9	57.2	14.2	50	50	1.3		I2G
SGC8598-50B-R	8.5-9.8	48	11	41	50	0.17		IK
SGC8598-51B-R	8.5-9.8	48	11	41	50	0.17		I2K
SGC8598-100B-R	8.5-9.8	51	10	41	50	0.33		IK
SGC8598-101B-R	8.5-9.8	51	10	39	50	0.33		I2K
SGC8598-200B-R	8.5-9.8	54	10	39	50	0.66		IK
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		
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		
SGC0910-300B-R	9-10	55.3(~9.6) 54.7(9.6~)	9.3(~9.6) 8.7(9.6~)	38	50	1		I2K
SGC0910-301B-R	9-10	55.3(~9.6) 54.7(9.6~)	9.3(~9.6) 8.7(9.6~)	38	50	1		
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		IK
SGC1112-100B-R	11.4-12	51	9	37	50	1		VU
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		

I2G Package



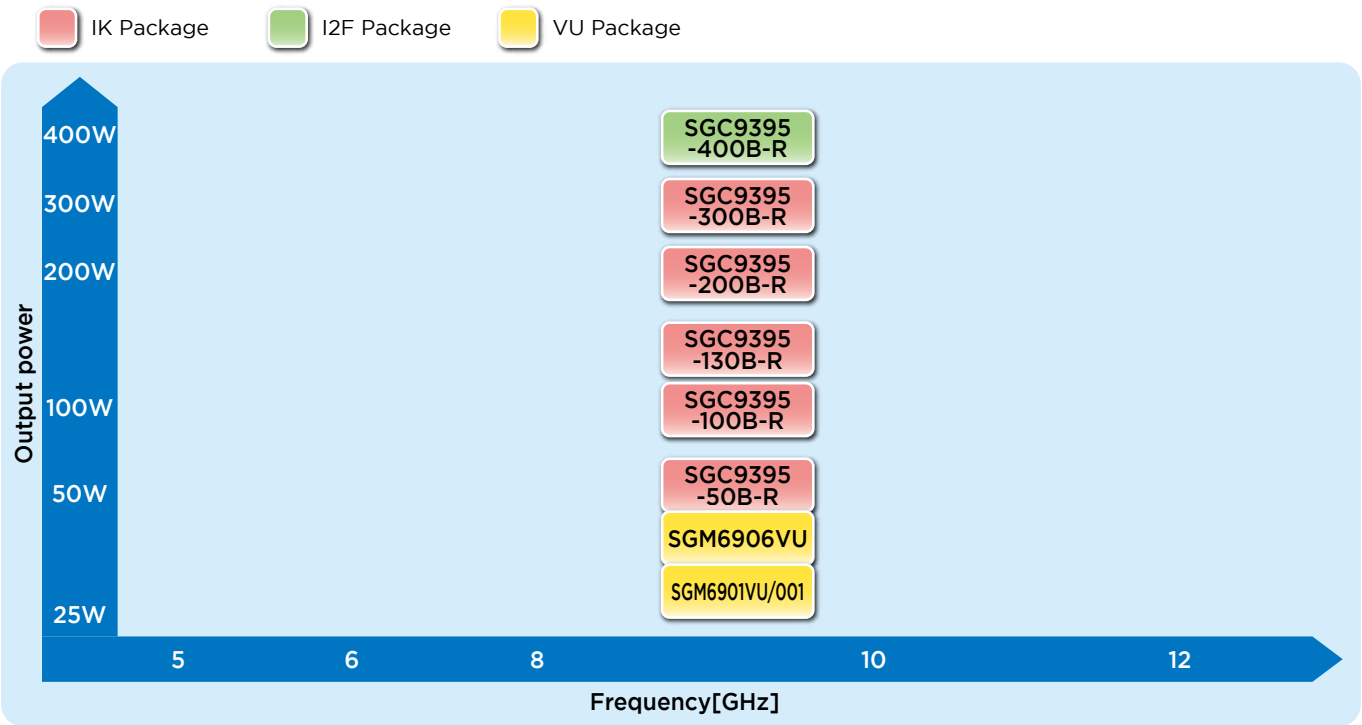
GaN HEMTs for Marine Radar

Features

- High Power up to 450W(Typ.)
- High Gain
- High Efficiency
- For Marine Radar
- Impedance Matched Z in/Z out = 50ohm



