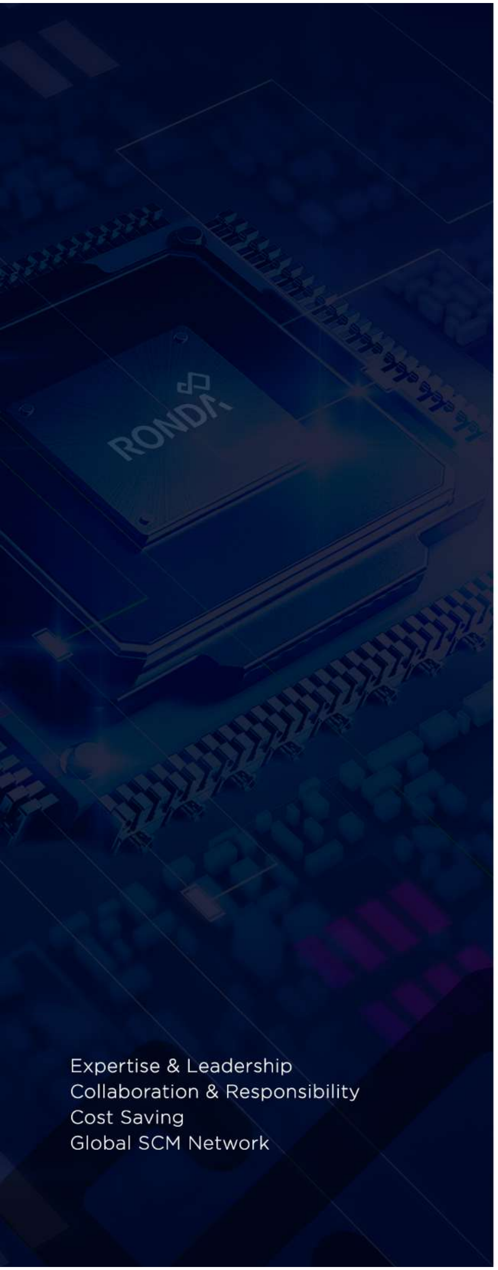
2023 RONDA
COMPANY INTRODUCTION

RONDA

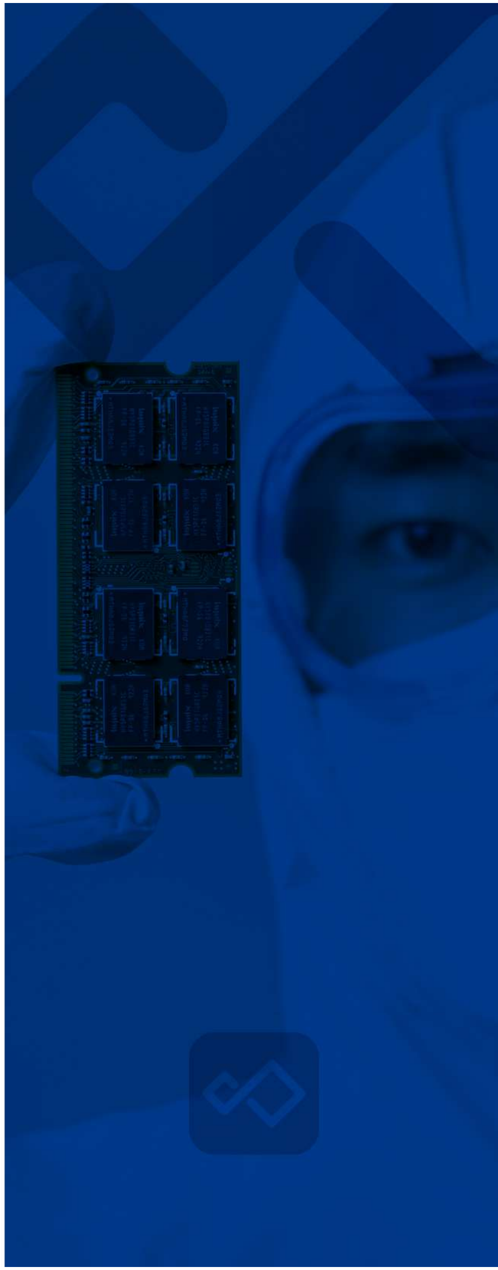
SEMICONDUCTOR SOLUTION



Expertise & Leadership
Collaboration & Responsibility
Cost Saving
Global SCM Network

TECHNOLOGY CONNECTED
RONDA
SEMICONDUCTOR SOLUTION

RONDAR KOREA CO.,LTD



RONDA KOREA CORPORATION

01 Company Overview

- Intro
- Company Profile
- Corporate History
- Leadership
- Organization
- Core Manpower
- Performance Record
- PARTNER

Expertise & Leadership
Collaboration & Responsibility
Cost Saving
Global SCM Network

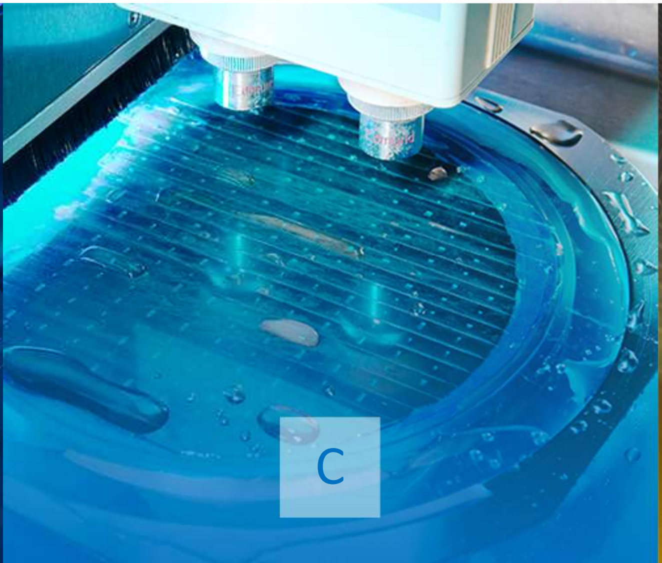
RONDA KOREA was established to provide competitive and cost-effective semiconductor technology and manufacturing solutions to our valued customers in worldwide.

RONDAR KOREA Co.,LTD

M · C · V statements

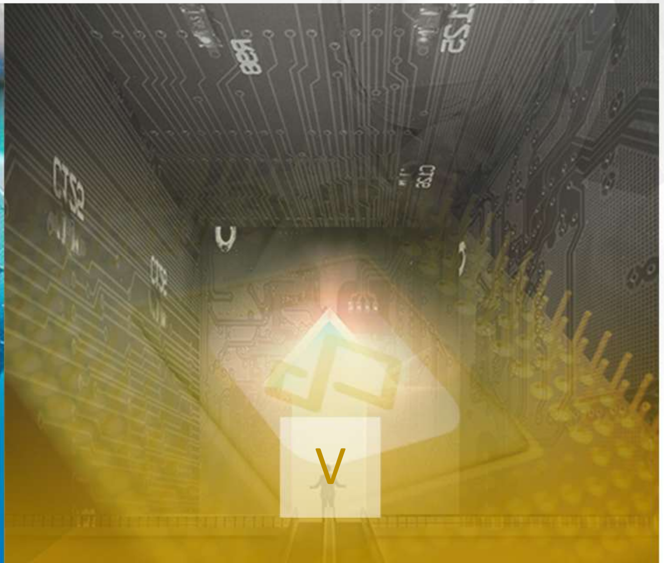
COMPANY MISSION

Facilitate industry-leading
Semiconductor technology solutions
by providing cost-competitive
products & quality services to our customers.



COMPANY CORE VALUES

Pursue integrity, accountability
and mutual trust by demonstrating
technical leadership & quality supply
chain solutions for win-win business.



COMPANY VISION

Contribute to semiconductor
industry and help our customers
to change the world better and
improve the way of people's life.

RONDA introduction

A Semiconductor Platform Company for Global Business!

1 We consist of semiconductor experts from major technology fields

- Specialized for high volume semiconductor manufacturing solutions
- Broad technical backgrounds from device integration to module process
- Rich knowledge on hardware & process technology for 200/300mm HVM

2 We have experienced at industry-leading companies worldwide

- Chip Makers (IDM/Foundry): Samsung, TSMC, Global Foundries, Chartered
- Equipment OEM: Applied Materials, Tokyo Electron, LAM Research, AMEC, NAURA
- Work Experience: Korea, US, China, Singapore, Europe

3 We have a strong supply chain network for global business

- Top-to-bottom semiconductor supply chain management & related solutions
- Quality and cost-effective parts, materials and equipment business
- BKMs from R&D to high volume manufacturing environment

Company Profile

General company status

Category	Description	Remark
Legal Entity Name	Ronda Korea Co. Ltd.	Registration #: 8828601292 (KOR)
Corporate Representative	Bennie Moon	Founder & CEO
Establishment	April 1, 2019	4 Years
Location	Dongtan	#1501-1505, Geumgang IX Tower A, 27 Dongtanchemdansaneop1-ro, Hwaseong-si, Gyeonggi-do, Republic of Korea
Employee	Ronda Korea/China 28	Korea Office 16, China Office 12 (Excluding >10 Technical Outsourcing Staffs) Working Location: Korea, China, Singapore, Italy & United States
	China MFG 30 (by 2023)	
Capital	$0.15M USD	100% Share Owned By Company
Revenue	$30M USD (FY2022)	Including OEM Outsourcing, Technical Consulting & Global Trading Service >50% CAGR Since Establishment
	$40M USD (FY2023 Estimate)	
Branches	Chengdu China Xi'an China Gumi Korea	China Sales & Marketing Office
		China Si & SiC Manufacturing Facility
		Korea Si & Quartz Manufacturing Partnership (ERAETECH)
Industry Focus	Semiconductor Manufacturing	Semiconductor Manufacturing Material Solutions & Consulting Services
Target Business	Materials & Services	Equipment, Spare Parts (BM & Consumables), Raw Materials, Technology Consulting
# of Customers	>15	SMIC, YMTC, CXMT, Huali, Intel Dalian, AOS, AMEC, NAURA, BAEC, TEL China, etc.
# of Business Items	>100	Si, SiC, Quartz, Gasket, Socket, Strap, O-ring, CMP Consumables & Equipment

