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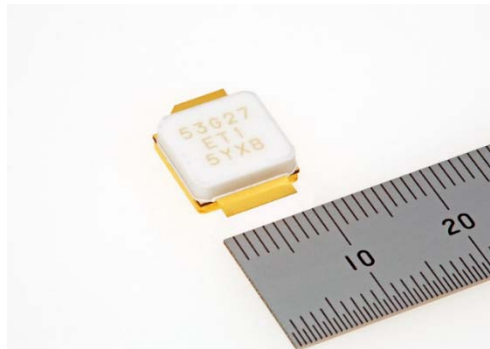
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## **Mitsubishi Electric to Release Sample 220W-output power GaN-HEMT for 2.6GHz-band 4G Mobile Communication Base Transceiver Stations**

*For BTS small size and low power consumption by high performance*

**TOKYO, August 31, 2016** – [Mitsubishi Electric Corporation](http://www.mitsubishielectric.com) (TOKYO: 6503) announced today that it has developed a 220W-output power Gallium Nitride High Electron Mobility Transistor (GaN-HEMT) offering world-leading\* efficiency for 2.6GHz-band Base Transceiver Stations (BTS) of fourth-generation (4G) mobile communication systems. Samples will be released starting November 1.

\*According to Mitsubishi Electric as of August 31, 2016



New GaN-HEMT for 2.6GHz 4G BTS (MGFS53G27ET1)

High-speed 4G mobile communication systems including Long Term Evolution (LTE) and LTE-Advanced incorporate are being equipped with progressively smaller BTS for macro-cells to increase data capacity and to reduce power consumption. Mitsubishi Electric's highly efficient new GaN-HEMT for 2.6GHz-band macro-cell BTS is expected to help realize even smaller and lower-power BTS.

### **Product Features**

#### **1) *World-leading efficiency and transistor optimization***

- High drain efficiency\*\* of 74%
- High efficiency results in simpler cooling system, which reduces BTS size and power consumption

2) *Size reduction*

- Flangeless ceramic package reduces size of device itself and related power amplifier modules

3) *Expanded GaN-HEMT lineup*

- Added flangeless ceramic package for 220W models for 2.6GHz-band macro-cell BTS

\*\* Load pull measurement

**Main Specifications**

Use	Model	Frequency [GHz]	RF performances				Operating Voltage Vd <sup>***</sup> [V]
			Saturated output power		Linear gain [dB]	Drain efficiency <sup>**</sup> [%]	
			[dBm]	[W]			
Macro-cell BTS	<b><u>MGFS53G27ET1</u></b>	2.5 to 2.7	53.4	220	18	74	50
	MGFS53G38ET1	3.4 to 3.8	52.6	180	17	70	
	MGFS50G38FT1		50.0	100	17	74	
	MGFS50G38ET1		49.5	90	17	74	
Small-cell BTS	MGFS39G38L2		39.5	9	20	67	
	MGFS38G38L2		38.4	7	20	67	
	MGFS37G38L2		37.0	5	20	67	

\*\*\* Drain voltage

Going forward, the lineup will be further with products for different outputs and frequencies, as well as adapted for mobile communication systems beyond 4G.

**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.

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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 4,394.3 billion yen (US\$ 38.8 billion\*) in the fiscal year ended March 31, 2016. For more information visit:

[www.MitsubishiElectric.com](http://www.MitsubishiElectric.com)

\*At an exchange rate of 113 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2016