Reliance
Technology Development Ltd.

Manufacturer

Professional

Client-oriented

Brilliant

Vision

We are totally dedicated to building a reputation as the most professional and highly valued circuit board supplier to our customer base as an industry partner.

Mission Statement

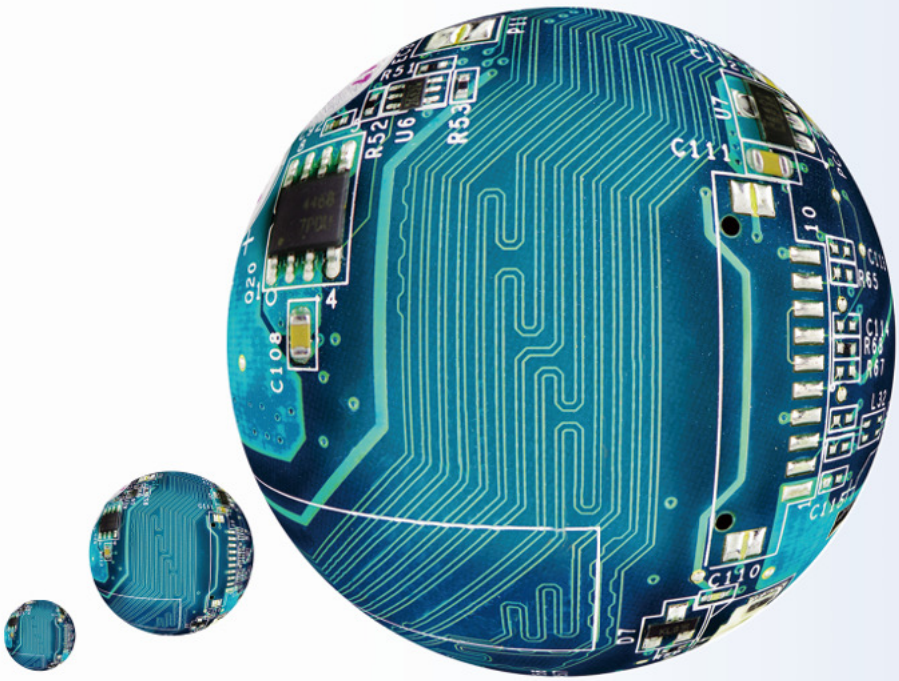
We will continue to invest in our people, the most up-to-date processes and enhance our production capabilities to add real value for our customers.

We will never compromise environmental protection and we strive to provide a genuine one-stop service for our customers with a focus on continual cost reduction and improvement.

Commitment

Our commitment is to offer a premium quality service at a genuinely competitive price without ever compromising quality and assembly performance.

Quality will always be our primary focus, and our service levels will clearly indicate just how we value your business.



Company Profile

Reliance is a long established Hong Kong company which provides a comprehensive PCB manufacturing service to a global customer base.

Established in 2002, we have continued to grow and fine tune our manufacturing capabilities, providing single and double-sided circuit board production. In addition to basic technology PCBs, we also offer multi-layer technologies and quick turn around prototype production. We offer a wide range of special materials, flexible & semi-flexible designs and also assembly services to complement our portfolio.

Reliance strives to provide a fast, competent response to customer requirements with a clear understanding that on-time delivery is critical to your production process.

Furthermore, our commitment extends further than production excellence; we also focus on environmental protection and recognise workers' rights in an environment that encourages excellence.

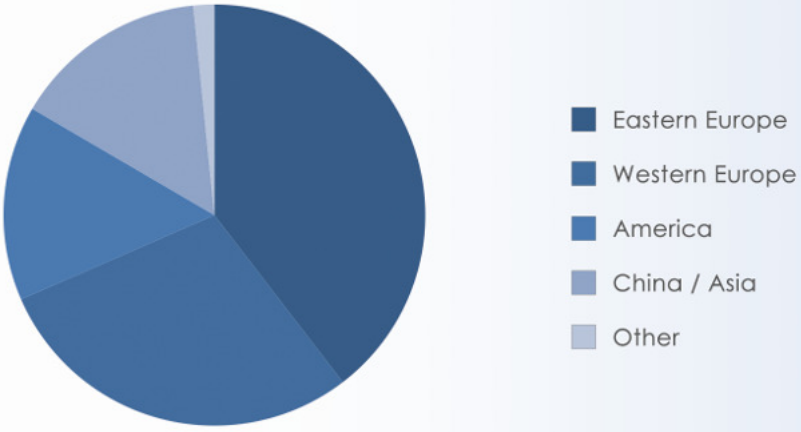
Reliance offers fully RoHS compliant products and utilise in-house waste water treatment.