GaN HEMTs for Marine Radar Lineup



Part Number	Freq. (GHz)	Pout Typ. (dBm)	Gp Typ. (dB)	Efficiency (%)	VDS (V)	IDS(DC) (A)	Conditions Pulse Width/Duty	Pkg
SGC9395-50B-R	9.3-9.5	48	11	41	50	0.17	100μs/10%	IK
SGC9395-100B-R	9.3-9.5	51	10	41	50	0.33		
SGC9395-130B-R	9.3-9.5	52	10	39	50	0.5		
SGC9395-200B-R	9.3-9.5	54	10	39	50	0.66		
SGC9395-300B-R	9.3-9.5	55.3	9.3	38	50	1		
SGC9395-400B-R	9.3-9.5	56.5	8.5	38	50	1.3		I2F
SGM6906VU	9.2-9.5	47.5	22.5	37	50	0.2	50μs/5%	VU
SGM6901VU/001	9.3-9.5	45.3	23.3	38	50	0.2	100μs/10%	

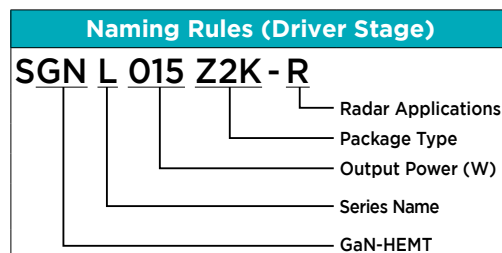
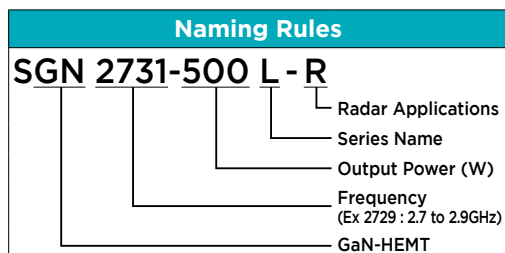
Product Photo



