

**MITSUBISHI ELECTRIC CORPORATION**  
**PUBLIC RELATIONS DIVISION**  
7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo, 100-8310 Japan

**FOR IMMEDIATE RELEASE**

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*Customer Inquiries*

*Media Inquiries*

Semiconductor & Device Marketing Div.B  
Mitsubishi Electric Corporation

Public Relations Division  
Mitsubishi Electric Corporation  
[prd.gnews@nk.MitsubishiElectric.co.jp](mailto:prd.gnews@nk.MitsubishiElectric.co.jp)

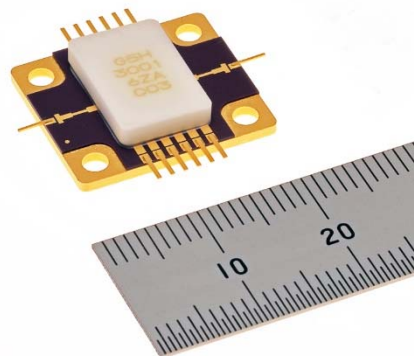
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## **Mitsubishi Electric to Launch Ka-band GaN-HEMT MMIC for Satellite Earth Stations**

*High output power and low distortion will help downsize satellite earth stations*

**TOKYO, October 4, 2017**– [Mitsubishi Electric Corporation](http://www.mitsubishielectric.com) (TOKYO: 6503) announced today it will launch a Ka-band (26–40GHz) 8W gallium nitride (GaN) high-electron mobility transistor (HEMT) monolithic microwave integrated circuit (MMIC) amplifier for satellite earth stations. The new MGFG5H3001, which offers industry top-level low distortion and output power rating of 8W, boasts a small footprint that will help to downsize power transmitters. Mitsubishi Electric will begin shipping samples on November 1.



Ka-band GaN-HEMT MMIC (MGFG5H3001)

Satellite networks, which are used for high-speed communication during natural disasters and in areas where ground networks are difficult to construct, are currently implemented mainly in the C-band (4–8GHz) and Ku-band (12–18GHz), but higher frequencies are increasingly being used. Also, market demands for deployments in the higher-frequency Ka-band are increasing. Mitsubishi Electric's new Ka-band GaN-HEMT MMIC will help meet the growing demand for higher frequency deployments, as well as facilitate the development of satellite communications equipment capable of extra-high output power and efficiency.

## Product Features

- 1) **Industry top-level output power contributes to miniaturization**
  - Optimized transistor configuration delivers industry top-level 8W output power
  - One chip integrates amplifier transistors circuits, matching circuits and distortion-reducing linearizer
  - Reduced number of parts will help to downsize satellite earth-station transmitters
- 2) **Industry top-level distortion reduction for high signal integrity and miniaturization**
  - Built-in linearizer achieves low distortion for power transmitters
  - High signal integrity and reduced need for external linearizer for further miniaturization of satellite earth-station transmitters
- 3) **Will facilitate new satellite earth-station equipment to meet wider needs**
  - Expected to lead to new Ka-band and existing Ku-band equipment for deployments in more diverse frequency ranges

## Sale Schedule

Product	Application	Model	Overview			Shipment
			Frequency	Saturated output power	Linear gain	
Ka-band GaN-HEMT MMIC	Satellite earth stations	MGFG5H3001	27.5–31.0 GHz	39.0dBm (8W)	15.0dB	Nov. 1, 2017

## Main Specifications

	Symbol	MGFG5H3001
Drain-source voltage	VDS	24V
Frequency	27.5–31.0GHz (Ka-band)	
Saturated output power	Pout (Typ.)	8W
Linear gain	Glp (Typ.)	15.0dB

## Revised GaN HEMT Lineup (new model in bold)

Frequency	Model	Saturated output power [W]	Linear gain [dB]
<b>Ka-band</b>	<b>MGFG5H3001</b>	<b>8</b>	<b>15.0</b>
Ku-band	MGFG5H1503	20	20.0
	MGFK47G3745A	50	8.0
	MGFK48G3745	70	10.0
	MGFK49G3745	80	7.5
	MGFK50G3745	100	10.0

## Environmental Awareness

This product is compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive 2011/65/EU.

Note: Development of this product has been partially supported by Japan's New Energy and Industrial Technology Development Organization (NEDO).

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**About Mitsubishi Electric Corporation**

With over 90 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded consolidated group sales of 4,238.6 billion yen (US\$ 37.8 billion\*) in the fiscal year ended March 31, 2017. For more information visit:

<http://www.MitsubishiElectric.com>

\*At an exchange rate of 112 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2017