Milestone

- *2019*
    - Company Established at Dongtan Hwaseong
    - Italy Lfoundry Etch/CVD Consulting Contract
    - China Beijing Jingyi Registration Coolant & Chiller Business
    - China Local Sales & Marketing Office at Chengdu
    - Italy Lfoundry Consumable Parts Business
- *2020*
    - China SMIC Registration for Si Business Engagement
    - China Intel Dalian Registration for RF Consumable Business
    - Etch/PVD Consulting Project for Lfoundry
- *2021*
    - China AMEC Si Showerhead OEM Business
    - China YMTC (ZNIC) Registration for Consumable Parts
    - Italy LFoundry 200mm Etch System Business
    - ISO 9001 & 14001 Certification
- *2022*
    - China Huali/Huahong Group Registration for Parts Sourcing
    - China Intel Dalian Consignment Business for Spare Parts
    - China Si Manufacturing Business Program
    - Engtegris Agency Acquisition for China Business
    - Venture Certification by Korea Government
    - China NAURA Business Engagement for R&D Parts
- *2023*
    - Company Award from China Xi’an Government
    - China Si Manufacturing Company Setup at Xi’an

03 Leadership

Core administrator

CEO

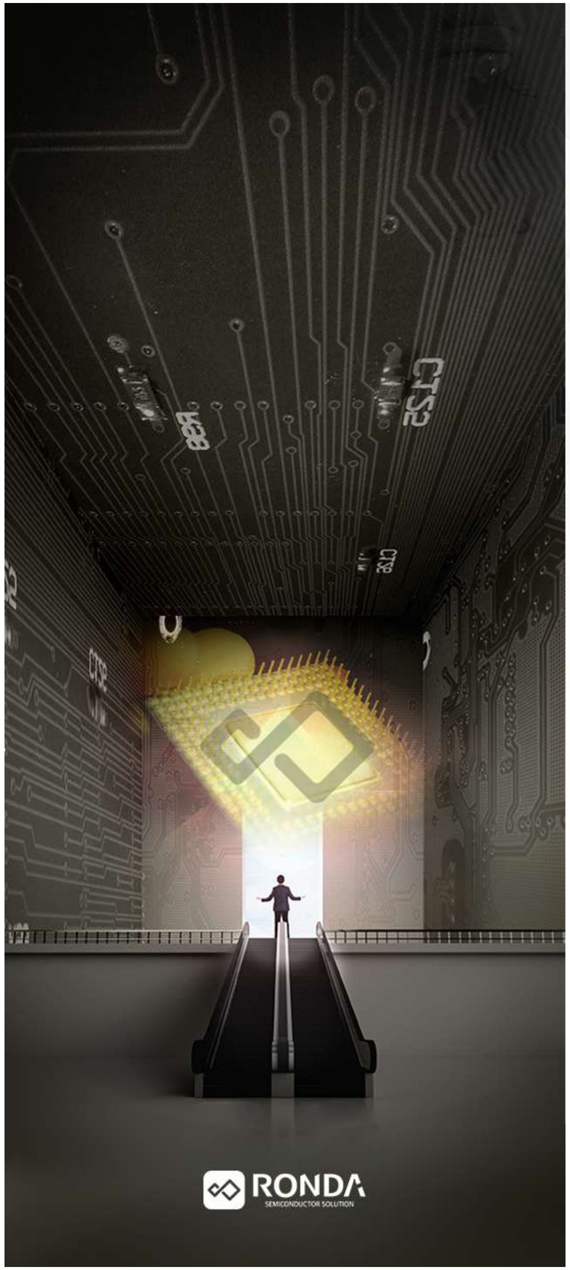
Chief Executive Officer
Bennie Moon

- 20 Years Experience at US, China, Korea
- TSMC, Applied Materials, AMEC
- Etch/CVD Process & Device Integration
- Etch/CVD Technical Marketing Roles for Samsung, SK hynix & China Customers
- Marketing, Sales & Buyer Experience

CTO

Chief Technology Officer
Wade Hwang

- 23 Years Experience at US, Korea, China
- Samsung, GF, Applied Materials, TEL
- Etch Process for Memory & Logic
- Devices for Korea/US/China IDM/Foundry
- DRAM, NAND & Logic Process Specialist
- US/EU Sales & Marketing Experience



COO

Chief Operating Officer
Chris Jang

- 30 Years Experience at Korea
- Samsung & Techest
- Etch Equipment & Hardware Experience
- FAB Equipment Solution & Sales Specialist
- Sales VP of #1 facility solution company in Korea
- Supply Chain Management Expert

CGM

General Manager
Jack Chen

- 20 Years Experience at China
- Huahong NEC, Huali, AMEC
- CVD/Etch Equipment & Hardware Experience
- Long-term Etch Equipment Sales Specialist
- Sales VP of Leading China Equipment OEM

04 Organization

CEO

- ST Moon (Consultant)
- WS Jeong (Marketing)
- Shawn Xiao (Manufacturing)
- HJ Kim (R&D)

COO

GM

SCM TEAM

Supply Chain Management
Global Sourcing

- Antonio Park
- YM Lee
- MK Shin
- Andy Kim
- Jenny An

Global Sales TEAM

EU, USA, Korea Business
Technical Service Team

- Wade Hwang
- Albert Lee
- Emma Chien
- Daniel Wang

Operation TEAM

Finance, Operation, Logistics
Administration

- Neil Song
- Ellin Kim
- Sophia Kang
- Hayden Yun
- David Kim

China Sales & Operation TEAM

Supply Chain Management
Global Sourcing

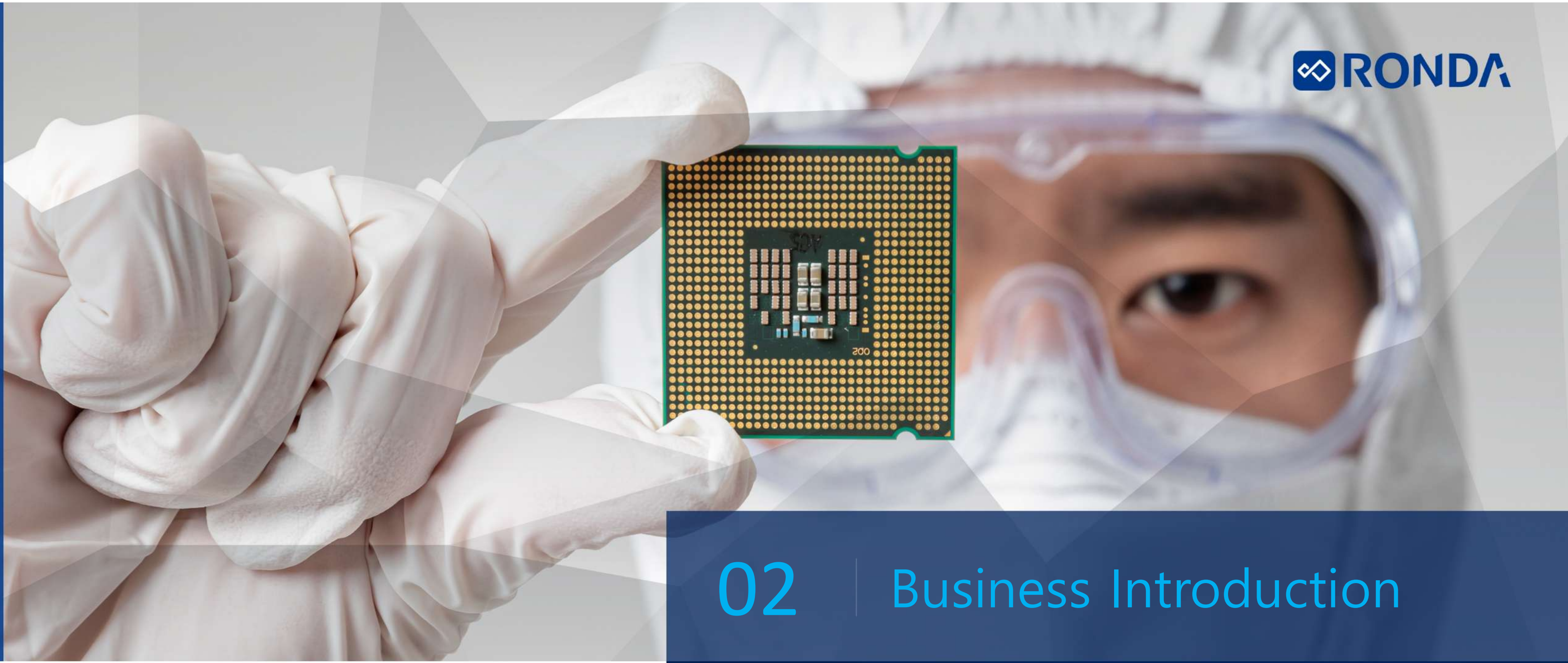
- Kevin Du
- Leibi Yu
- Wald Zhang
- Daniel Wang
- Lorraine Wang
- John Li
- Lisa Wang

