

3M™ Bonding Solutions for Electronics

APPLICATION PROFILES



Electronics Bonding Applications by Device



Smartphones



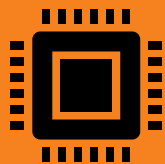
Tablets / Notebooks



IoT Smart Home / Security



Wearables / Hearables



Others



3M™ Bonding Solutions for Electronics

Smartphones



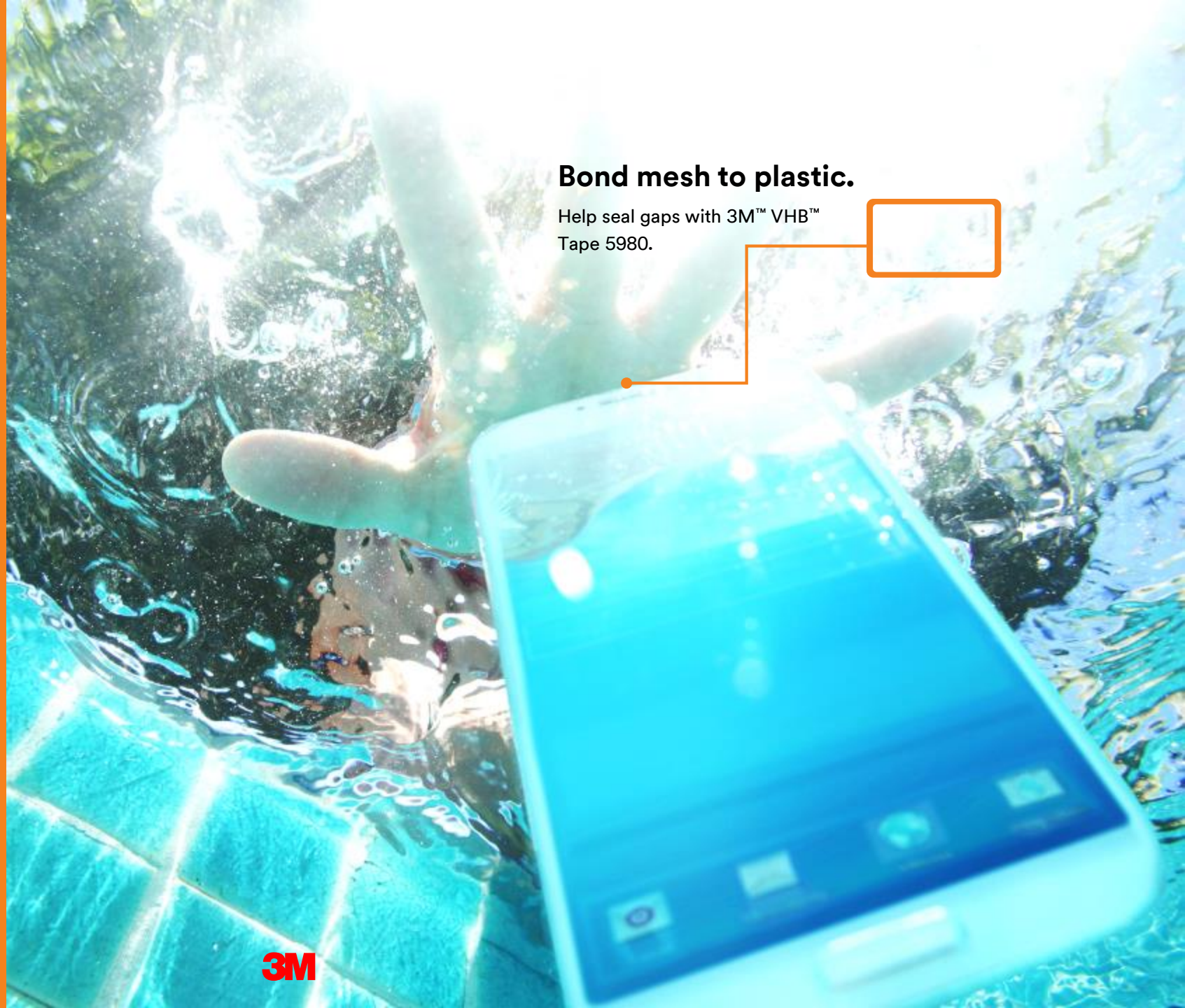


SMARTPHONES

ELECTRONICS

Fill in the gaps.

