

Effective: January 1, 2025

SCHEDULE OF LABORATORY CHARGES

Minimum Order is \$500, \$750 for High Priority.

SPREADING RESISTANCE ANALYSIS		Normal Priority		
Quantity:	1 – 3	4 – 10	11 +	Any
Monitor wafers (no patterns – 3mm square or larger)	<u>.</u> \$270	\$243	\$216	\$405
Device wafers, in large test patterns (min 500µ by 50µ) First Profile Additional profiles run on the same bevel	\$330 \$230	\$297 \$207	\$264 \$184	\$495 \$345
Device wafers, in product patterns (less than 500µ by 50µ) First Profile Field or scribe line profiles run on the same bevel Other product pattern profiles run on the same bevel	\$540 \$230 \$290	\$486 \$207 \$261	\$432 \$184 \$232	\$810 \$345 \$435
SURFACE TESTS				
4-Point Probe Maps, Diameter Scans Optical Profilometry	\$100 \$100	\$90 \$90	\$80 \$80	\$150 \$150

SURCHARGES

Picture Rate (see notes)	\$50 each
Labor Rate (see notes)	\$400 per hour
Dice under 1mm square or from packages	Add 50%
Profiling product patterns less than 100µ by 20µ	Add 50%
Ultra shallow beveling (typically for junctions under 1000Å)	Add 25%
International Processing Fee	\$25
Emergency Priority (no delays)	2x the high priority rate

Terms: Net 30 days - Payment may be required in advance, FOB Reno NV. Past due balances are subject to a finance charge of 1.5% per month (18% APR).

Notes:

1. This price schedule is effective January 1, 2025 and supersedes all prior schedules.

- 2. Our Minimum Order amount is \$500 for normal priority, \$750 for high priority.
- All prices are in US dollars. We require a copy of the Purchase Order or a signed credit card authorization form prior to starting your analysis. We accept Visa, MasterCard, American Express and Discover. Our <u>CCAuthForm</u> is available on our website or email by <u>contacting</u> us. The Purchase Order or credit card authorization can be sent with your samples or emailed to <u>admin@solecon.com</u>.
- 4. Lab charges are for labor and not subject to Nevada sales tax.
- 5. International work is subject to a \$25 processing fee.
- 6. A quantity discount is available for *normal priority* jobs having a minimum of four (4) profiles. An additional discount is available for *normal priority* jobs having a minimum of eleven (11) profiles. Additional discounts are available for over 200 or 500 profiles completed within a month. The profiles do not need to be of the same type. (Surface tests count as "profiles" for this purpose.)

(continued)

- 7. We consider non-patterned areas or dice that are 3mm square or larger to be non-patterned test wafers. Patterns between 50x500um and 3mm sq. are considered large test patterns. Patterns between 20x100um and 50x500um are considered product patterns. If you have patterns narrower than 20um width or shorter than 100um length, we *may* be able to run them although it is not encouraged. Please call or email us to discuss the possibilities.
- 8. In order to run additional profiles on an existing bevel, the additional locations (field, scribe line or other patterns) must be in-line with the first location. Depths of interest should also be similar or resolution for certain layers may be compromised unless we bevel additional samples to detail the other depths. Please see our technical note "The Desirability of Dedicated Test Patterns" for more information.
- 9. Our specialty is spreading resistance analysis. Therefore our photographic skills are limited to conveying supporting information to the customer. Our photographs will not be the high quality expected from a professional studio.
 - Requests for photos on jobs already completed will be subject to laboratory hourly labor rates to remount and prepare samples plus the above per item picture rate.
 - Requests for photos of stained bevels will be subject to laboratory hourly labor rates while staining the samples plus the above per item picture rate. We will provide the best we can but we won't be able to guarantee readable staining due to issues beyond our control.
- 10. Additional/Preliminary work required prior to running usable profiles will be billed at \$400 per hour. Examples of preliminary work are: trying multiple locations to find the proper area to analyze; trying multiple bevel angles to discover the depth of interest; preparing and/or staining samples for pictures and preparing packaged dice for beveling.
- 11. All work will be accepted as normal priority unless otherwise requested. Normal priority samples are handled on a first-in/first-out basis with a usual turn-around time of one to two weeks.
- 12. High priority work bypasses the normal priority queue and is usually completed within two days of receiving the samples. The amount of high priority work our system can manage is limited no more than six analyses per customer per day. On occasion we may be unable to accept high priority work. Quantity discounts are not available for high priority work.
- 13. Very limited "Emergency Priority" work will be accepted no more than three analyses per request. It is discouraged for all but "fab line down" situations. This work, done with absolute minimum delay, will be billed at twice the high priority rate, subject to a minimum cost of \$1500.
- 14. Other jobs, including section and stain, device dice profiling and very large jobs, will be accepted only as normal priority and may be billed at hourly rates. Please call for information.
- 15. An online analysis cost calculator can be found at <u>www.solecon.com/cost/</u>

When submitting samples, we ask that you complete our "Spreading Resistance Analysis Request Form."

For spreading resistance analysis, please:

- Indicate the maximum depth of interest, the orientation, conductivity type of the substrate, the type and approximate thickness of each layer in the structure.
- Submit duplicate samples of dice, if possible.
- Provide a photo, sketch or copy of the mask indicating areas of interest on patterned samples.
- You need not strip oxide or metallization from the sample surface, however when possible, please remove nitride passivation.

For 4-point probe contour mapping, please:

- Write "Map" for the maximum depth of interest. Indicate the conductivity type and approximate thickness of the surface and background layers on the wafer.
- Mark sample identification on the BACK of the wafer.
- If possible, strip oxides from the sample surface. You probably have a cleaner way of doing it than we do. Which helps!

For optical profilometry, please:

- Write "Opto" for the maximum depth of interest. Indicate the approximate step heights in the structures.
- Provide a sketch or picture indicating areas of interest on samples.