05 Core Manpower

RONDAR core manpower

Name	Title	Degree	Experience (YR)	Career	Expertise
B. Moon	CEO	MS	>20	TSMC, AMEC, AMAT	Device Integration, Etch, CVD, Marketing, Sales, Purchasing
C. Jang	COO	BS	>25	Samsung, Techest	Etch, Technology, Sales & Facility Solution
W. Hwang	CTO	MS	>23	Samsung, AMAT, TEL	Etch, Technology, FAB Consulting, Process & Equipment
J. Chen	China GM	BS	>20	Huahong, AMEC	Etch, CVD, China Marketing & Equipment Sales
H. Kim	R&D Head	Ph.D	>20	AMAT, Samsung SEMES, AMEC	Etch, Equipment & Material Solution
A. Park	Director	BS	>25	Samsung	Etch, CVD, ALD, PVD Facility & MFG Solutions
Y. Lee	Director	BS	>25	AMAT	Etch Equipment & SCM Specialist
S. Moon	M&A Consultant	BS	>25	Samsung	CMP, Metal Consumable & Raw Materials Technology
K. Du	Chengdu GM	BS	>15	Chartered, AMAT, LAM	Etch, Equipment & Sales/Operation Specialist
S. Xiao	BD Director	MS	>15	AMAT	Etch, Equipment, System Sourcing & Marketing Specialist
W. Zhang	Sales Director	BS	>15	LAM, NAURA	Etch, Equipment, System Sourcing & Marketing Specialist
D. Wang	Sales Manager	BS	>12	AMAT	Etch, Equipment, Procurement & Sales
L. Yu	Ops Manager	BS	>10	Samsung China Semiconductor	Finance & Operation Specialist
L. Wang	Sales Manager	BS	>10	GlobalFoundries, BASF	Raw Material & Equipment Buyer & PJT Management
N. Song	Ops Director	MS	>10	A Global Consulting Firm	Legal, Global Trading & Finance Specialist
M. Shin	Senior Buyer	BS	>15	AMAT	AMAT/KLA Metrology, Procurement Specialist
W. Jeong	Marketing Director	BS	>15	AMAT, AMEC	Global Marketing and PJT Management
H. Jeong	Tech Manager	BS	>10	AMAT	Etch, Equipment, Procurement & Sales
A. Kim	Senior Buyer	BS	>10	AMAT	Etch, Equipment, Display, Procurement & Sales
R. Kim	Tech Manager	BS	>20	Samsung	Etch, Equipment, Facility, 200mm Specialist
J. Li	Tech Manager	BS	>9	AMAT	Etch Hardware Specialist & Quality Control
L. Wang	Operation Specialist	BS	>7	AMAT	Finance & Logistics Specialist

RONDA KOREA CORPORATION



02 Business Introduction

- Field of Business
- Business Category
- Business Expansion
- Customer Engagement
- SCM Business Model

Expertise & Leadership
Collaboration & Responsibility
Cost Saving
Global SCM Network

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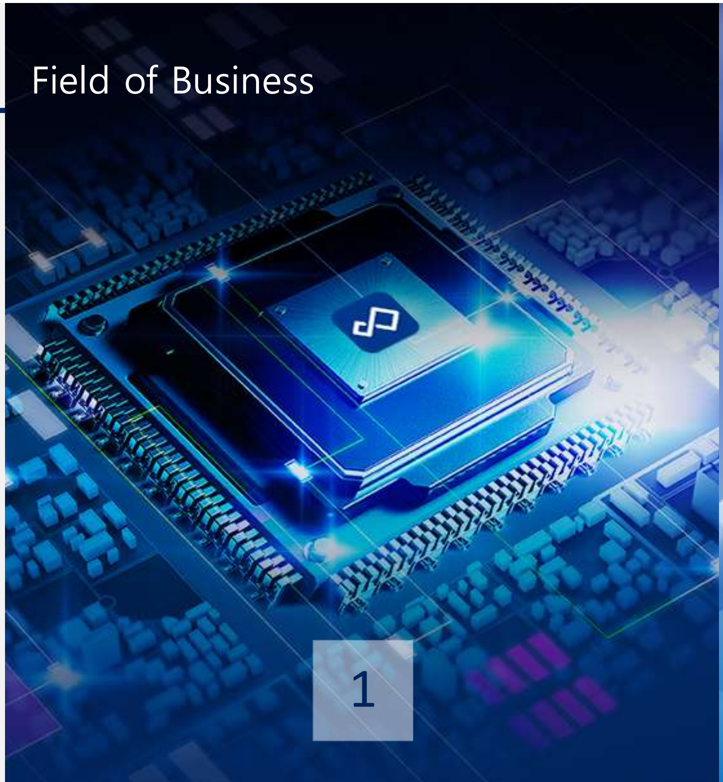
RONDAR KOREA Co.,LTD

01 Field of Business



1

Spare Parts, Consumables

- Consumable Parts
- OEM Parts Sourcing
- Component CIP/Upgrade
- 2nd Sourcing Solution
- Total Kit Management

2

Equipment, Materials

- Equipment Trading
- System Refurbishment
- Installation Service
- Facility Solution
- Raw Materials

3

Consulting, Service Contract

- HW/SW Troubleshooting
- Process/Productivity Solution
- Tool Maintenance BKM/SOPs
- FAB Diagnosis Consulting
- Labor Service

Business Category

Semiconductor MFG Total Solution

ASML / KLA Parts

Component and Assembly
Repair Service & Training

Break - down Kits

Board, Controller,
Driver, Sensor

200 / 300mm System

Equipment Sales,
System Refurbishment

Material Solution

Anodization, Cleaning, Coating,
Gas & Chemicals

Repair Parts

RF Component, Pump,
Valve, Robot, MFC

OEM Business

Entegris, Naura, Akrion,
DFJY, Raintree

Facility / Safety Solution

Clamp, Valve, Chiller, Pump,
Scrubber, Heater, FAB Diagnosis

Critical Components

Electrode, Heater,
RPS, Matcher, Generator

Consumable Parts

Silicon, Quartz, Ceramic, SiC,
Gasket, O-ring, CMP Consumables

Ronda Korea Business Evolves based on Customer Demands and Market Needs!

Phase 1

Korea-to-China Business

- Consumable Parts Sourcing for High-end Market Demand & Cost Reduction
- Transfer HVM BKMs & SOPs to China IDM/Foundry Customers
- Short-term Solutions for SCM Gap due to US/China Tension

Phase 2

China-to-Korea Business

- Develop a Channel for China's Low-Cost Material Business to Korea
- Raw Materials: Coolant, O-ring Compounds, PFA Panels
- Metallic Parts: Machining Parts & TL Clamps

Phase 3

Global OEM Agency

- Entegris (US) Sales Agency for China Market (TI, AMEC)
- Akrion (US) Sourcing & Sales Agency from Korea & for EU
- Productive Technology, DFJY, Raintree Sales Agency for Global Business

Phase 4

China Manufacturing

- Si & SiC Part Local Manufacturing at Xi'an & Huzhou China
- RF Consumable (Gasket, Socket, & Strap) & Repair Center at Xi'an China
- Valve & Controller MFG at Wuxi China

Customer Engagement

Business Engagement | Business Items

CUSTOMER ▶
(FAB & WFE OEMs)

Business Engagement

	AMEC	SMIC	YMTC	HUALI	INTEL Dalian	AOS Chongqing	BAEC	LFOUNDRY	CXMT	Applied Materials	NAURA	TEL	HUAHONG Wuxi	UMC Singapore	SAMSUNG Xi'an	AKRION USA
Marketing Promotion	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Technical Engagement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Procurement Engagement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Evaluation & Qualification	✓	✓	✓	✓	✓	✓	✓	✓	✓	○	✓	✓	○	○	○	○
Sales	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	○	✓	○	○	○	○
Periodic Order	✓	✓	✓	○	✓	○	✓	✓	○	○	○	○	○	○	○	○
Internal Champion Long-term	✓	✓	✓	✓	✓	✓	✓	✓	○	✓	✓	✓	✓	○	✓	○
Partnership	✓	✓	✓	✓	✓	○	✓	✓	○	✓	○	○	○	○	○	○

Customer Engagement

Business Engagement

Business Items

CUSTOMER ▶
(FAB & WFE OEMs)

Business Items

	AMEC	SMIC	YMTC	HUALI	INTEL Dalian	AOS Chongqing	BAEC	LFOUNDRY	CXMT	Applied Materials	NAURA	TEL	HUAHONG Wuxi	UMC Singapore	SAMSUNG Xi'an	AKRION USA
System/Filter (Entegris)	○	○	○	○	○	○	◔	◔	○	◔	○	○	○	◔	◔	◔
Si/SiC	◔	◔	◔	◔	◔	○	○	◔	○	◔	◔	○	◔	✓	○	○
Quartz/Ceramic ESC/Heater	○	✓	○	✓	○	○	○	✓	○	○	○	○	✓	○	○	○
Lid/Pedestal Gasket/Socket	◔	○	◔	○	○	◔	○	◔	○	○	○	○	○	○	○	○
Strap/Weldment	✓	○	✓	○	✓	○	○	✓	○	○	✓	○	○	○	○	○
CMP Consumables	○	○	○	○	✓	○	○	✓	○	○	○	○	○	○	○	○
BM & OEM Parts	✓	✓	✓	✓	○	✓	○	✓	✓	○	✓	○	✓	○	○	✓
Facility, Repair & FA Solutions	○	○	○	○	○	○	✓	✓	○	✓	○	✓	○	○	✓	✓