Look to 3M™ VHB™ Tapes to help seal displays, speakers, microphones, volume keys, and more from water. Its closed-cell construction, conformability and softness can fill gaps while maintaining enough flexibility to absorb energy from shocks, vibrations and design stress.



Bond mesh to plastic.

Help seal gaps with 3M™ VHB™
Tape 5980.





SMARTPHONES

ELECTRONICS

Picture perfect bonding.

Cameras on mobile phones are more and more sophisticated and require the best bonding solution. Whether you're bonding metal to glass or plastic, 3M has an ideal bonding solution for you. With high tensile impact resistance, sealing and re-workability, the easy to apply 3M™ VHB™ Tape 5980 helps protect your camera. And if you're looking for the right performance at the right price, look to 3M™ Conformable Double Coated Tape 93420.



Camera Lens Bonding

Bond metal to glass.

Help protect phone cameras with 3M™ VHB™ Tape 5980 or 3M™ Tape 93420.



SMARTPHONES

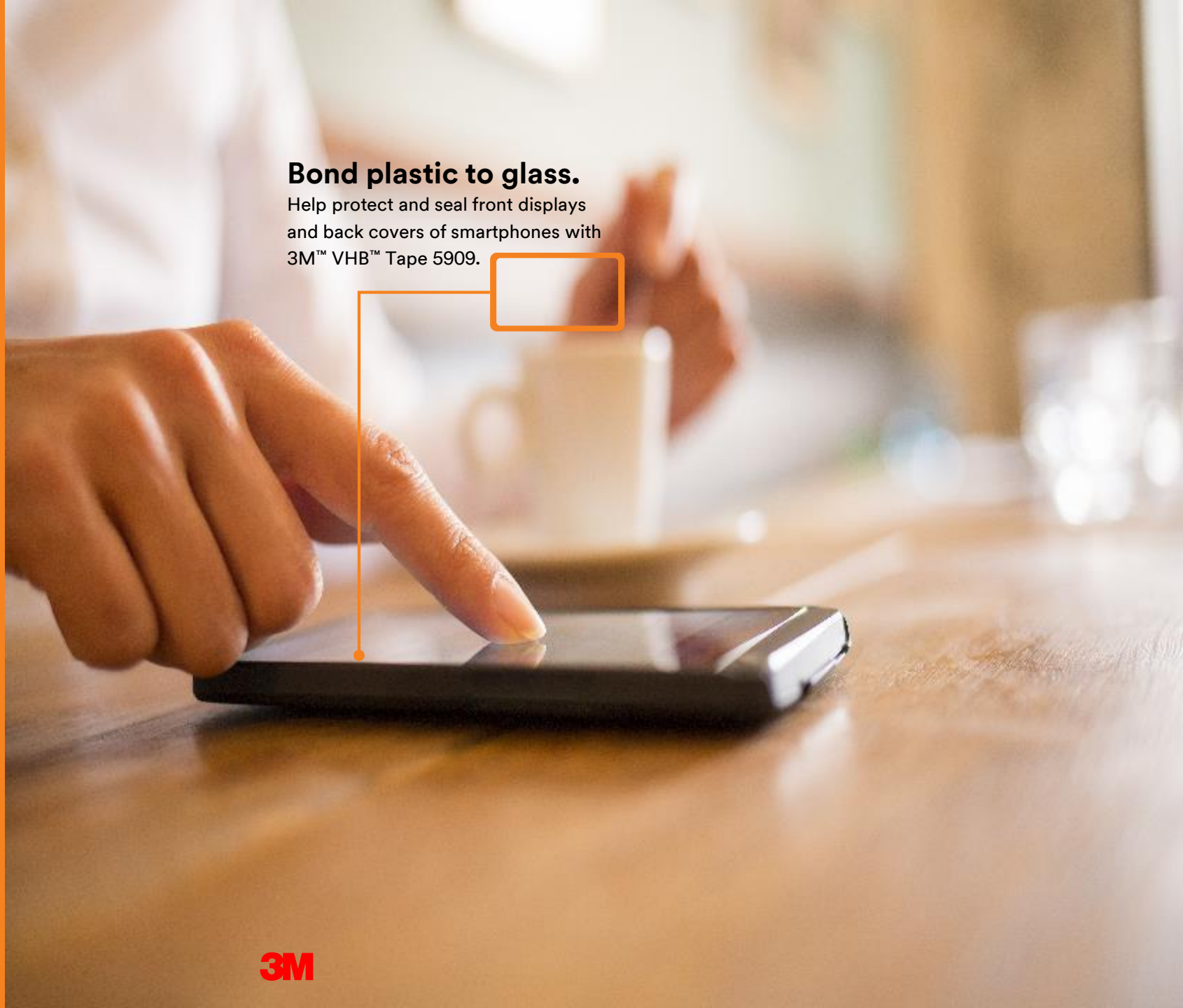
ELECTRONICS

Get the edge on frame bonding that seals and cushions.

Get excellent shock absorption and sealing performance to help reduce the risk of broken screens and improve water resistance for your smartphone. Our bonding solutions offer excellent impact strength, conformability, adhesion to multiple surface types and design flexibility.

Bond plastic to glass.

Help protect and seal front displays and back covers of smartphones with 3M™ VHB™ Tape 5909.





SMARTPHONES

ELECTRONICS

The right call for anti-lifting antenna module bonding.

Optimize design and performance with a reliable solution for bonding hard-to-bond materials to flexible printed circuits (FPC).



Bond FPC to plastic.

Make a strong connection with 3M™ Adhesive Transfer Tape 9471LE with 3M™ High Strength Acrylic Adhesive 300LSE.





SMARTPHONES

ELECTRONICS

Resist chemicals no matter the form factor.

When a logo needs to be applied on a curved surface, there's a risk that it can peel off over time. Add to this the exposure to sweat, cosmetics, sunscreen, and cleaners and bonding becomes a real challenge. 3M™ Chemical-Resistant Adhesive Transfer Tape 96105CR is an ideal solution designed to combine high adhesion and chemical resistance performance for a strong bond where it's needed most.

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Logo on foldable phone

Maintain a strong bond with high chemical resistance with 3M™ Tape 96105CR.