We understand and recognise that taking care of the workers and the environment means taking care of our business.

Reliable Partnership

Milestone

1999 Aug	Establishment of PCB sales office in Hong Kong
2003 Oct	Invest modern production plant for a widely development
2004 Jun	Started Multi-Layer production line
2006 Apr	Obtained ISO9001 Certificate
2007 Aug	Obtained ISO14001 Certificate
2007 Dec	Expand Plant size to 20,000 sqm, capacity was increased from 250,000 sq.ft/month to 450,000 sq.ft/month
2008 Sep	Accomplish TS16949 quality system
2009 May	New factory under development
2012 Jul	Hui Zhou Factory start production
2014 Feb	Obtained ISO9001 & 14001 Certification for Hui Zhou Factory



Years of Experience in the Worldwide Market

Reliance Global Partner

Excellent Manufacturer

Plant & Capacity

Plant Size : 20,000 sq m

Number of Staff : 600

Managers / Supervisors : 60

Monthly Capability : 450,000 sq ft/ month

Number of Engineer : 60

Certificates : ISO9001, ISO14001, TS16949, UL

Product Type

- Standard Rigid PCB from 1 to 24 Layers
- Flexible PCB
- Rigid-Flex PCB

Special PCB :

- HDI PCB - Blind / Buried vias, Laser drill vias
- Hard gold / Halogen Free PCB
- Aluminium / Ceramic Substrate PCB

Service

- Mass Production
- Quick Turn Service
- Sample / Prototype Production
- PCBA service

Production Lead Time

	Sample	Quick Turn	Standard
S/S, D/S	4-5 w/days	3 w/days	8-10 w/days
4 Layers	7 w/days	6 w/days	10-12 w/days
6 Layers	8-10 w/days	7 w/days	10-15 w/days
8 Layers	8-12 w/days	7 w/days	10-15 w/days

Licensed Raw Material

Material	Supply Name
Base Material	Fr-4, CEM-3: KingBoard, ShengYi, Nanya, Grace Aluminium : Bergquist Special: ISOLA, ROGER...etc
Copper	Shigangxing
Tin	Yunnan Tin
Soldermask	Taiyo
Legend	Taiyo
Photoimageable etching resist ink	Peters
Brown Film	FOLEX
Photo Film	Yacoo

Capabilities

Items	Specification
Maximum Layer Count	24 Layers
Finished Board Thickness	0.016" ~ 0.128" (0.4mm ~3.2mm)
Maximum Dimension	20" x 24" (508mm x 610mm)
Minimum Line Width / Spacing	4 mil / 4 mil (0.1mm / 0.1mm)
Minimum Mechanical Hole Diameter	10 mil (0.25mm)
Minimum Laser Hole Diameter	4 mil (0.1mm)
Minimum Solder PAD Diameter	10 mil (0.25mm)
Hole Position Precision	2 mil (0.05mm)
Minimum Hole to Hole Spacing	12 mil (0.3mm)
Minimum Hole to Edge Spacing	8 mil (0.2mm)
Surface Treatment	HAL, Lead Free HAL, Flash Gold, ENIG, OSP, Imm. Silver, Imm. Tin
Minimum Hole Wall Thickness	>18um
Maximum Aspect Ratio	8.0 : 1
Minimum Annular Ring	4.5 mil (0.115mm)
Maximum Copper Thickness	Inner Layer: 3.0 oz, Outer Layer: 4.0 oz
Minimum Height of Characters	32 mil (0.8mm)
Minimum Size of Punched Hole	0.1" (0.25mm)
Controlled Impedance	+/- 10%
Outline Precision (CNC)	4 mil (0.1mm)
Outline Precision (Punch)	2 mil (0.05mm)
HDI Construction	BVH/ Build up/ 1+N+1/ 2+N+2