SCM Business Model – More than 40 Suppliers in Korea

Partner

RONDA KOREA NETWORK

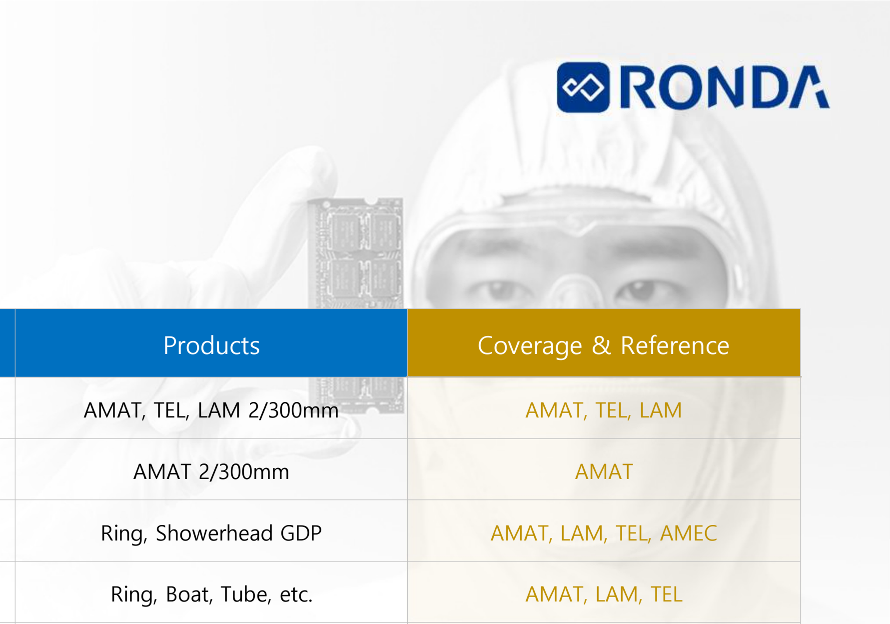
- SB ENG
- MECARO
- BOBOO
- DS Techno
- TECHEST
- ENF
- YOUNG SHIN QUARTZ
- Mi
- 3S
- GTSEMI
- ERAETECH
- Entegris
- JJ CNS
- TEM
- INORES
- HANA TECHNOLOGY
- CM TECH Creative Materials
- pki
- WyCom Wy & Company Ltd.
- SMT
- FNS Four Nine Solutions

Customer

- YMTC
- SMIC
- AMEC
- intel
- 北京京仪自动化装备技术有限公司
- HLMC
- ALPHA & OMEGA SEMICONDUCTOR
- NAURA 北方华创

Benefits

1. High-Quality SCM network in Korea
2. Wide Product Coverage to High-end
3. Customized & On-Demand Solution
4. Volume Production Qualified at SEC/Hynix
5. Cost Effective Solution with price benefit
6. Technical Consultation for IPs and CIPs
7. Close Communication with Global Partners
8. Insurance Coverage & Quality Assurance



Semiconductor Manufacturing & Equipment OEM Coverage - #1

Category	RK Suppliers	Type	Products	Coverage & Reference
ESC Materials	4 Suppliers (Korea)	2nd Source, Repair	AMAT, TEL, LAM 2/300mm	AMAT, TEL, LAM
Heater Materials	3 Suppliers (Korea)	2nd Source, Repair	AMAT 2/300mm	AMAT
Si/SiC Materials	4 Suppliers (Korea)	OEM, 2nd Source	Ring, Showerhead GDP	AMAT, LAM, TEL, AMEC
Quartz Materials	3 Suppliers (Korea)	2nd Source	Ring, Boat, Tube, etc.	AMAT, LAM, TEL
Sockets & RF Gaskets	2 Suppliers (Korea)	OEM	Valve, Heater, Clamp, ASV	Samsung OS, ,LAM, TEL OEM
Ceramic Materials	2 Suppliers (Korea)	2nd Source	Ring, Puck, GDP	AMAT, TEL
Metallic Parts	2 Suppliers (Korea, China)	OEM, 2nd Source	Flange, Liner, Plate, Shield	AMAT, LAM
Bellows Materials	1 Supplier (Korea, US)	OEM	Lift Pin/Gate Valve Bellows	AMAT, LAM
Vacuum Chucks	2 Supplier (Korea, US)	2nd Source, Repair	Photo chuck, Inspection chuck	ASML, Canon, Nikon
Lamp Materials	1 Supplier (Korea)	OEM, 2nd Source	RTP Lamp, EPI Lamp	AMAT, AP System, ASM
O-Ring Materials	2 Suppliers (Korea)	2nd Source	O-ring, E-band, Door Valve	LAM, AMAT, 3M, DuPont,
CMP Consumables	2 Suppliers (Korea)	Consumable	Pad, Slurry, Membrane	AMAT, Ebara
FOSB, FOUB, Cassette	1 Supplier (Korea)	OEM	FOSB, Foup, Cassette	Miraial, Shinetsu

Semiconductor Manufacturing & Equipment OEM Coverage - #2

Category	RK Suppliers	Type	Products	Coverage & Reference
Chiller Solution	2 Suppliers (Korea, China)	OEM	Electric, Heat Exchanger	Samsung Solution
Gas Solution	3 Suppliers (Korea, China)	OEM	Facility Box, Gas Pannel	Brooks, GST, PFEIFFER
Inner Heater Solution	1 Supplier (Korea)	OEM	Inner heater, Implant heater	Samsung Solution
Chemical Solution	3 Suppliers (Korea, China)	OEM	FC series, HT series	3M, Solvay
Equipment Refurbishment	6 Suppliers (Korea, China)	Refurbishment, Install, SVC	All Equipment	All Equipment
OEM BM Parts	8 Suppliers (Korea, China)	OEM, Used Part, Repair	2/300mm BM Parts	AMAT, LAM, TEL, Etc.
KLA Service Solution	2 Suppliers (Korea, Singapore)	Used Part, Repair	Repair Part, Service	BF, DF Inspection system
ASML Service Solution	1 Supplier (Korea)	Used Part, Repair	Repair Part, Service	200mm PAS system
Robot Repair Solution	3 Suppliers (Korea, Japan)	OEM, Used Part, Repair	Robot Blade, CMP UPA	Kawasaki, Yaskawa
Pump Repair Solution	2 Suppliers (Korea, China)	Repair	Dry and Turbo Pumps, Service	Edwards, Ebara
RF Components Solution	2 Suppliers (Korea)	OEM, Used Part, Repair	Bias, Source Generator/Match	MKS, AE
Liquid Controller Solution	2 Supplier (Korea, China)	Used Part, Repair	Vaporizer, LFM, VoDM, LFM	Horiba, MKS, Fujikin
Gas/Chemical Filter	Sales Agency (USA)	OEM	Gas, Chemical Filter	Entegris
System/Chamber Diagnosis	Sales Agency (Korea)	Service	Mass Spectrometry	FAB Consulting

RONDA KOREA CORPORATION

03 Technology & Service

Expertise & Leadership
Collaboration & Responsibility
Cost Saving
Global SCM Network

RONDA KOREA was established to provide competitive and cost-effective semiconductor technology and manufacturing solutions to our valued customers in worldwide.

RONDAR KOREA Co.,LTD

- Value Proposition
- Technical Consulting

CIPs & IP Development

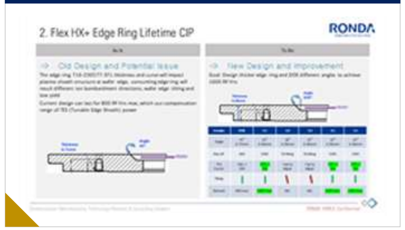
Best Quality Control

Ronda Korea is Continuously Providing FAB & Equipment CIP solutions to Customers for IP Protection & Cost-Saving!

Tool Time 2.5%-5% Improvement


1. Flex HX +C-Ring Conductance CIP

MTBC 35% Improvement


2. Flex HX+ Edge Ring Lifetime CIP

Cost Down 50%. Sample Making

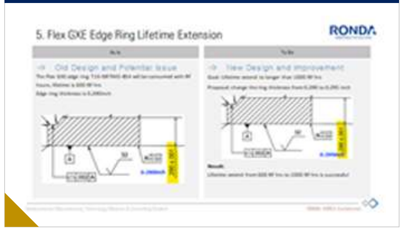

3. Flex HX +C-Ring Cost Down CIP

Ongoing

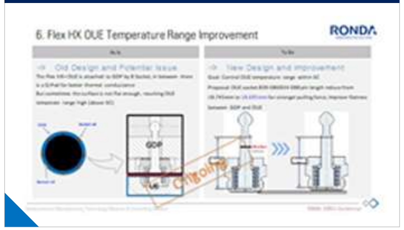
Socket Lifetime 60% Improvement


4. Flex HX+ Inner Socket Lifetime Extend

MTBC 30% Improvement


5. Flex GXE Edge Ring Lifetime Extension

OUE Temperature >6C 0 Case. Testing


6. Flex HX OUE Temperature Range Improvement

Ongoing

PFA Peeling 0 Case. Sample Making


7. Kiyo GX Middle-Outer SIC Edge Ring Particle Improvement

Ongoing

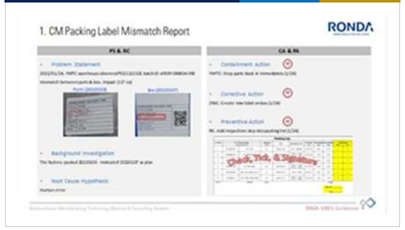
01 Value Proposition

CIPs & IP Development

Best Quality Control

Ronda Korea Put Highest Value on Quality to Meet Customer's Requirement!