GaN HEMTs for Radar L/S-band

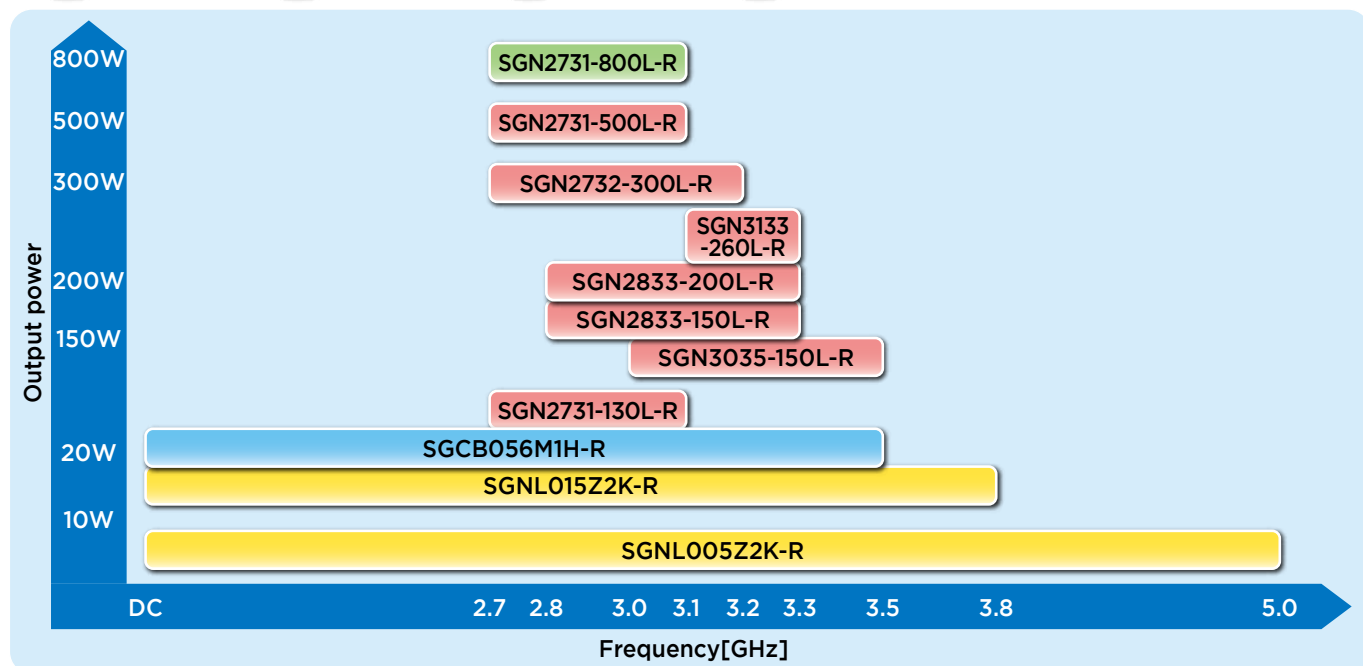
Features

- High Power up to 1000W(Typ.)
- High Gain
- High Efficiency
- Broad Band



GaN HEMTs for Radar L/S Lineup

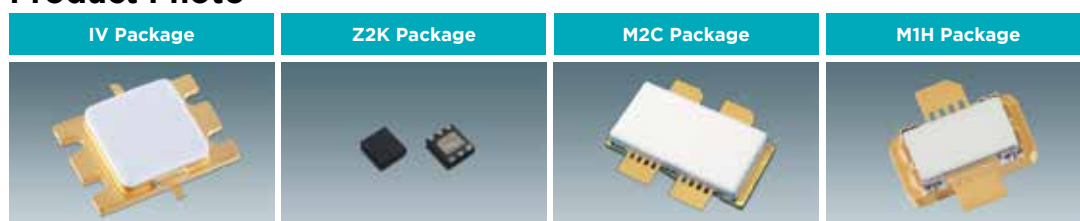
■ IV Package
 ■ M2C Package
 ■ Z2K Package
 ■ M1H Package



	Part Number	Freq. (GHz)	Pout Typ. (dBm)	Gp Typ. (dB)	Efficiency (%)	VDS (V)	IDS (DC)	Conditions Pulse Width/Duty	Pkg
*	SGNL005Z2K-R	DC-5.0	38.3 38.0	12.8 12.5	52 49	50	0.02	5μs/10% 3000μs/30%	Z2K
*	SGNL015Z2K-R	DC-3.8	42.4 42.1	11.9 11.6	56 53	50	0.06	5μs/10% 3000μs/30%	
*	SGCB056M1H-R	DC-3.5	47.5 47.2	13.5 13.2	60 57	50	0.13	200μs/10% 3000μs/30%	M1H
*	SGN2731-130L-R	2.7-3.1	52.2 51.9	14.2 13.9	62 59	50	0.5	400μs/25% 3000μs/30%	IV
*	SGN3035-150L-R	3.0-3.5	52.8 52.3	13.8 13.5	62 59	50	0.5	200μs/10% 3000μs/30%	
*	SGN2833-150L-R	2.8-3.3	52.8 52.5	13.8 13.5	62 59	50	0.5	200μs/10% 3000μs/30%	
*	SGN2833-200L-R	2.8-3.3	54.0 53.7	12.0 11.7	60 57	50	0.5	200μs/10% 3000μs/30%	
	SGN3133-260L-R	3.1-3.3	55.1	11.4	57	32	1	200μs/10%	
	SGN2732-300L-R	2.7-3.2	55.5	15.5	62	50	1	200μs/10%	
	SGN2731-500L-R	2.7-3.1	57.4	12.4	57	50	1.5	120μs/10%	
	SGN2731-800L-R	2.7-3.1	60	15	60	50	0.5	200μs/10%	M2C

