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MITSUBISHI ELECTRIC ANNOUNCES SALE OF HIGH POWER AMPLIFIER FOR UHF-BAND RFID READER/WRITER APPARATUS

Tokyo, November 4, 2008 – Mitsubishi Electric Corporation (President and CEO: Setsuhiro Shimomura) announced today the launch of high power amplifiers for UHF band RFID¹ reader/writer apparatus, starting November 25, 2008. These products are the industry's first amplifiers for RFID reader/writers with a built-in impedance-matched circuit for both input and output.

1: Radio Frequency Identification: non-contact automatic identification technology using radio waves

Summary of Sale

Product	Model	Price of sample (Excl. tax)	Sample shipment date	Production
High power amplifier for RFID reader/writer	RA01L8693MA (world-wide band)	1,200 yen	Nov. 25	20,000 /year
	RA01L9595M (Japanese band)			

Aim of Sale

With the recent increase in demand for RFID reader/writer apparatus, which are used in logistics, shipment, inventory control and cash registers in stores, there is a need to reduce production costs.

Mitsubishi Electric's newly developed models, the RA01L8693MA and RA01L9595M, are the industry's first amplifiers for RFID reader/writers with a built-in impedance-matched circuit for both input and output, which can also reduce spurious radiation. These improvements help reduce the number of necessary peripheral components as well as production costs for RFID reader/writers.

Product Features

1) Industry-first built-in impedance-matched circuit reduces number of peripheral components

Until now, power amplifiers for RFID reader/writers needed extra circuits to externally match their impedance for both input and output. Mitsubishi Electric's new models have included the impedance-matched circuit inside the 9.2 x 9.1-millimeter package, an industry first, by using a ceramic

multilayer board to increase density in surface mounting. This improvement eliminates external impedance-matching circuits in RFID reader/writers, thus simplifying circuit designs, while also helping to reduce production costs by using less peripheral components.

2) Reduced spurious radiation, an industry-first

To reduce spurious radiation, power amplifiers until now needed either to be placed in a metal case, or to have its insides sealed with radio wave absorbers or conductive tape. For the new models, Mitsubishi Electric used a metal cap to increase effectiveness of their electromagnetic shields, and succeeded in reducing spurious radiation leakage. This improvement eliminates the process of taking measures to reduce spurious radiation, thus helping to cut down RFID reader/writer production costs.

3) Drain voltage range of 3.3-5V, compatible to both mobile type and fixed type RFID reader/writers

The two amplifiers are high-voltage silicon metal oxide semiconductor field effect transistors (silicon MOSFET), and their drain voltage ranges from 3.3 to 5 volts. Therefore, a single amplifier can meet the requirements of both types of RFID reader/writers; the mobile type, which mainly uses a power source of 3.3 volts, and the fixed type, which mostly uses 5 volts.

For the Environment

The models are compliant to the *Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS)*.

Specifications

	RA01L8693MA	RA01L9595M
Output Power	1.4 Wmin.	
Drain Voltage (Vdd)	3.3 - 5V (recommended voltage: 3.3V)	
Input Power	30 mW	
Package Type	Leadless SMD Package	
Zg=Zl	50 ohms	
Total Efficiency	38% Min.	35% Min.
Frequency Range	865-928 MHz	952-954 MHz
Outline	9.2 x 9.1 x 1.8 mm	

About Mitsubishi Electric

With over 80 years of experience in providing reliable, high-quality products to both corporate clients and general consumers all over the world, Mitsubishi Electric Corporation (TSE: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. The company recorded consolidated group sales of 4,049.8 billion yen (US\$ 40.5 billion*) in the fiscal year ended March 31, 2008. For more information visit: <http://global.mitsubishielectric.com>

*At an exchange rate of 100 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2008

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