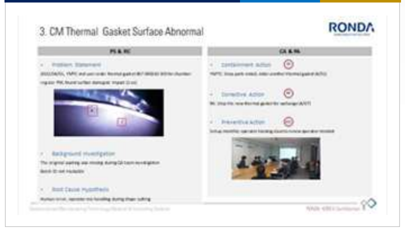
Parts Label Mismatch CA:1D PA:1D


1. CM Packing Label Mismatch Report

Parts Packing NG CA:7D PA:12D


2. CM RF Gasket Damage by Packing

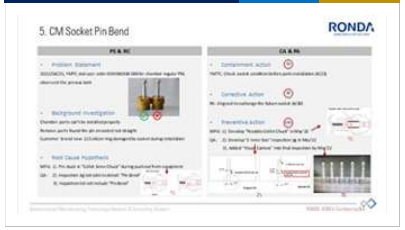
Product Defect CA:6D PA:35D


3. CM Thermal Gasket Surface Abnormal

Process Differential CA:12D PA:00D


4. CM Thermal Gasket Temperature High

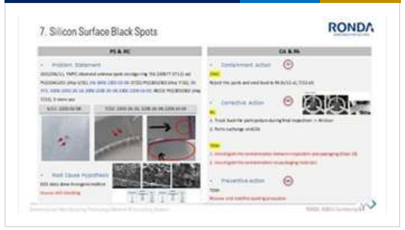
Product Defect CA:3D PA:11D


5. CM Socket Pin Bend

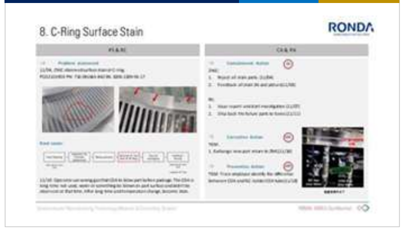
Product Defect CA:1D PA:6D


6. RF Gasket Packing Dirty

Product Defect CA:16D PA:16D


7. Silicon Surface Black Spots

Product Defect CA:16D PA:16D


8. C-Ring Surface Stain

RONDA KOREA CORPORATION

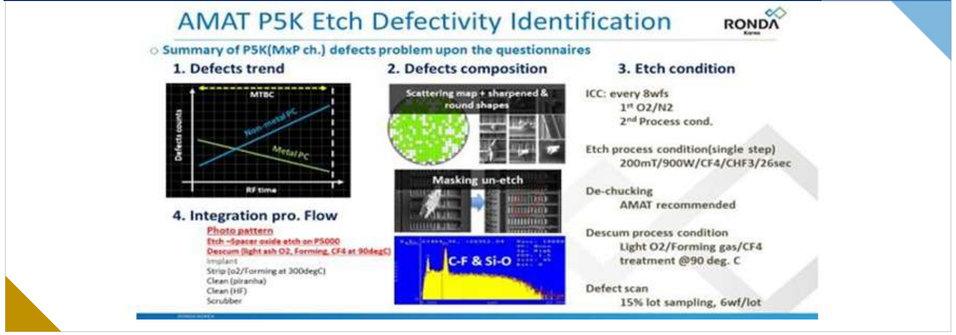
02 Technical Consulting

Specialized Etch & Thin-film | Case Study - #1 | Case Study - #2

Module	Consulting Scope	Customer ROIs
Etch	▪ HW troubleshooting, Systematic Optimization & Development of WAC/ISD Clean ▪ PM Optimization like Pre-season, Chamber back-up, PM SOPs, chamber coating, etc. ▪ Chamber to Chamber Plasma Matching, Tool to Tool HW Matching, FDC Optimization ▪ Defectivity Improvement Through Analysis of Process/Hardware/Kit Management ▪ In-line Process Monitoring Parameters (CD, Depth, Profile) Improvement	▪ Tool performance improvement ▪ Defectivity improvement ▪ Productivity improvement ▪ Product quality improvement ▪ Yield enhancement ▪ Capacity improvement ▪ Line management ▪ Cycle time reduction ▪ SCM & cost-effective solutions ▪ Device/tech transfer ▪ Tech-node licensing ▪ Facility Solutions
Thin-film & Diffusion	▪ Systematic Optimization & Development of ISD (In-situ Dry Cleaning) Process ▪ Particle Reduction & Productivity Enhancement by Process Optimization ▪ Film Thickness Uniformity Control through Hume and Outgassing Control ▪ Key Monitoring Parameter SOP for Chemical Composition or Growth ▪ Optimization of Chamber Back-up (Seasoning) Recipe After Equipment PM	
Metal	▪ Cu BEOL BKM Transfer, Fab Contamination/Operation Management Recommendation ▪ Systematic Optimization & Development of ISD (In-situ Dry Cleaning) Process ▪ Optimization & Development of Chamber Cleaning Process, Spares Handling BKMs ▪ Precision Detection of Residual Gas Affecting on Metal Oxide Film Thickness	
Common	▪ UPEH Improvement Without Major Process Change ▪ Wafer to Wafer or Lot to Lot Variation Analysis for Reduction of Process Drift ▪ WAC/ISD Recipe Optimization (Exact Time, Gas ratio, Pressure, Purge/pump, Multi-x etc.) ▪ Various Productivity Solutions for Kit & Material Optimization ▪ FDC Control & Operational Management	

Specialized Etch & Thin-film | **Case Study - #1** | Case Study - #2

AMAT P5K Etch Directivity Identification



AMAT P5K Etch Defectivity Identification

- Summary of P5K(MxP ch.) defects problem upon the questionnaires

1. Defects trend

2. Defects composition

3. Etch condition

ICC: every 8wfs
1st O2/N2
2nd Process cond.

Etch process condition(single step)
200mT/900W/CF4/CHF3/26sec

De-chucking
AMAT recommended

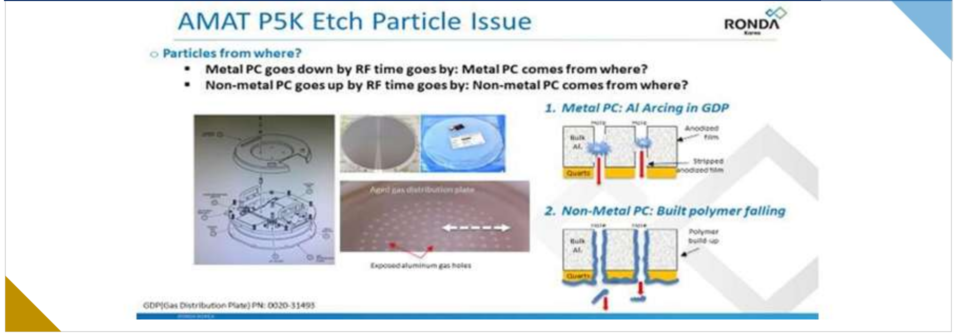
Descum process condition
Light O2/Forming gas/CF4
treatment @90 deg. C

Defect scan
15% lot sampling, 6wf/lot

4. Integration pro. Flow

Photo pattern
Etch –Spacer oxide etch on P5000
Descum (light ash O2, Forming, CF4 at 90degC)
Implant
Strip (o2/Forming at 300degC)
Clean (piranha)
Clean (HF)
Scrubber

AMAT P5K Etch Particle Issue



AMAT P5K Etch Particle Issue

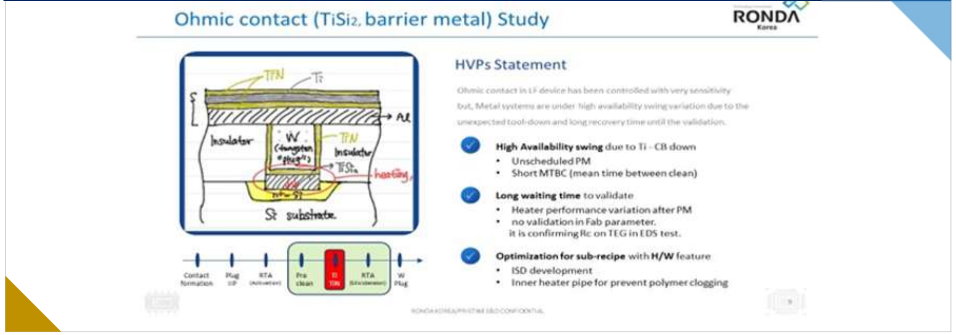
- Particles from where?
  - Metal PC goes down by RF time goes by: Metal PC comes from where?
  - Non-metal PC goes up by RF time goes by: Non-metal PC comes from where?

1. Metal PC: Al Arcing in GDP

2. Non-Metal PC: Built polymer falling

GDP(Gas Distribution Plate) PN: 0020-31493

Ohmic contact Study



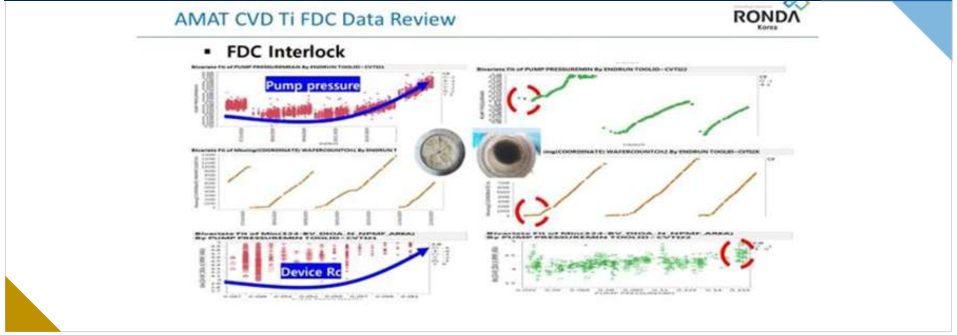
Ohmic contact (TiSi2, barrier metal) Study

HVPs Statement

Ohmic contact in LF device has been controlled with very sensitivity but, Metal systems are under high availability swing variation due to the unexpected tool-down and long recovery time until the validation.

