Natronix

SPEL Semiconductor Limited

An IC Assembly & Test Company

SPEL

About Us

- Natronix Semiconductor Technology Pvt Ltd is a semiconductor packaging & design company headquartered in Singapore
- Natronix's India OSAT(outsourced semiconductor assembly & test) presence is SPEL semiconductor limited.
- SPEL is a IC assembly & test company located in Chennai, India
- India's first OSAT company & 100% export oriented
- Global customers across US, Europe, India & APAC inclusive of companies within top 20 semiconductor ranking
- Established customers serving wide range of application segments like 3cs, automotive, medical, industrial, military & aerospace

Vision

To be the Natural Destination for global Customers seeking cost-effective OSAT & Design services

Mission

Achieve zero defect, Just-in-time, Cost-effective solutions with Service that is uncompromised. Our Partners → Customers, Suppliers, Employees & Shareholders are confident in the knowledge that we are consistently meeting and exceeding their expectations.

Values

1.Business Ethics : Defines us as a Company

2.Professionalism : Defines us as individuals

3.Citizenship : Defines our contribution to society

Our Customers

Quality

- Our Quality consciousness starts from the incoming material and follows through process until device reliability in the final application
- The robust in-house Quality control procedures ensures excellent Assembly Yield and no field failures
- Has the following Quality Certifications
  - ✓ ISO 9001:2015
  - ✓ IATF 16949:2016
  - ✓ ISO 14001:2015

Quality Policy

- Getting it Right the First Time
- Defect-Free Products and Services
- Continuous Improvement
- Regulatory Compliance
- Common Systems and Processes

USP

- Talented Engineering team providing excellent Cost effective packaging solutions, Lead frame design solutions catering to Customer's end Application
- New Package Development (QFN) in 6 weeks
- Test Engineering solutions capability includes Product Test program Development, Hardware, Debugging, Characterization & Production Release
- Competitive Pricing for Test Engineering & Production
- Dedicated Customer Account Engineers

Natronix

SPEL®

Technical Capabilities

Process	Capability
Back grinding	Silicon wafers – Max 8”
	Down to 6 Mils (6” Wafers), 8 Mils (8” Wafers)
Dicing	Max 8“ wafer
Wafer Backside coating	Available for QFN with B-stage epoxy
Die Attach	Max 12” wafers
	Minimum die size – 15x15 Mils
	Wafer Map Capability
	Multi die Capability
Wire Bond	Gold, Copper & Pd Cu wire
Wire bond (Cu)	For dies with bond pad thickness > 0.8 Microns
Package Singulation (QFN)	Saw Singulation
Top Mark	Laser
Lead Finish	100% Matte Tin; 85% tin & 15% lead ; NiPdAu ; preplated lead finish on select packages

Packages

QFN Capability

Process	Package Thick (mm)	Body Size (mm)	Lead Pitch (mm)	Lead Count
Saw Singulated QFN/DFN	0.40 0.50 0.75 0.90	0.6 x 1 To 12 x 12	0.40 0.50 0.65	2~100 pins

Leaded Capability

PACKAGE	LEAD COUNT
150 MIL; 300 MIL SOIC	7/8/14/16; 16/20
150 MIL QSOP; VSOP	16/20/24/28; 40/48
173 MIL TSSOP	8/20/24/38;
150 MIL MILLIPAQ	80
300 MIL PDIP	8/14/16
225 MIL SIP	8

Test Platform	Credence ASL1000	Eagle ETS 364/88	V50
Digital			
Mixed Signal			
Analog			

Roadmap

Planned “2025- 2026”

WLCSP

BGA

Existing

C U

Leaded Package

QFN / DFN

Full Turnkey

- Assembly – Leaded SMD & QFN
- Testing – Digital, Analog, Mixed Signal
- Tube, Reel, Tray shipment
- RoHS complinance & Green packages
- Smallest package – 0.6 x 1.0 x 0.4 mm

Value Added

- Package Design
- Custom QFN packages
- Lead frame design
- Multi Chip Modules
- FA & Reliability
- Test program development
- Drop shipments

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