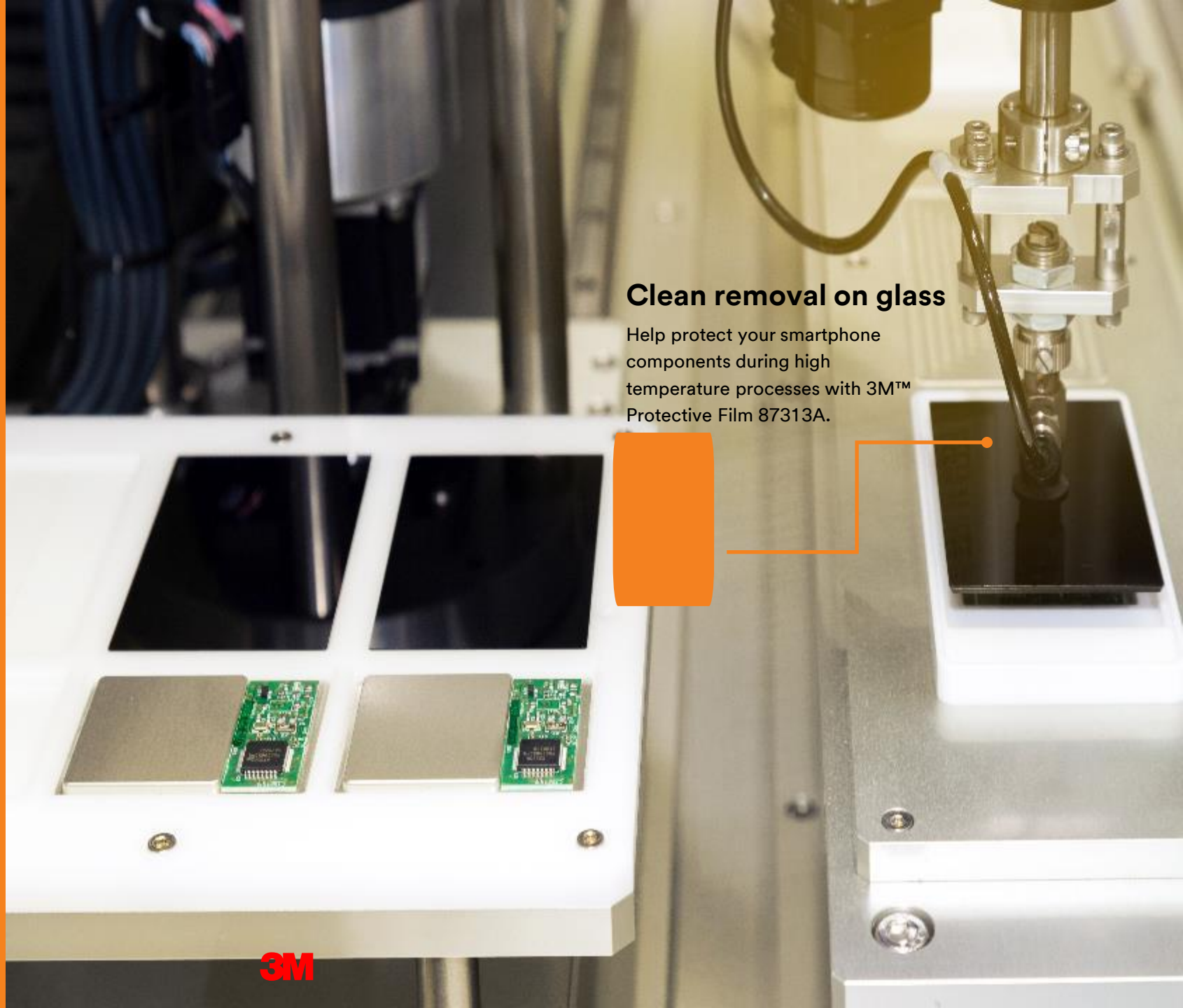


SMARTPHONES

ELECTRONICS

In-process protection.

Physical vapor deposition (PVD) is a high temperature process used to produce a metal vapor that can be deposited as a thin metal coating. With clean removal after high temperature process, 3M™ Protective Film 87313A can help protect high value components such as cameras when a PVD coating is applied on a smartphone glass cover.



Clean removal on glass

Help protect your smartphone components during high temperature processes with 3M™ Protective Film 87313A.



SMARTPHONES

ELECTRONICS

Keep displays in shape.

Flexible OLED displays consist of several film layers bonded together. If they are continuously folded and unfolded, maintaining optical performance can be a challenge. With high adhesion, good creep recovery and surface quality, 3M™ Adhesive Transfer Tape 74002NH is designed to be a reliable bonding solution to help keep displays in shape at all times.