Automatic Laminating Line

Plating Line

Drilling Machine

Clean Room

Ideal Production Line

PTH Line

Dry Film

Etching Line

Exposure Machine

UV LED Exposure

Automatic Solder Mask Machine

Scrubbing Line

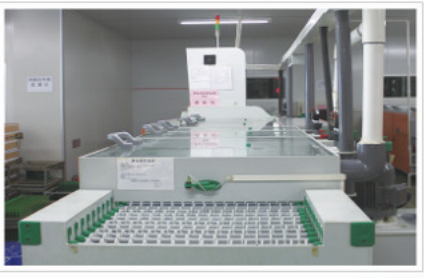
Silkscreen Printing

Scrubbing Line

CNC V-cut Machine

Developing Line

Routing Machine

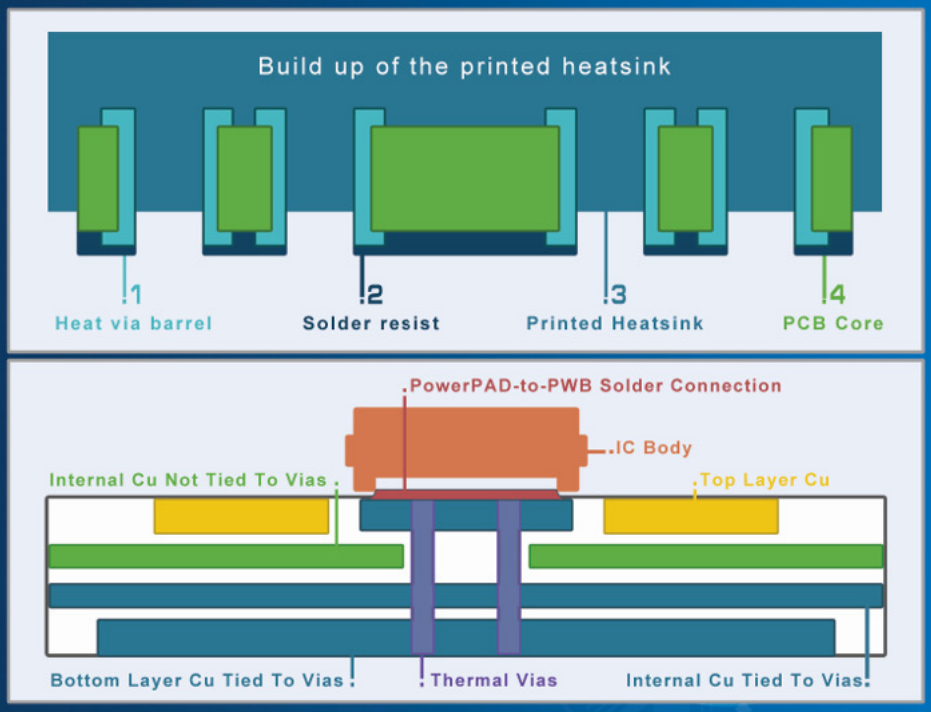


Pre-treatment Line

Oven

A

Radiating PCB Design



Advanced Technology

Heatsink Paste / Thermal Via

- Help solving PCB medium level thermal management
- Applicable for single to multilayers
- Allow flexibility in design
- Cost Saving

Radiating PCB Design

Metal-core PCB (1 to 4 Layers)

- Good alternative to normal FR-4,
- Especially good for:
  - *High Temperature Conduction
  - *High Dimensional Stability
  - *High Mechanical Loads

Item	Test Condition	Unit	Requirement
Peel Strength After thermal Stress	A288 +/- 5˚C 10+/- 1/2s	N/mm (1bf/in)	1/2 oz >/= 1.1 (6.0) 1 oz >/= 1.41 (8.0) 2 oz >-= 1.9 (11.0)
Thermal Stress	A288 +/- 5˚C 10+/- 1/2s		No Delaminating
Flammability	A&E-24/125+DES		94V-0
Volume Resistivity	C-96/35/90	M Ω.cm	>/=10
Surface Resist	C-96/35/90	M Ω	>/=10
Dielectric Constant	C-40/23/50		>/=5.4
Loss Tangent	C-40/23/50		</=0.035
Dielectric Breakdown	D-50+/- 2˚C 48 + 2/0h D-23+/- 5˚C 0.5 - 4h	KV	>/=3
Themal Resistance	A	˚C/W	</=2.0