- **High Availability swing** due to Ti - CB down
  - Unscheduled PM
  - Short MTBC (mean time between clean)
- **Long waiting time** to validate
  - Heater performance variation after PM
  - no validation in Fab parameter. it is confirming Rc on TEG in EDS test.
- **Optimization for sub-recipe** with **H/W** feature
  - ISD development
  - Inner heater pipe for prevent polymer clogging

AMAT CVD Ti FDC Data Review



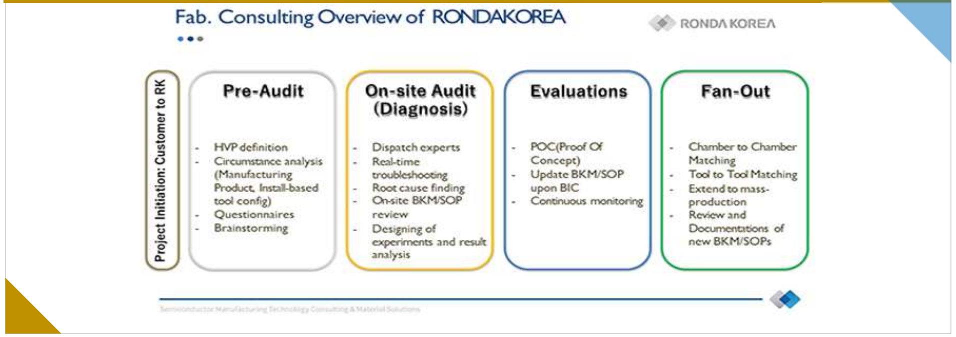
AMAT CVD Ti FDC Data Review

- **FDC Interlock**

02 Technical Consulting

Specialized Etch & Thin-film | Case Study - #1 | **Case Study - #2**

Fab, Consulting Overview of RONDAKOREA



Fab. Consulting Overview of RONDAKOREA

RONDA KOREA

Project Initiation: Customer to RK

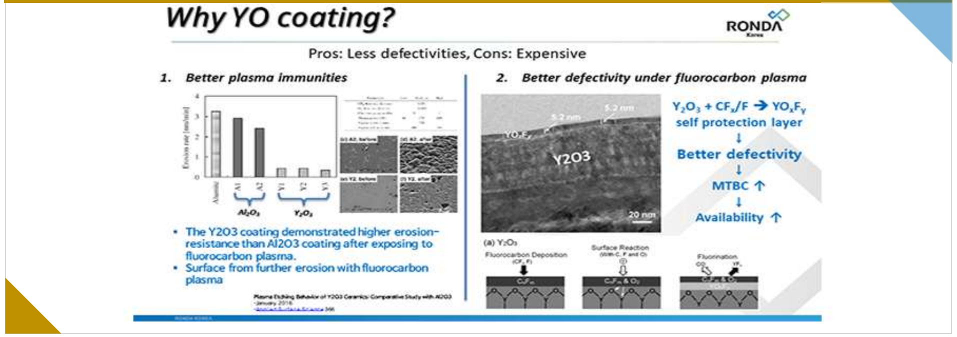
Pre-Audit
- HVP definition
- Circumstance analysis (Manufacturing Product, Install-based tool config)
- Questionnaires
- Brainstorming

On-site Audit (Diagnosis)
- Dispatch experts
- Real-time troubleshooting
- Root cause finding
- On-site BKM/SOP review
- Designing of experiments and result analysis

Evaluations
- POC(Proof Of Concept)
- Update BKM/SOP upon BIC
- Continuous monitoring

Fan-Out
- Chamber to Chamber Matching
- Tool to Tool Matching
- Extend to mass-production
- Review and Documentations of new BKM/SOPs

Why YO coating



Why YO coating?

RONDA Korea

Pros: Less defectivities, Cons: Expensive

1. ***Better plasma immunities***

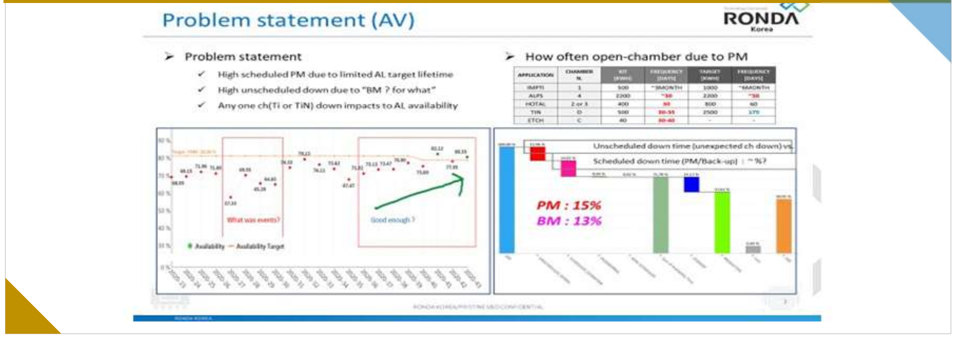
- The Y2O3 coating demonstrated higher erosion-resistance than Al2O3 coating after exposing to fluorocarbon plasma.
- Surface from further erosion with fluorocarbon plasma

Plasma Etching Behavior of Y2O3 Ceramics: Comparative Study with Al2O3 -January 2016

2. ***Better defectivity under fluorocarbon plasma***

$Y_2O_3 + CF_x/F \rightarrow YO_xF_y$ self protection layer
↓
Better defectivity
↓
MTBC ↑
↓
Availability ↑

Problem statement (AV)



Problem statement (AV)

RONDA Korea

➢ Problem statement
- ✓ High scheduled PM due to limited AL target lifetime
- ✓ High unscheduled down due to "BM ? for what"
- ✓ Any one ch(Ti or TiN) down impacts to AL availability

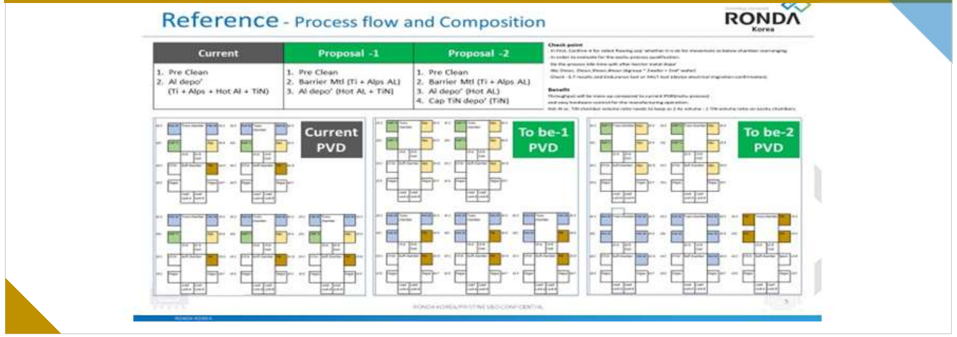
➢ How often open-chamber due to PM

APPLICATION	CHAMBER #	KIT [KWH]	FREQUENCY [DAYS]	TARGET [KWH]	FREQUENCY [DAYS]
IMPTI	1	500	~3MONTH	1000	~6MONTH
ALPS	4	2200	~30	2200	~30
HOTAL	2 or 3	400	30	300	60
TIN	D	500	30-35	2500	175
ETCH	C	40	30-40	-	-

Unscheduled down time (unexpected ch down) vs.
Scheduled down time (PM/Back-up) : ~%?

PM : 15%
BM : 13%

Reference – Process flow and Composition



Reference - Process flow and Composition

RONDA Korea

Current	Proposal -1	Proposal -2
1. Pre Clean 2. Al depo' (Ti + Alps + Hot Al + TiN)	1. Pre Clean 2. Barrier Mtl (Ti + Alps AL) 3. Al depo' (Hot AL + TiN)	1. Pre Clean 2. Barrier Mtl (Ti + Alps AL) 3. Al depo' (Hot AL) 4. Cap TiN depo' (TiN)

Check point

Benefit

RONDA KOREA CORPORATION

RONDA

04 Business strategy

Expertise & Leadership
Collaboration & Responsibility
Cost Saving
Global SCM Network

RONDA KOREA was established to provide competitive and cost-effective semiconductor technology and manufacturing solutions to our valued customers in worldwide.

RONDAR KOREA Co.,LTD

- Worldwide Locations
- Xi'an Manufacturing Project
- Global Silicon Parts Business

01 WORLDWIDE

RONDA KOREA Offices

RK Dongtan Korea Headquarter	Global Business Control
RK Chengdu China Sales Office	China Sales Business, Entegris Agency
RK Xi'an China MFG Headquarter	Global Manufacturing Facility (Si, Consumable)
RK Singapore Business Office	EU Sales Business, Repair Center
RK San Jose USA Business Office (TBD)	US Business Engagement

Korea Headquarters

RONDA KOREA CO. LTD.

China Sales Office

成都荣达科半导体有限公司

China Manufacturing

RONDA Materials CO., LTD

02 Xi’an Manufacturing Project

RONDA

1	2	3	4	5	6	7	8
Profile	Partnership	Contract	Opening	Material	Factory	Time-line	Forecast

Xi’an Silicon Manufacturing Factory Profile

Category	Description	Comments
Company Name	▪ Ronda Materials (Xi’an) Co., Ltd. (RMX)	Company Registration Done
Ownership	▪ BS Moon 100%	External Funding Ongoing
Date of Establishment	▪ FY2023 Q1	-
Location	▪ Xi’an GXQ Duty Free Zone B	Free Rent from Xi’an GVMT
Business Scope	▪ Semiconductor equipment parts and components manufacturing ▪ Specialized for Si, SiC, ceramic, quartz, metal and resins and polymers ▪ Raw materials, coating, machining and composition technology	High-End Product Line-Up
Funding Amount	▪ 60M RMB Investment in 2023 ▪ 250M RMB Investment by 2024 (Huzhou Option Is Pending)	Depending on Investment
MFG Starts	▪ Q3’2024 Pilot Production for High-end Si Parts ▪ Q4’2025 Mass Production & Samsung Xi’an Business Penetration	Equipment Ordering
Employee	▪ Phase 1: 40PAX ▪ Phase 2: 120PAX	Korean Expat China Local Champions
Target Customers	▪ Phase 1: AMEC ▪ Phase 2: AMEC, YMTC, Samsung Xi’an, Intel Dalian, SMIC, CXMT	DFZ Customers: AMEC, SCS
Revenue Target	▪ 10M USD (Pilot) – 20% of RK silicon business revenue in 2023 ▪ 50M USD (HVM) – 80% of RK silicon business revenue from 2025	Take #1 Si Machining Company Position in China