Bond flexible OLED displays

Bond polyimide films while maintaining reliable performance with 3M™ Adhesive Transfer Tape 74002NH





SMARTPHONES

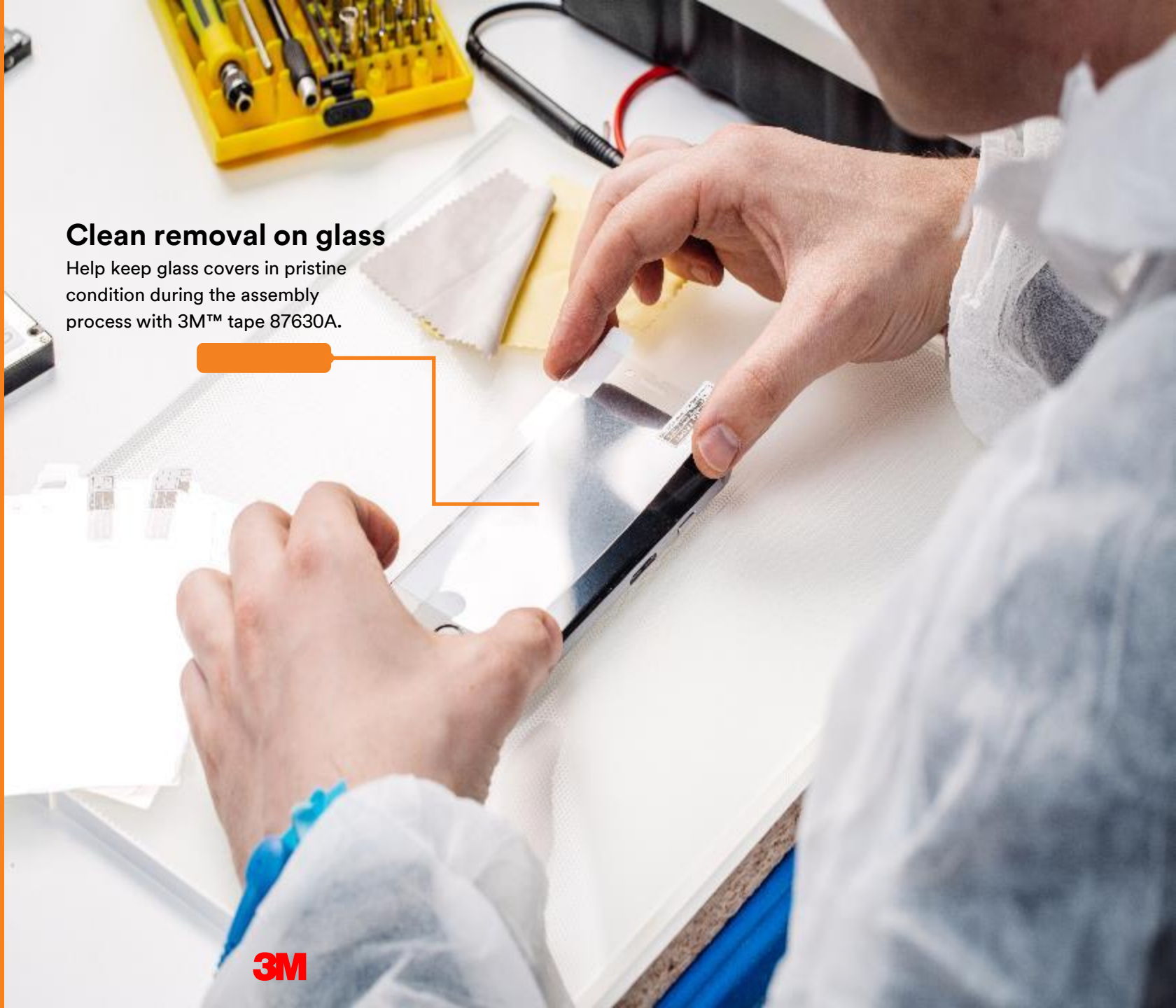
ELECTRONICS

Don't scratch.

During the device assembly process, display glass covers can be scratched or damaged. A reliable solution is needed to help protect them. 3M™ Surface Protective Tape 87630A is a clear polyester tape with a low-tack adhesive system. The tape's transparency enables inspection of the surface condition of a substrate without removing the tape. It is designed to be removed cleanly without residue.