Aluminium's Thickness	Size	Copper	Protection Film
0.8, 1.0, 1.2 1.5, 2.0, 3.0	610 x 406 ~480 Make Poculiar Size	1/2 oz 1 oz 2 oz 3 oz	60˚C 165˚C 180˚C

Data-Matrix Code (PCB ID)

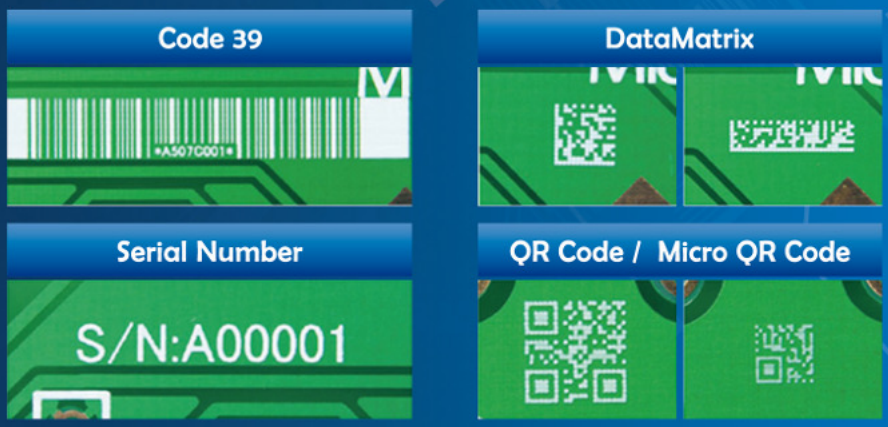
Among almost all kinds of the production technology, a unique product identification and tracking are essential topics for quality control. It has been raised itself in the assembly of printed circuit boards. However, most of them are manually made just before the PCBA.

It is useful to produce marks or codes on printed circuit boards during manufacture to aid in inventory control and tracking, and the ID will be definitely useful for the later production in PCBA process.

Pros:

- Keep record for all PCB
- Aid in inventory control and tracking before PCBA
- Help finding out the root cause of the problem

New Technique



Semi-Flexible PCB

Semi-flexible printed circuit boards differ from fully flexible in the materials used, as well as in the restricted bending radius and the limited number of bending cycles. Instead of polyimide, thin standard FR4 is used as a more economical alternative in certain applications.

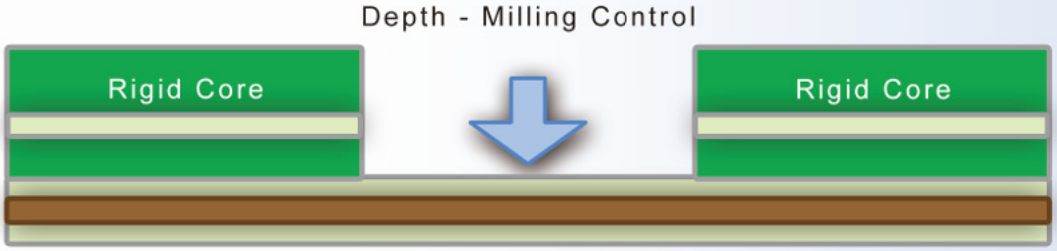
By simple depth milling control, a normal printed circuit board can be turned into more flexible status. In this way 'semi-flexible' PCB provides a lower cost option. This could reduce the number of connectors and increase reliability, as well as decrease the dimension of the application and assembly time. It is a better solution for those flex installation is required and there is no operation during dynamic bending.

Pros

- More economical alternative to Rigid-flex PCB
- Reduce the number of connectors
- Increase reliability
- Decrease the dimension of the application
- Decrease assembly time

Cons

- Restricted bending radius
- Limited number of bending cycles



Copper on outside of bending area

CERTIFICATE

This is to certify that

Reliance Technology Development Limited

No.46, Shangzha Industrial Zone, Dongcun, Xingtan Town, Shunde District
528325, Foshan, Guangdong
P.R. China

has implemented and maintains a **Quality Management System**.