Xi'an Manufacturing Project

RONDA & ERAETECH Collaboration & Partnership

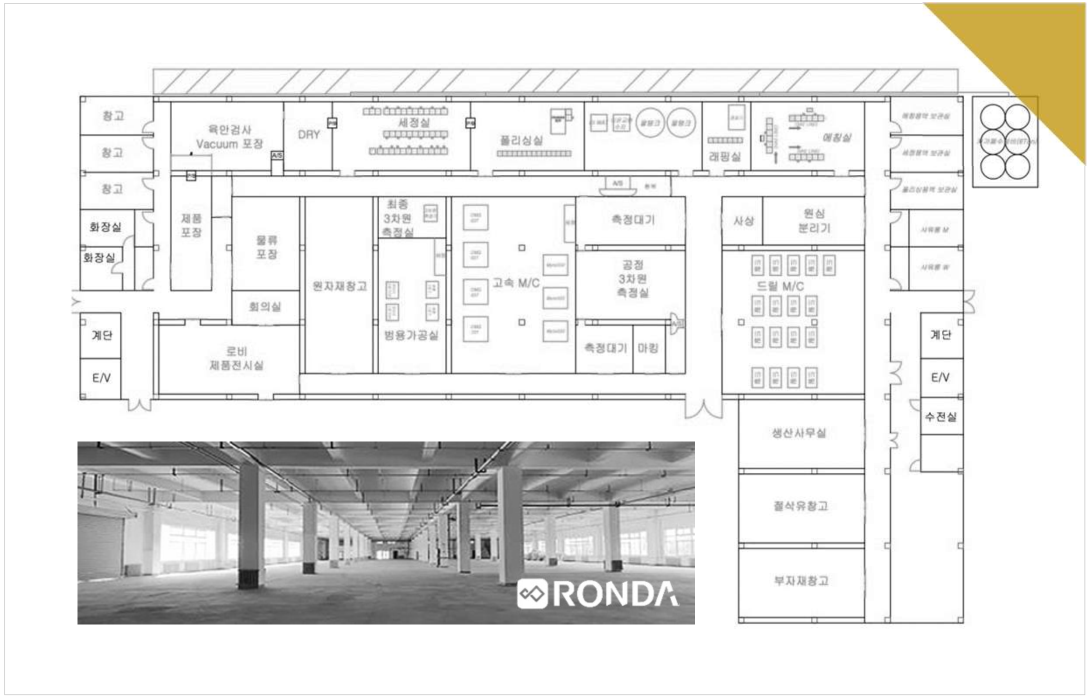
02 Xi'an Manufacturing Project

1 Profile
2 Partnership
3 Contract
4 Opening
5 Material
6 Factory
7 Time-line
8 Forecast

Business Contract with Xi'an Government on Mar'23

Xi'an Manufacturing Project

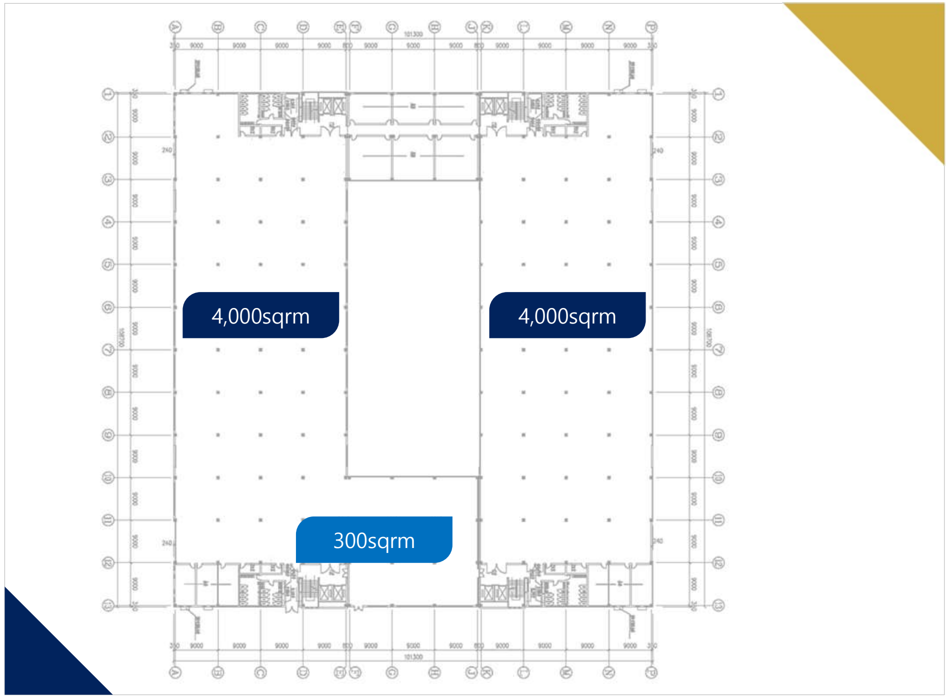
Factory Opening Ceremony at May'23



Xi’an Manufacturing Project

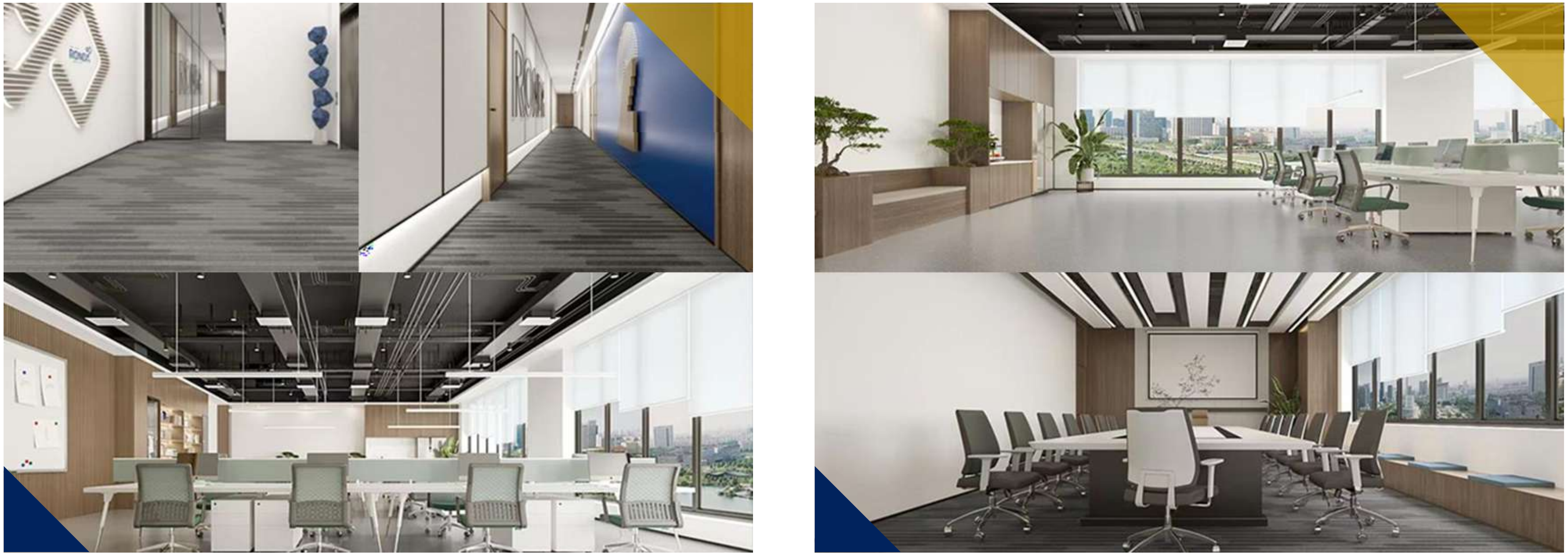
1	2	3	4	5	6	7	8
Profile	Partnership	Contract	Opening	Material	Factory	Time-line	Forecast

Ronda Materials Xi’an Co. Ltd.



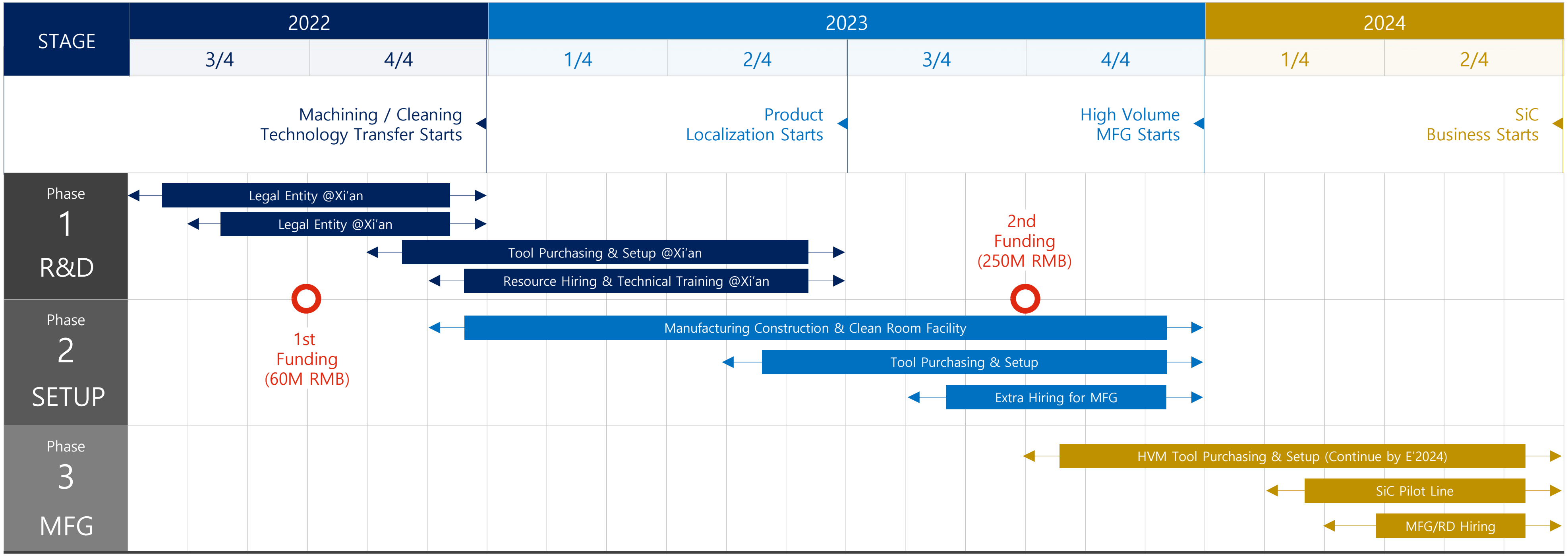
02 Xi'an Manufacturing Project

Xi'an, China Factory Preparation_ Apr'3 ~



Xi'an Manufacturing Project

Xi'an Project Time-line



STAGE

2022: 3/4, 4/4

2023: 1/4, 2/4, 3/4, 4/4

2024: 1/4, 2/4

Machining / Cleaning Technology Transfer Starts

Product Localization Starts

High Volume MFG Starts

SiC Business Starts

Phase 1 R&D
- Legal Entity @Xi'an
- Legal Entity @Xi'an
- Tool Purchasing & Setup @Xi'an
- Resource Hiring & Technical Training @Xi'an