Clean removal on glass

Help keep glass covers in pristine condition during the assembly process with 3M™ tape 87630A.



3M



3M™ Bonding Solutions for Electronics

Tablets/Notebooks



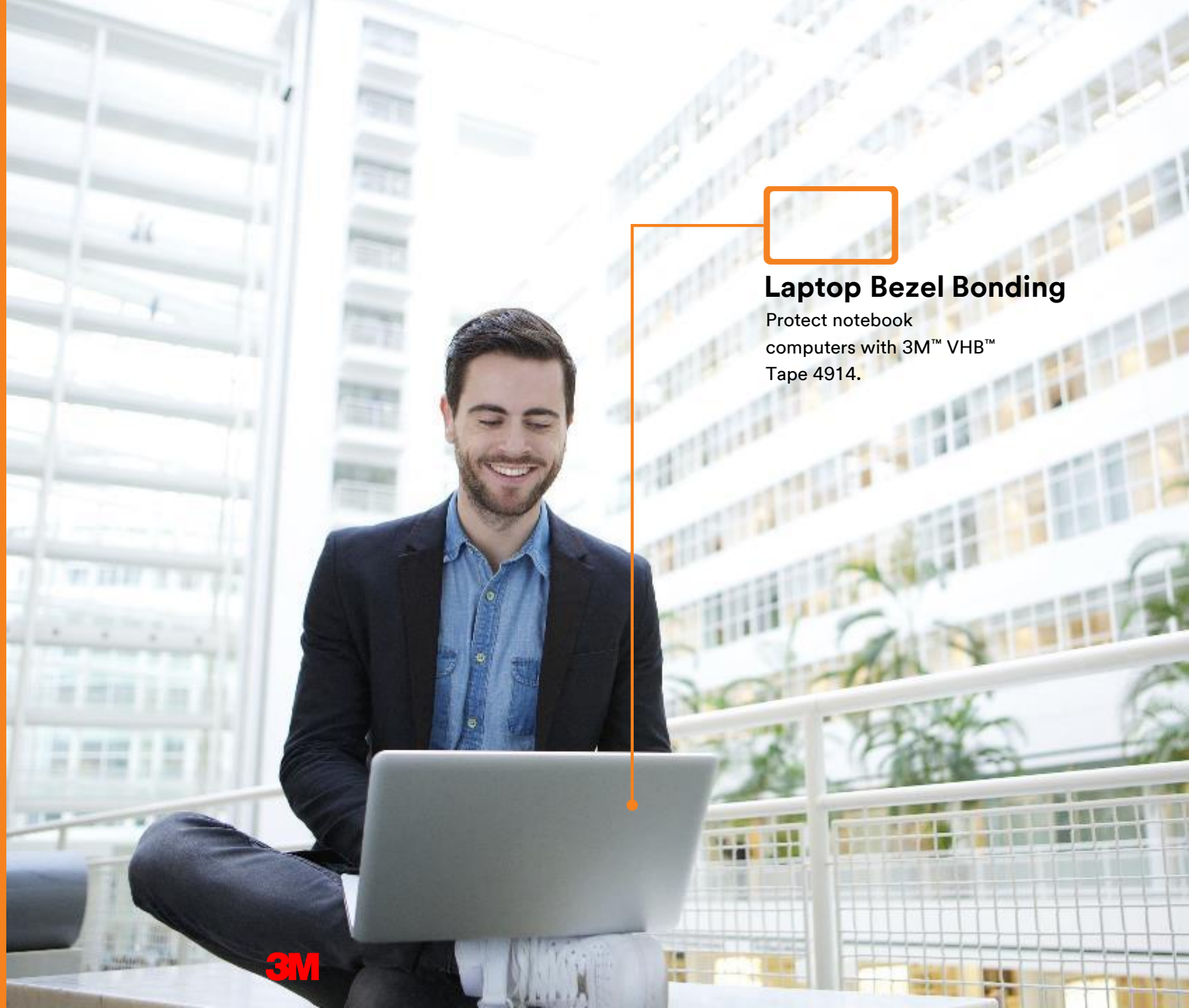


TABLETS/NOTEBOOKS

ELECTRONICS

Carry your laptop everywhere.