Scope:
Manufacture of Single Side and Double Side and Multi Layer Printed Circuit Board

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2008

Certificate registration no.	492287 QM08
Valid from	2014-01-11
Valid until	2017-01-10
Date of certification	2014-01-03

DAkkS Deutsche Akkreditierungsstelle D-ZM-16074-01-03

DQS GmbH

G. Blechschmidt

Götz Blechschmidt
Managing Director

IQNet

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main
Administrative Office: DQS-UL AP, Room 1702 OOCL Plaza, No. 841, Yan An Middle Road, 200040 Shanghai, P.R.China

CERTIFICATION INTERNATIONAL

Certificate of Registration

This is to certify that

Reliance Technology Development Limited

No.46（2-3 floor), Shangzha Industrial District, Dongcun Village, Xingtan Town, Shunde District, Foshan City, Guangdong Province, P.R. China.

Operates a environment management system which has been assessed as conforming to

ISO14001：2004

for the scope of activities

Manufacture of single-layer, double-layer and multilayer printed circuit boards.

Certificate No: CI/131465Q Issue Date: 2 January 2014
Valid until 1 January 2017 subject to adherence to the agreed ongoing audit programme, successful endorsement of certification following each audit and compliance with CI Regulations

Signed for and on behalf of

Accreditation Manager

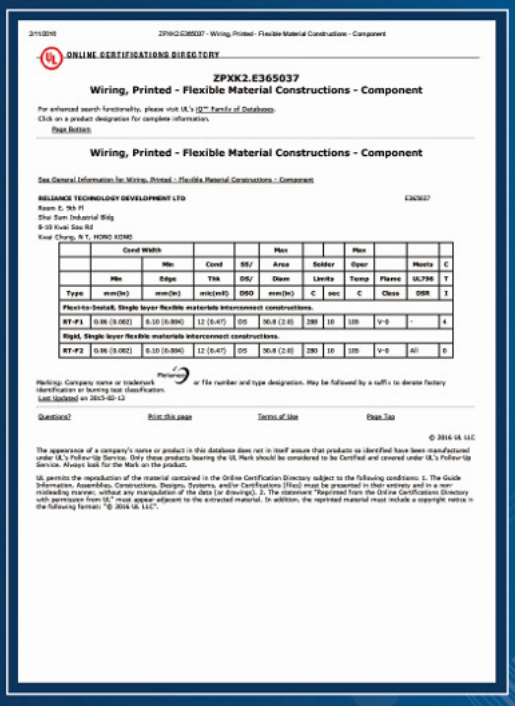
UKAS MANAGEMENT SYSTEMS 063

IAF

Annual surveillance audit for the first time

Annual surveillance audit for the second time

Note: According to the certification requirements, the interval between the annual surveillance audit and the last spot audit cannot exceed twelve months.



2/11/2016 ZPXK2.E365037 - Wiring, Printed - Flexible Material Constructions - Component

ONLINE CERTIFICATIONS DIRECTORY

ZPXK2.E365037
Wiring, Printed - Flexible Material Constructions - Component

For enhanced search functionality, please visit UL's iQ™ Family of Databases.
Click on a product designation for complete information.
Page Bottom

Wiring, Printed - Flexible Material Constructions - Component

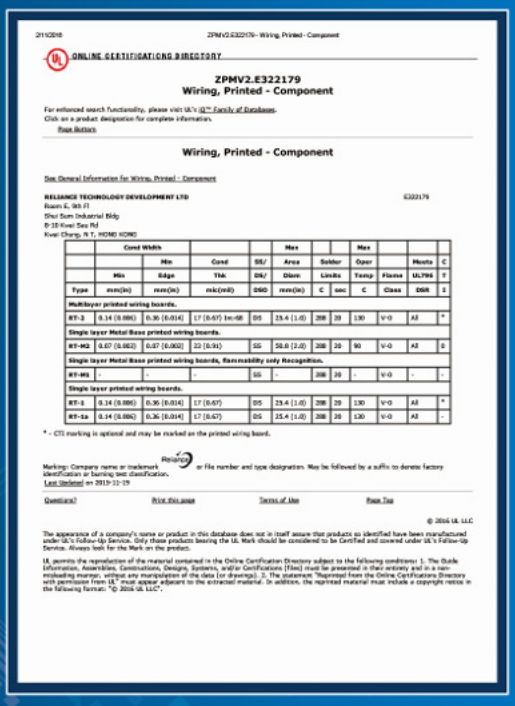
See General Information for Wiring, Printed - Flexible Material Constructions - Component