* Long pulse, High duty capable

Product Photo



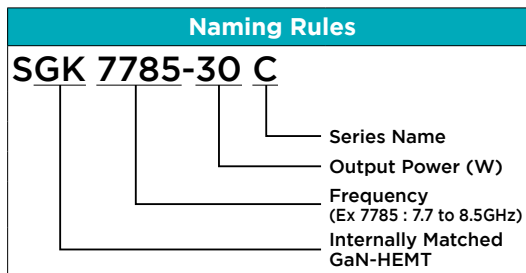
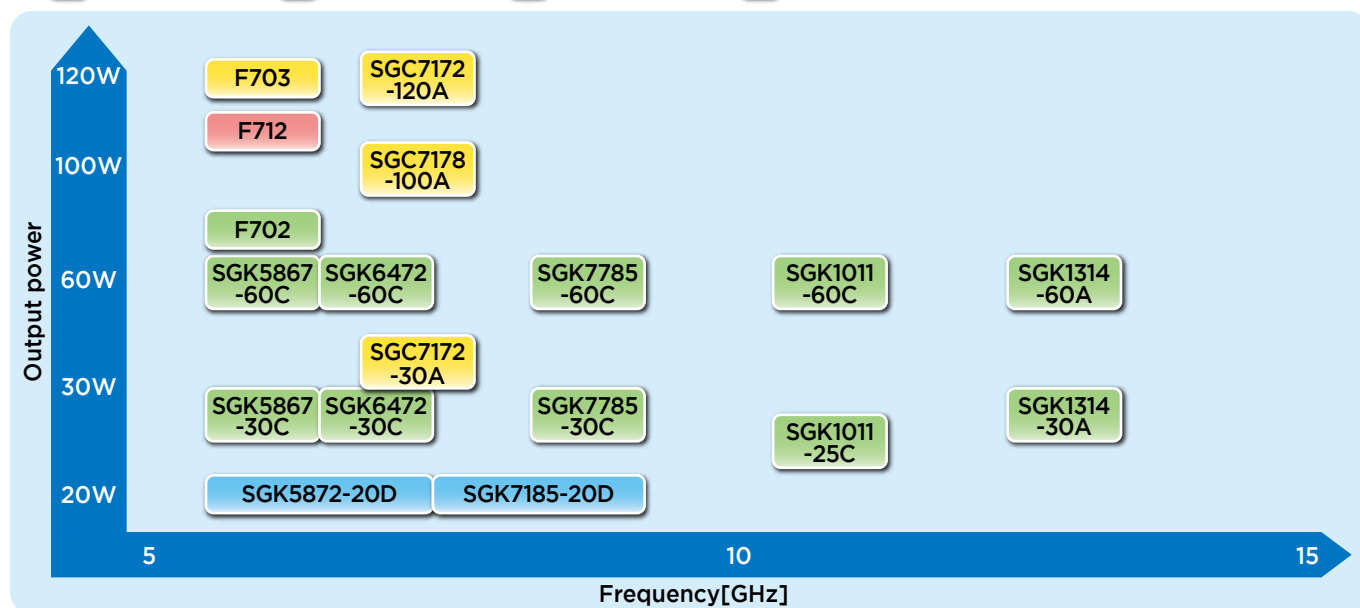
GaN HEMTs for Radio Link and SATCOM

Features

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

GaN HEMTs for Satcom Lineup

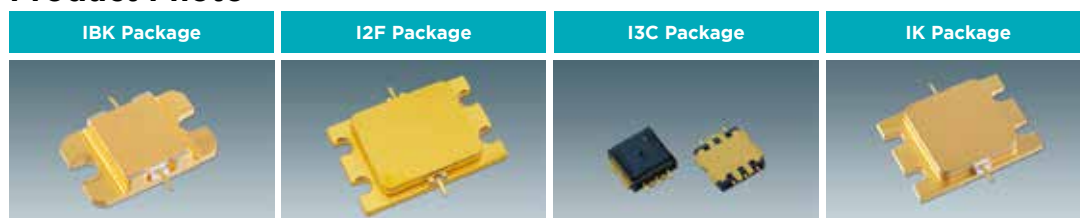
■ I2F Package
 ■ IBK Package
 ■ IK Package
 ■ I3C Package