As laptop computers get lighter and lighter, they are carried everywhere and could be dropped. With great impact resistance, our 3M™ VHB™ Tapes can help decrease the risk of a broken screen so your laptop will stay as ready as you are.



Laptop Bezel Bonding

Protect notebook computers with 3M™ VHB™ Tape 4914.



TABLETS/NOTEBOOKS

ELECTRONICS

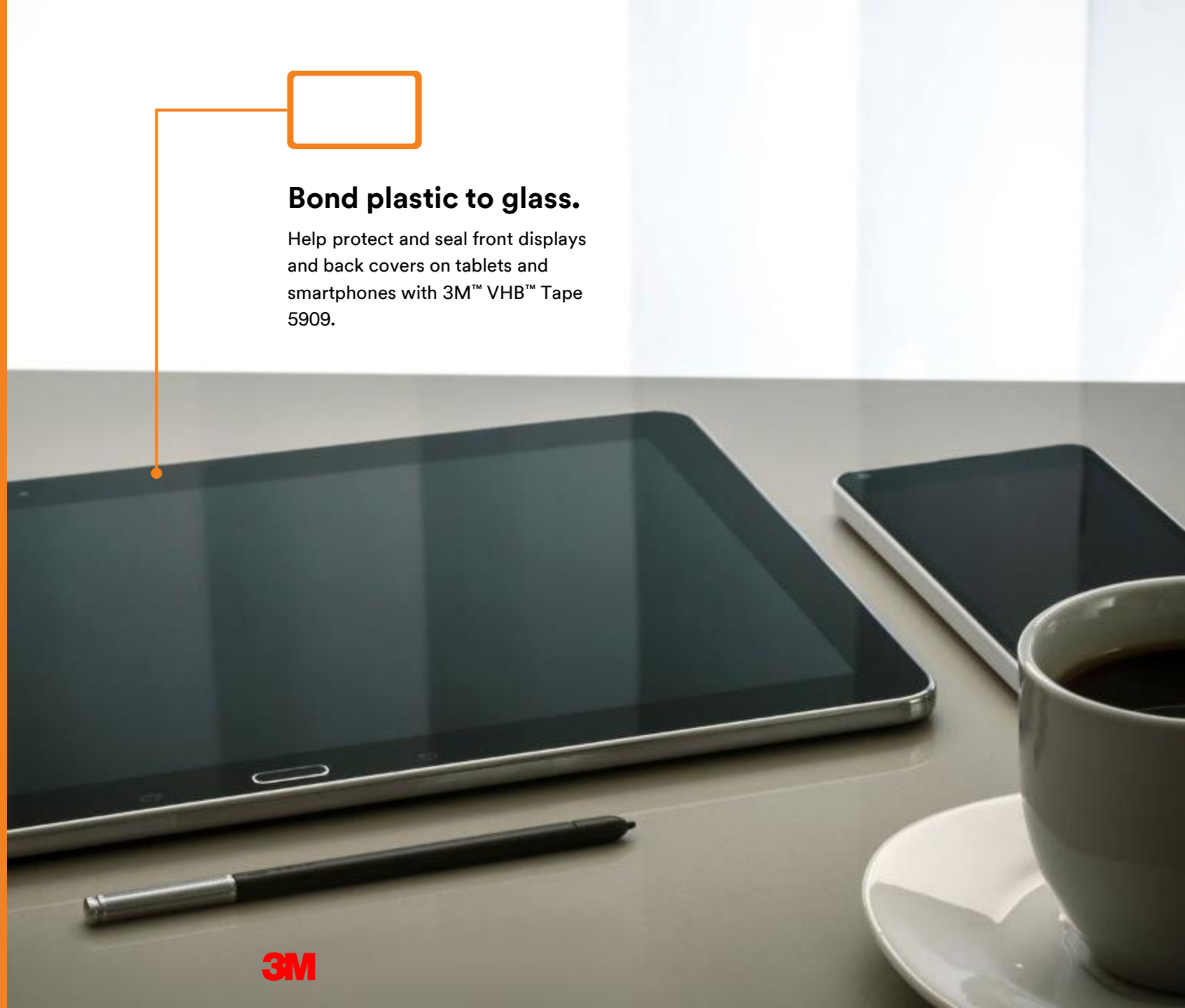
Get the edge on frame bonding that seals and cushions.