RELIANCE TECHNOLOGY DEVELOPMENT LTD E365037
Room E, 9th Fl
Shui Sum Industrial Bldg
8-10 Kwai Sau Rd
Kwai Chung, N.T. HONG KONG

	Cond Width				Max			Max			
		Min	Cond	SS/	Area	Solder	Oper			Meets	C
	Min	Edge	Thk	DS/	Diam	Limits	Temp	Flame	UL796	T
Type	mm(in)	mm(in)	mic(mil)	DSO	mm(in)	C sec	C	Class	DSR	I
Flex-to-Install, Single layer flexible materials interconnect constructions.										
RT-F1	0.06 (0.002)	0.10 (0.004)	12 (0.47)	DS	50.8 (2.0)	280 10	105	V-0	-	4
Rigid, Single layer flexible materials interconnect constructions.										
RT-F2	0.06 (0.002)	0.10 (0.004)	12 (0.47)	DS	50.8 (2.0)	280 10	105	V-0	All	0

Marking: Company name or trademark Reliance or file number and type designation. May be followed by a suffix to denote factory identification or burning test classification.
Last Updated on 2015-02-12

Questions? Print this page Terms of Use Page Top



2/11/2016 ZPMV2.E322179 - Wiring, Printed - Component

ONLINE CERTIFICATIONS DIRECTORY

ZPMV2.E322179
Wiring, Printed - Component

For enhanced search functionality, please visit UL's iQ™ Family of Databases.
Click on a product designation for complete information.
Page Bottom

Wiring, Printed - Component

See General Information for Wiring, Printed - Component

RELIANCE TECHNOLOGY DEVELOPMENT LTD E322179
Room E, 9th Fl
Shui Sum Industrial Bldg
8-10 Kwai Sau Rd
Kwai Chung, N.T. HONG KONG

	Cond Width				Max			Max			
		Min	Cond	SS/	Area	Solder	Oper			Meets	C
	Min	Edge	Thk	DS/	Diam	Limits	Temp	Flame	UL796	T
Type	mm(in)	mm(in)	mic(mil)	DSO	mm(in)	C sec	C	Class	DSR	I
Multilayer printed wiring boards.										
RT-3	0.14 (0.006)	0.36 (0.014)	17 (0.67) Inc:68	DS	25.4 (1.0)	288 20	130	V-0	All	*
Single layer Metal Base printed wiring boards.										
RT-M2	0.07 (0.003)	0.07 (0.003)	22 (0.91)	SS	50.8 (2.0)	288 20	90	V-0	All	0
Single layer Metal Base printed wiring boards, flammability only Recognition.										
RT-M3	-	-	-	SS	-	288 20	-	V-0	-	-
Single layer printed wiring boards.										
RT-1	0.14 (0.006)	0.36 (0.014)	17 (0.67)	DS	25.4 (1.0)	288 20	130	V-0	All	*
RT-1a	0.14 (0.006)	0.36 (0.014)	17 (0.67)	DS	25.4 (1.0)	288 20	130	V-0	All	-

* - CTI marking is optional and may be marked on the printed wiring board.

Marking: Company name or trademark Reliance or file number and type designation. May be followed by a suffix to denote factory identification or burning test classification.
Last Updated on 2013-12-19

Questions? Print this page Terms of Use Page Top

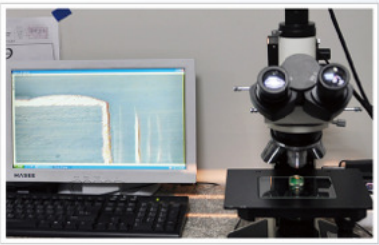
Certificated Plant

ISO 9001: 2008
ROHS Report
UL-Rigid: E-322179

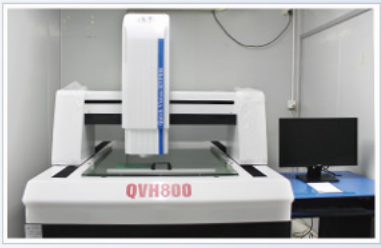
ISO 14001: 2004
Reach Report
UL-Flex: E-365037