Part Number	Freq. (GHz)	IM3 (dBc)	SCL Pout (dBm)	Pout (dBm)	GL (dB)	η_{add} (%)	VDS (V)	IDS(DC) (A)	IDS(RF) (A)	Rth (°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	
SGK5872-20D	5.85-7.2	-43	27.5	43	14	41	24	1	2	2.7	I3C
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	
SGK7185-20D	7.1-8.5	-42	27.5	43	13	35	24	1	2	2.7	I3C
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	
SGK1011-60C	10.7-11.7	-40	32	48.5	10	35	24	2.6	7.1	1.1	
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	IK
SGC7178-100A	7.1-7.8	-27	44	50	12	36	35	0.8	6	0.65	
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	IK
* F702	5.85-6.75	-30	41	48	13.5	40	40	0.6	3.4	1.6	IBK
* F703	5.85-6.75	-30	44	51	12.5	40	40	1.2	6.5	0.75	IK
* F712	5.7-6.65	N/A	N/A	50.5	14.5	40	24	4	10.5	0.55	I2F

* Under Development

Product Photo



GaN HEMTs for General Purpose

Features

- High Power up to 315W(typ)
- High Efficiency
- CW Operable
- Concurrent Broadband Operation
- Small Flangeless Package

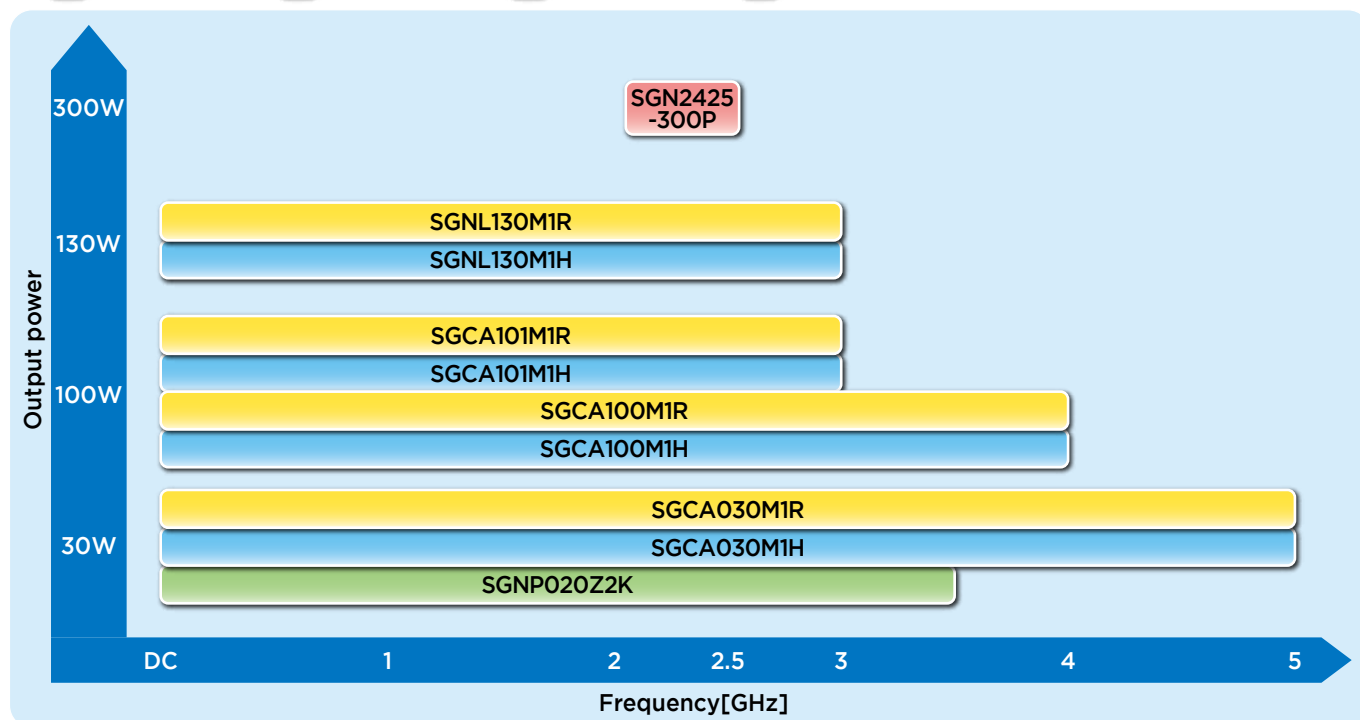
Naming Rules

SGN L 130 M1H

Package Code
Output Power (W)
Series Name
GaN-HEMT

GaN HEMTs for General Purpose Lineup

M2C Package Z2K Package M1R Package M1H Package



Part Number	Freq. (GHz)	Operation	VDS (V)	Spec. frequency	Pout Typ. (dBm)	Gp Typ. (dB)	η_D Typ. (%)	Pkg
SGNP020Z2K	DC-3.5	CW	50	2.45	43.2	21.0 *1	70	Z2K
SGCA030M1H	DC-5	CW	50	5	45.5	9.5	53	M1H
SGCA030M1R	DC-5	CW	50	5	45.5	9.5	53	M1R
SGCA100M1H	DC-4	CW	50	3.9	50.5	14.5	48	M1H
SGCA100M1R	DC-4	CW	50	3.9	50.5	14.5	48	M1R
SGCA101M1H	DC-3	CW	50	3	50.1	12.1	56	M1H
SGCA101M1R	DC-3	CW	50	3	50.1	12.1	56	M1R
SGNL130M1H	DC-3.0	CW	50	3	51.9	15.9	56.5	M1H
SGNL130M1R	DC-3.0	CW	50	3	51.9	15.9	56.5	M1R
SGN2425-300P	2.4-2.5	CW	50	2.45	55 *2	22.0 *1	77	M2C

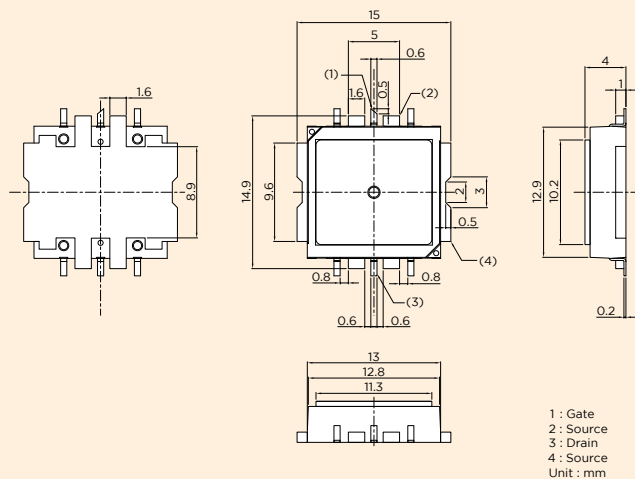
* 1 : Linear Gain
* 2 : P4dB

Product Photo

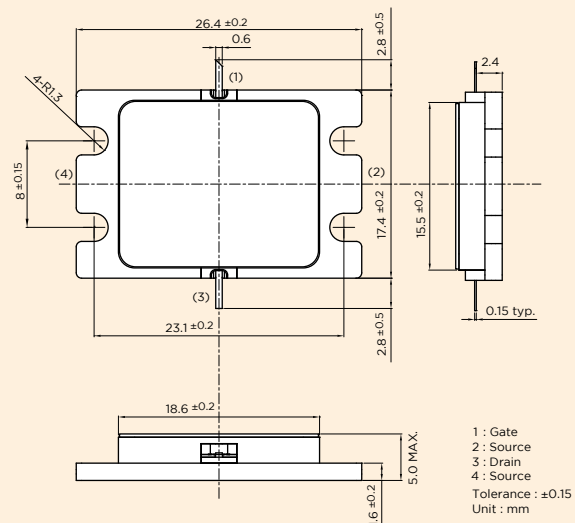
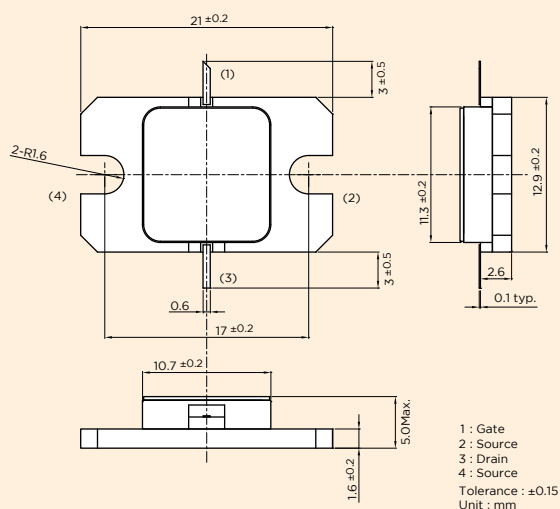


