

# Saga Electronics

## IC Packaging Services

**NJR**  
**NEWS**

2003 **24**

January 6, 2003

**Saga Electronics Co., Ltd.**

## Saga Electronics IC Packaging Services

Introducing Saga Electronics!! A leader in IC packaging services. Saga Electronics is a subsidiary of New Japan Radio Co., Ltd. It is located in Saga Prefecture on Kyushu Island, Japan.

Saga Electronics provides IC packaging and testing services to OEMs. We integrated a very efficient production line which combines assembly, test, tape & reel packaging, and quality assurance for this service.

Saga Electronics offers a quick turn-around time and utilizes its Just In Time (JIT) delivery.

Saga Electronics offers both JEDEC and EIAJ standard packages.

FFP and P-CSP packaging as well as SON and QFN/MLF packaging are supported.

Also, MCM (Multi-chip Module) packaging is available.

### Company Summary

Business: IC/LSI Assembly & Test Sub-contracting

Capacity: 140 Million pcs./mo.

Employees: Over 800 employees

### Corporate Highlights

- Founded in 1965
- Began its OEM business in 1982
- Established NJR Co., Ltd. (Thailand) in 1989
- Received ISO 9002 Certification in 1994
- Reduced leadtimes by 20% after utilizing JIT System
- Introduced Flipchip Fine Package (FFP) in 1999
- Developed Plastic Chip Scale Package (P-CSP) in 2001
- Became ISO 14001 Certified in 2002

### Main Customers

Sony, Mitsubishi, Toshiba, Fujitsu, NEC, OKI, and others.

Package Type	Pin Count																	
	3	4	8	10	14	16	18	20	22	24	28	30	32	36	42	64	80	100
DIP			▲		▲	▲	▲	▲	▲									
SDIP			▲					▲	▲		▲							
SIP			▲															
ZIP						▲												
SOP (DMP)			▲		▲	▲		▲		▲					▲			
SDMP												▲						
SSOP (0.65mm pitch)			▲		▲	▲		▲										
SSOP (0.50mm pitch)				▲				▲										
VSP			▲	▲														
T-VSP (1.0 mm <sup>2</sup> )			▲	▲														
QFP (14x20 mm <sup>2</sup> )																▲	▲	▲
LQFP (14x14 mm <sup>2</sup> )																▲	▲	▲
TO-220F	▲	▲																

CSP	Package size [mm <sup>2</sup> ] and Pin count								
	1.5x1.5	2.0x2.0	2.5x2.5	3.0x3.0	3.5x3.5	4.0x4.0	4.5x4.5	5.0x5.0	5.5x5.5
FFP	8	12	16	20	24	28	32	36	
P-CSP (0.65mm pitch)			12 (16)	12 (16)	16 (24)	20 (32)	24 (48)	24 (48)	28 (64)
P-CSP (0.50mm pitch)			16	20	24	28	32	36	40

▲ Bold characters mean in Mass Production.

( ) Maximum Pin count on array layout. Others indicate Maximum Pin count on peripheral.

Check out our website! <http://www.sagaelec.co.jp>



**NJR CORPORATION**

A SUBSIDIARY OF NEW JAPAN RADIO COMPANY, LTD.

198 Stauffer Blvd. San Jose, CA 95125

NJR CORPORATION offers Bipolar ICs, C-MOS ICs, Bi-CMOS ICs and GaAs MMICs, as well as Saw filters, covering North America and South America to provide technical assistance and quick delivery for achieving customer satisfactions. For further information, please contact:

PHONE : (408) - 995-6200 or [WWW.NJR.COM](http://WWW.NJR.COM)

The World's Best Source for High - Quality ICs using Bipolar, C - MOS, Bi - CMOS and GaAs Technologies, and Saw filters