Quality Control

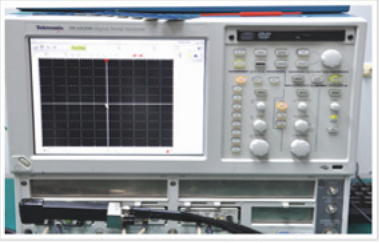
AOI



Cross-section Inspection



2-Dimension Measurement



Impedance Tester

X-Ray Thickness Tester

XRF-ROHS Tester

Hole Cu. Thickness Tester

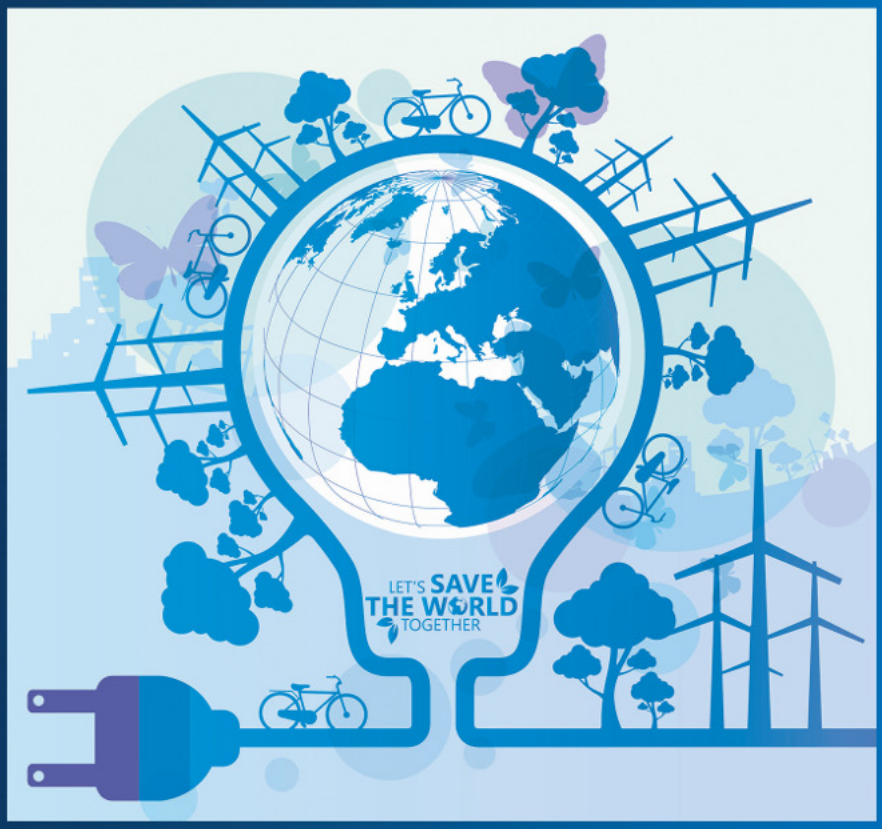
V-Scoring Measurement

Flying Probe Machine

Automatic E-tester

E-tester Machine

E-tester Machine



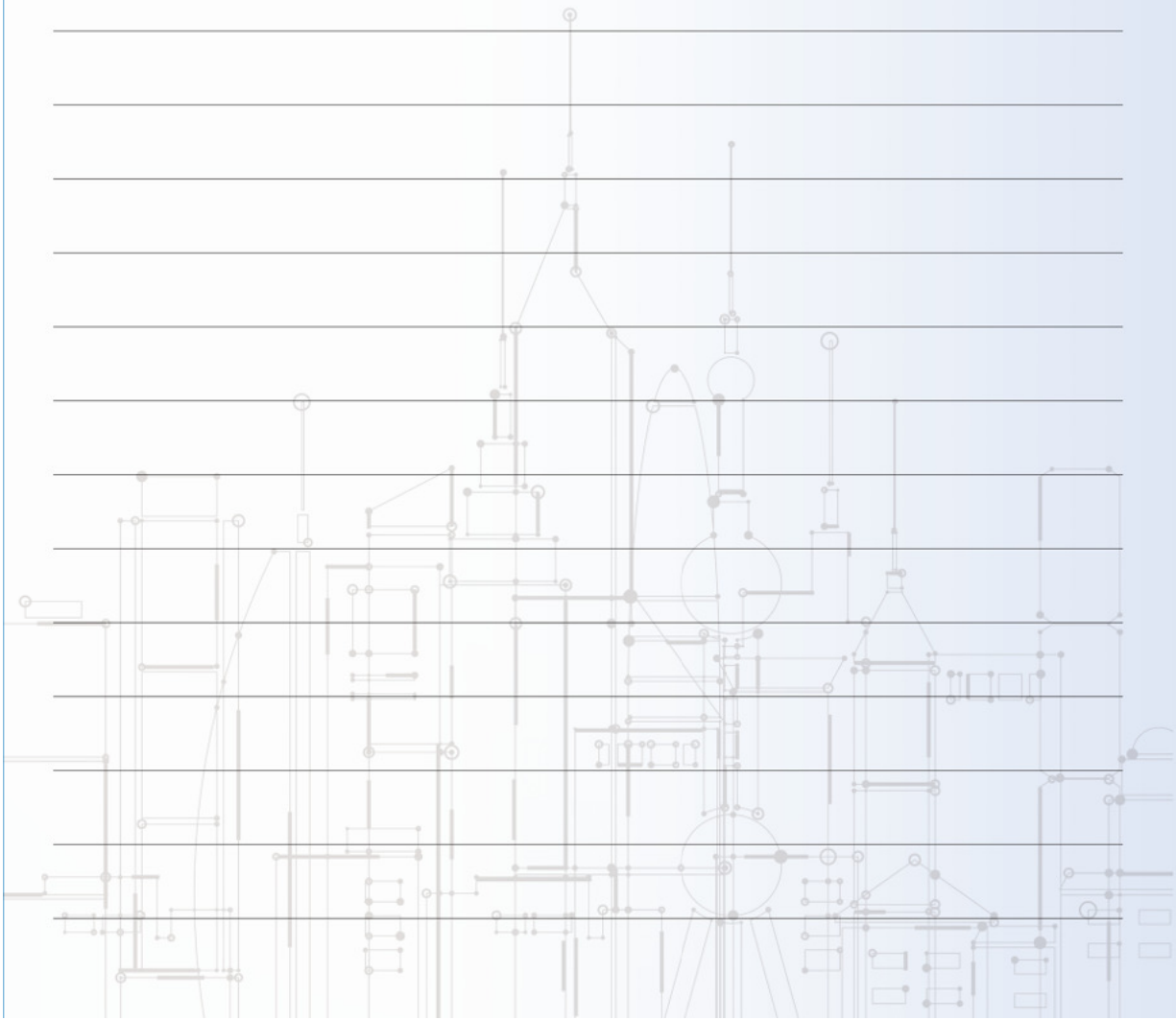
China's Environmental Policy ensures that all PCB producers with potentially high levels of pollution need to control their processes and minimise environmental impact.

Reliance's commitment to this programme way exceeds the recommended procedures and we are justly proud to be accredited with ISO14001 certification to illustrate our commitment to environmental best practice.

Reliance Technology Development Ltd. successfully fulfills and exceeds all of the environment requirements stipulated by the Guangdong Government by operating under the permissible emission quota and meeting the total business emission standards.

Reliance strives for genuine partnerships in order to create mutual advantage in a competitive marker and we value your business.

Environmental Policy



Contact US

HK Office Address:

Unit H, 14/F,
Mai Luen Industrial Building,
23-31 Kung Yip Street,
Kwai Chung, NT, Hong Kong
Tel: (852) 3176 2625
Fax: (852) 3176 2857

Hui Zhou Factory:

Tang Bu Village,
Daya Bay West District,
Hui Zhou, GuangDong, China

Shunde Factory:

Shang Zha Industrial Zone,
No.46 Village Avenue South,
Xingtan Town, Shunde District,
Foshan, GuangDong, China

Website: www.relianceems.com
Email: mkt@relianceems.com