Packages

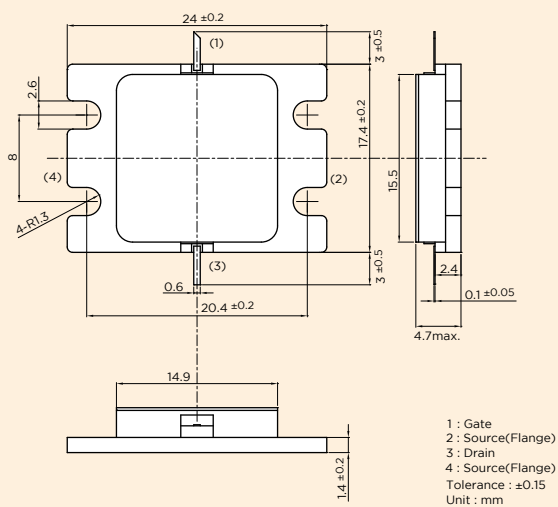
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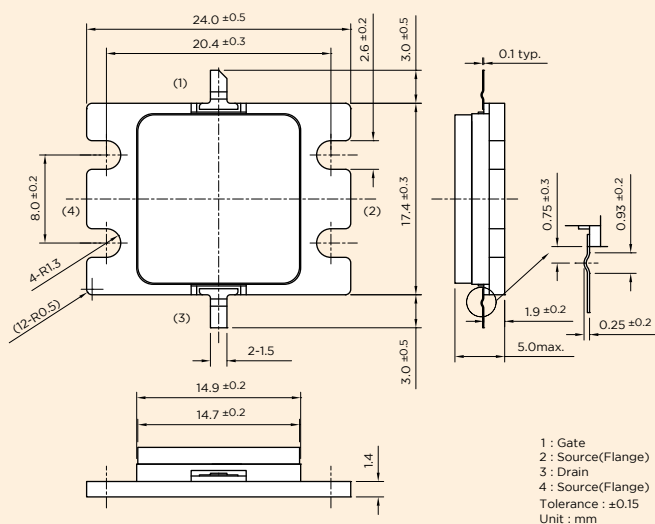
12F