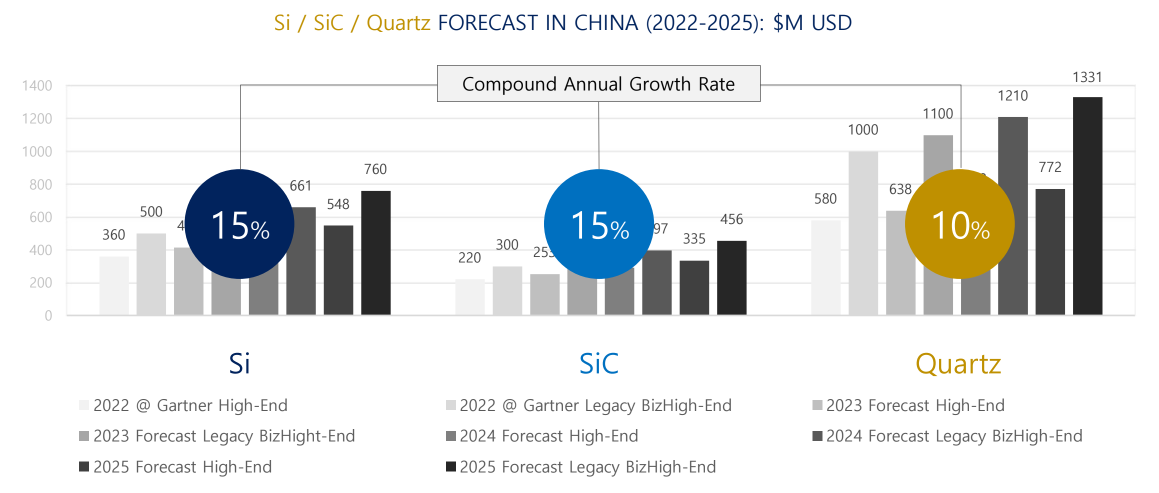
Phase 2 SETUP
- Manufacturing Construction & Clean Room Facility
- Tool Purchasing & Setup
- Extra Hiring for MFG

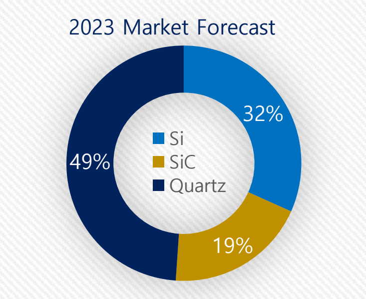
Phase 3 MFG
- HVM Tool Purchasing & Setup (Continue by E'2024)
- SiC Pilot Line
- MFG/RD Hiring

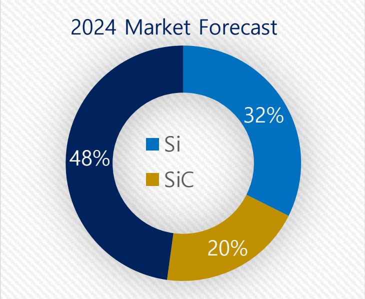
1st Funding (60M RMB)

2nd Funding (250M RMB)

Si/SiC/Quartz Market Forecast in China







UNIT SM USD	2022 @Garter		2023 Forecast		2024 Forecast		2025 Forecast		Remark
	High-End	Legacy BizHigh-End	High-End	Legacy BizHigh-End	High-End	Legacy BizHigh-End	High-End	Legacy BizHigh-End	
Si	360	500	414	575	476	661	548	760	CAGR 15%
SiC	220	300	253	345	291	397	335	456	CAGR 15%
Quartz	580	1000	638	1100	702	1210	772	1331	CAGR 10%

03 Silicon Parts Global Business

Silicon Parts Manufacturing Platform for Global Business

RONDA KOREA

ERAETECH
Korea/Global Parts Business

1) Investment $15M USD (2023)
2) Investment $20M USD (2024)
3) Relocation & Expansion (2025)
4) Applied Materials Registration (2025)

Si Ingot MFG

Si Raw Material
Manufacturing Company

1) Project Planning (2023)
2) Investment at Huzhou $15M USD (2024)
3) Start Production (2025)
4) Investment $10M USD ($100M Rev. Coverage)

RMX & HZ PJT

RONDA Materials
China Si/SiC Parts Business

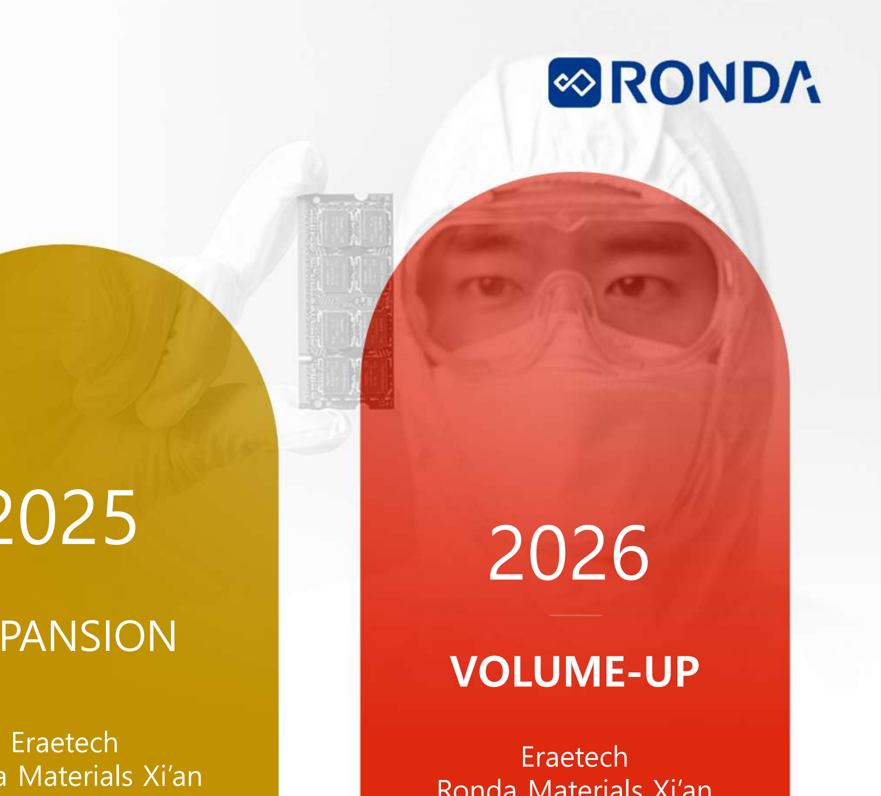
1) Xi'an Investment $15M USD (2023)
2) Mass Production (2024)
3) Samsung Xi'an Registration (2024)
4) Expansion to Huzhou ($30M, 2024)

Machining

Partnership with
Machining Equipment Maker

1) Partnership with Machining Company (2023)
2) Investment $15M (2024)
3) Customized Drilling, 3D/5D Machines
4) M&A (2025)

03 Silicon Parts Global Business



Si Global Business Timeline

2023

MODELING

Eraetech (Korea MFG)
Ronda Materials Xi'an
(China MFG)

- Korea & China Business
- Investment $25M USD
- Major Business
  1. RMX: AMEC/YMTC/SMIC
  2. ET: 200mm, Korea/Global
- Revenue Target $20M USD

2024

STRUCTURING

Eraetech
Ronda Materials Xi'an
Huzhou Si MFG

- Korea & China Business
- Investment $30M USD
- Major Business
  1. Samsung Xi'an (SCS)
  2. Local China Customers (HZ)
- Revenue Target $50M

2025

EXPANSION

Eraetech
Ronda Materials Xi'an
Huzhou Si MFG
Silicon MFG (Raw Materials)

- Si Raw Material Company Setup
- Investment $20M USD
- Major Business
  1. China Customers (RMX, HZ)
  2. Korea Customers (ET)
  3. AMAT OEM Business (ET)
  4. Raw Material Supply
- Revenue Target $70M

2026

VOLUME-UP

Eraetech
Ronda Materials Xi'an
Huzhou Si MFG
Silicon MFG (Raw Materials)
Equipment Maker

- Partnership with Tool Maker
- Investment $30M USD
- Major Business
  1. All China Customers
  2. Korea Customers
  3. AMAT OEM Business
  4. Equipment Development
- Revenue Target $100M

Silicon Parts Global Business

Future Silicon Business Model – Maximum Stretch

TECHNOLOGY CONNECTED RONDA SEMICONDUCTOR SOLUTION

China Partner

ERAETECH

1) Korea Si/Qrtz/SiC Business
2) Applied Materials OEM Goal
3) 200mm & Global Business
4) 30~50M Investment
5) 50~60M Yearly Revenue (2026 Goal)

Equipment Maker

1) Equipment OEM Parnership
2) Machining Center (High-end)
3) Stock Sharing
4) 10~20M Investment
5) 20M Yearly Revenue (2026 Goal)

RONDA MATERIALS

1) China Si/SiC Business
2) Samsung Xi'an & 2nd Hands
3) Expand to Huzhou
4) 30~50M Investment
5) 40~50M Yearly Revenue (2026 Goal)

Si Raw Materials

1) China Si Raw Materials
2) Si Supply to Korea/China
3) R&D Material Development
4) 20~30M Investment
5) 30M Yearly Revenue (2026 Goal)

RONDA
SEMICONDUCTOR SOLUTION

RONDA KOREA was established to provide competitive and cost-effective
semiconduct technology and manufacturing solutions to ou valued customers in worldwide.

Thank You

RONDAR KOREA Co.,LTD