

# Space Product Introduction

## Introduction

Sumitomo Electric combining advanced technological leadership with over 30 years of design, development, and manufacturing of satellite devices, offers a broad range of RF products, from Low Noise HEMTs to High Power RF Devices. These products undergo an extensive qualification process to assure the absolute highest reliability and superior technical performance expected for long term spacecraft missions.

The reputation and dependability of our customers' flight hardware is highest priority of Sumitomo Electric. Our advanced, dedicated manufacturing facility for satellite products provides the customer with the highly reliable and quality products needed for extended satellite missions.

In addition to the extensive space qualified product offering available, Sumitomo Electric provides custom MMIC designs for the customers who have unique requirements. These MMIC designs include Power Amplifiers, Low Noise Amplifiers, Analog/Digital Attenuators, Digital Phase Shifters, and Detectors.

This catalog provides the customer with the technical information necessary to select their product line-ups. More detailed specifications are available upon request directly from our sales offices as shown on our web site.

## Space Qualification

### STANDARD

- MIL-PRF-19500: Semiconductor Devices, General Specification for
- MIL-STD-750: Test Methods for Semiconductor Devices
- MIL-STD-883: Test Methods for Microelectronic Devices

## Customer Support

- Line-ups
- Specifications
- Operating Conditions
- Samples
- DPA's Construction Analysis
- Reliability Analysis

## Quality Management

ISO 9001 : 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



## Quality Management for Aerospace

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



## Environmental Management

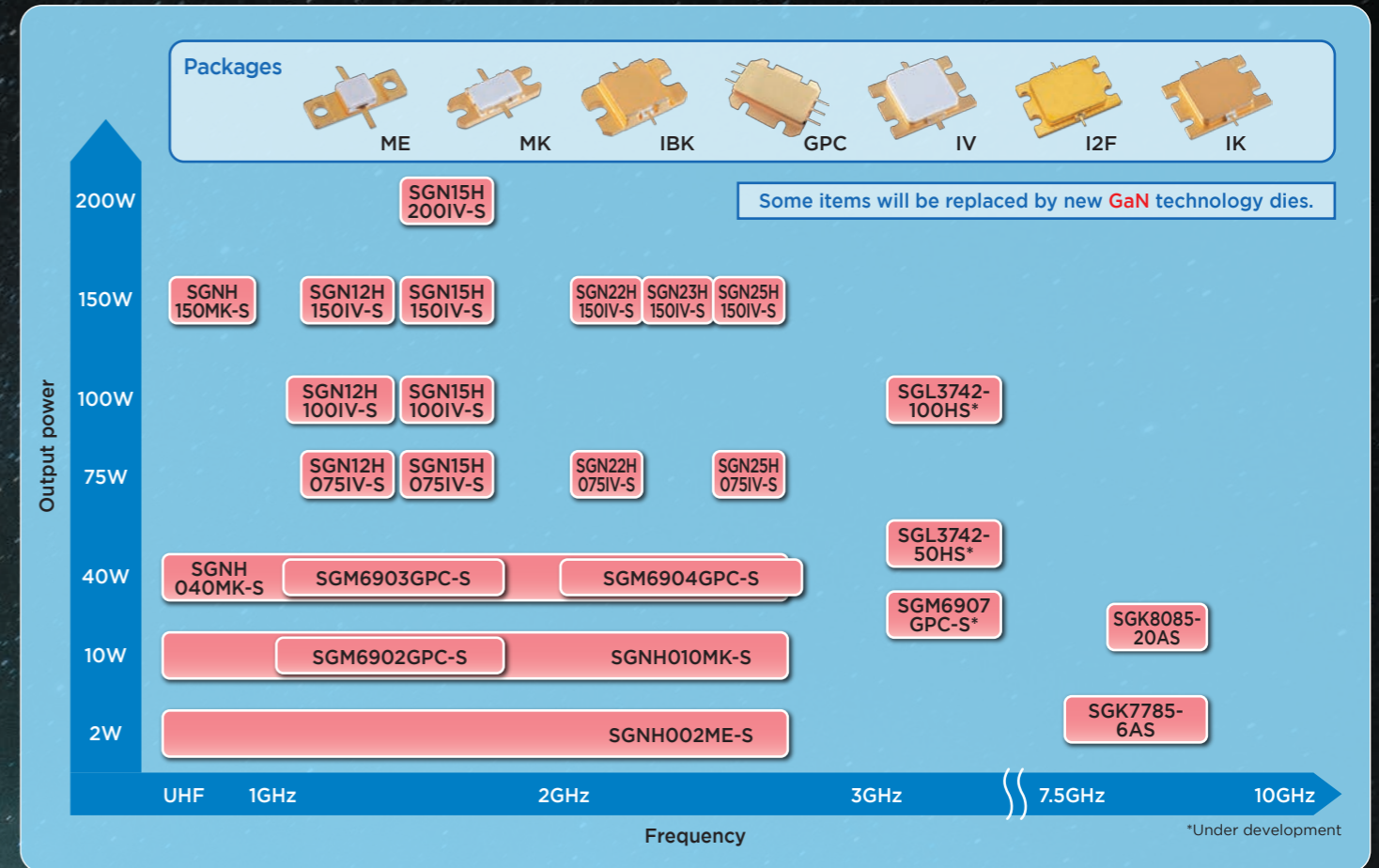
ISO14001 Record (Certificate Number : EC98J1050)

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 plans to terminate some of GaN HEMT products manufactured by outdated equipment and to replace them with new GaN technology dies.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

# GaN HEMTs for Space



## Specification for GaN HEMTs

Part Number	Freq. (GHz)	Pout Typ. (W)	P4dB typ. (dBm)	GL (dB)	PAE Typ. (%)	VDS (V)	Pkg
SGN12H075IV-S	1.20-1.25	75	48.5	18	73	50	IV
SGN12H100IV-S	1.15 -1.25	100	50.4	19	71	50	
SGN12H150IV-S	1.20-1.25	150	51.5	18	73	50	
SGN15H075IV-S	1.55-1.60	75	48.5	18.5	72	50	
SGN15H100IV-S	1.55-1.60	100	50.1	18.5	70	50	
SGN15H150IV-S	1.55-1.60	150	51.5	18.8	71	50	
SGN15H200IV-S	1.55-1.60	200	53	18	70	50	
SGN22H075IV-S	2.2	75	48.5	19	65.5	50	
SGN22H150IV-S	2.2	150	51.3	18.4	63	50	
SGN23H150IV-S	2.3	150	52	17	60	50	
SGN25H075IV-S	2.5	75	49	17.5	61	50	
SGN25H150IV-S	2.5	150	51.5	17.3	59	50	
SGNH002ME-S	2.5	2	33	22	53	50	
SGNH010MK-S	2.5	10	40.8	17	54	50	MK
SGNH040MK-S	2.5	40	46.2	15	51	50	
SGNH150MK-S	0.45	150	51.8	21	79	50	GPC
SGM6902GPC-S	1.0-1.7	10	39.5	30.5	35	50	
SGM6903GPC-S	1.1-1.7	40	46	30	43	50	
SGM6904GPC-S	2.0-2.7	40	46.2	29.2	49	50	IBK
SGK7785-6AS	7.7-8.5	6	38	15	47	24	
SGK8085-20AS	8.0-8.5	20	44	12	40	24	GPC
SGM6907GPC-S*	3.7-4.2	30	45	28	40	40	
SGL3742-50HS*	3.7-4.2	50	48	16	60	40	IK
SGL3742-100HS*	3.7-4.2	100	50	16	60	40	

\*Under Development