**IBK**

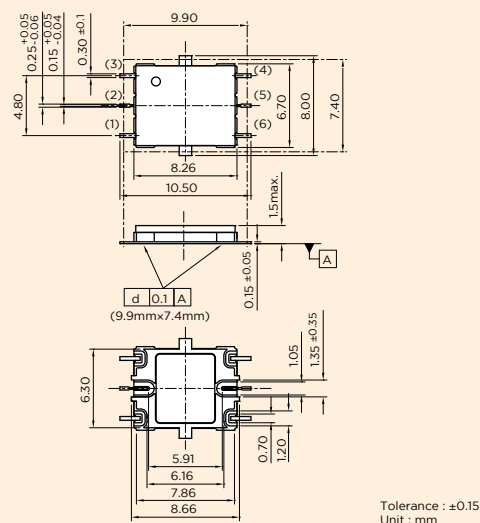
IK

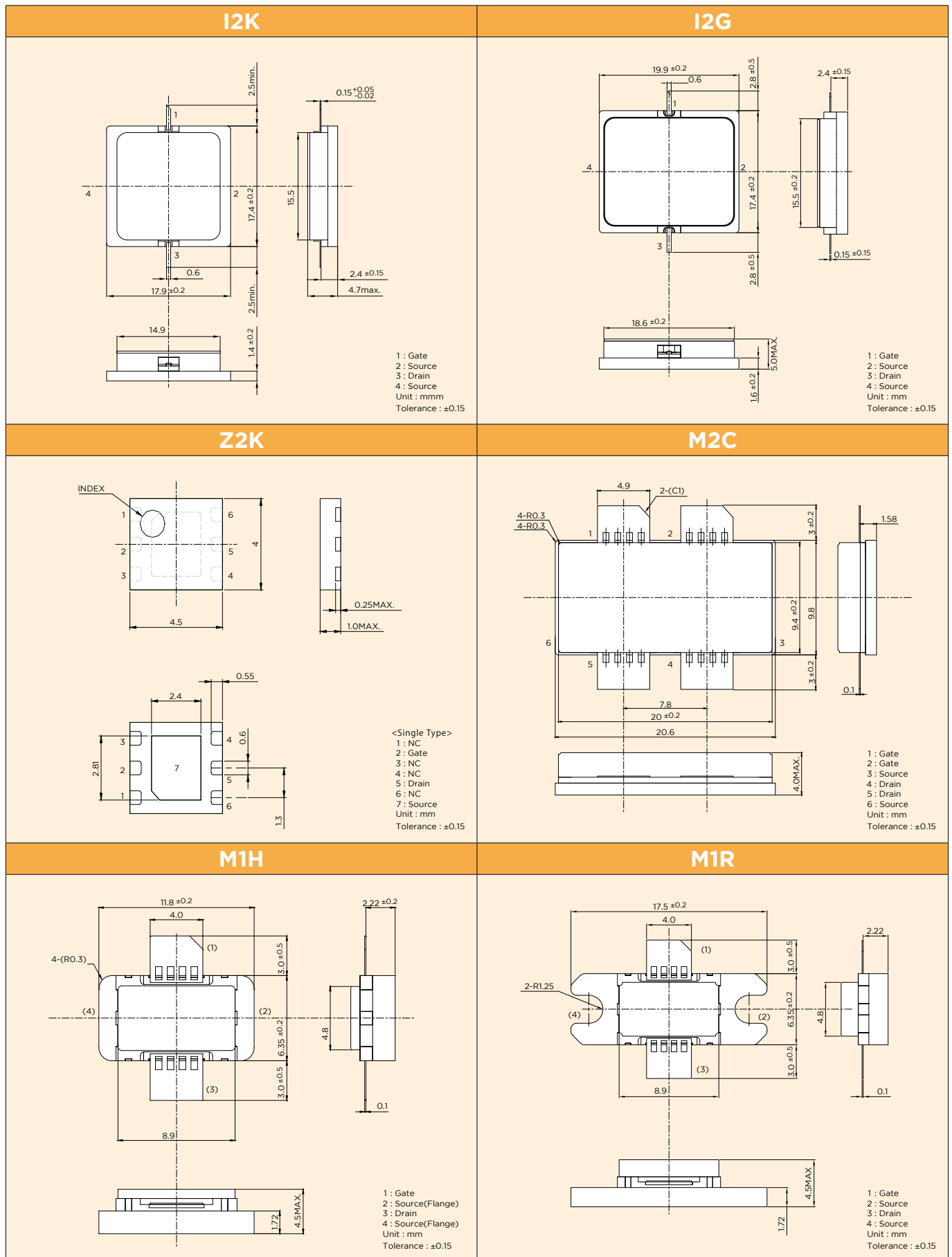


IV



VU





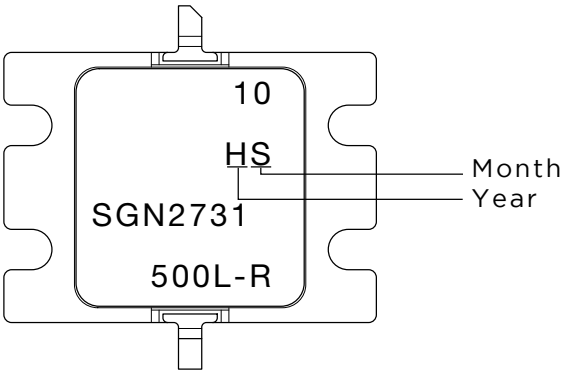
Sealing Rules

■ Year/Month code

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Code	Y	Z	A	B	C	D	E	F	G	H	I	J

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. "HS" stands for the device is manufactured in year 2025 (Year code "H") and June (Month code "S"). See the above table.)

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: 2015) and Aerospace Quality Management System JIS Q 9100 : 2016. 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, 2024
Expiry Date : September 14, 2027



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

Registration Date : August 20, 2010
Last Renewal Date : September 15, 2024
Expiry Date : September 14, 2027
OASIS Identification Number : 6131093485



Environmental Management

ISO14001:2015 / JIS Q 14001:2015 Yamanashi Plant (Certificate Number : EC98J1050)

Registration Date : August 25, 1998
Last Renewal Date : August 25, 2022
Expiry Date : August 24, 2025



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ATTENTION

Information in this document is subject to change without notice.