Get optimal shock absorption and sealing performance to help reduce the risk of broken screens and improve water resistance for your tablet or smartphone. Our bonding solutions offer excellent impact strength, conformability, surface adhesion and design flexibility.



Bond plastic to glass.

Help protect and seal front displays and back covers on tablets and smartphones with 3M™ VHB™ Tape 5909.





TABLETS/NOTEBOOKS

ELECTRONICS

Balancing conformability with performance.

Get better reworkability, anti-lifting, anti-repulsion and drop resistance at a lower cost than polyethylene (PE) foam tapes for tablet and notebook devices.



Bond touch panel to metal.

Get well-balanced performance with 3M™ Conformable Double Coated Tape 93420.



3M™ Bonding Solutions for Electronics

IoT Smart Home Security





IoT/SMART HOME/ SECURITY

ELECTRONICS

Stay smart all the time.

Smart speakers play a growing role in connected homes. They control other devices, can function throughout various rooms, and are becoming more complex. With high drop resistance and sealing performance, 3M™ VHB™ Tape 5909 helps protect your smart speaker so that your house can stay connected all the time.



Bond metal to glass.

Help protect smart speakers
with 3M™ VHB™ Tape 5909



IoT/SMART HOME/SECURITY

ELECTRONICS

Keep an eye on things.

Reliability is the most important factor when selecting your home camera. For both indoor and outdoor applications, ensure strong bond and water resistance to help protect who matters most. With high shear holding strength and sealing performance, 3M™ VHB™ Tape 4914 helps you create new designs to keep smart homes safe all the time.

Security Camera Foot Assembly

Ensure strong bond and reliable water resistance with 3M™ VHB™ Tape 4914.





IoT/SMART HOME/SECURITY

ELECTRONICS

See who's calling.

Smart homes connect visitors through indoor and outdoor phones. They need to be reliable to operate at all times. With high performance bonding strength and excellent sealing properties, 3M™ VHB™ Tape 4914 bonds displays so that your house can stay connected all the time.

Smart Home Phone Display

Bond plastic to inked glass with 3M™
VHB™ Tape 4914





IoT/SMART HOME/SECURITY

ELECTRONICS

Open the door to new designs.

3M™ Adhesive Transfer Tape 9471LE with 3M™ Acrylic Adhesive 300LSE is designed to provide a secure bond on low surface energy substrates and bonding surfaces such as digital door locks.



Bond metal plating to plastic.

Unlock the possibilities with 3M™ Adhesive Transfer Tape 9471LE with 3M™ Acrylic Adhesive 300LSE.





IoT/SMART HOME/SECURITY

ELECTRONICS

Get sound performance.

3M™ Double Coated Tape 93015LE with 3M™ Acrylic Adhesive 300LSE is designed to give acoustic products a secure cover that looks great and holds strongly.



Bond metal to plastic.

Uncover the potential of speaker cover attachment bonding with 3M™ Double Coated Tape 93015LE with 3M™ Acrylic Adhesive 300LSE.

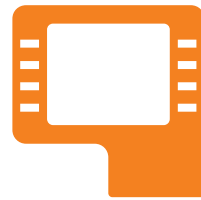


IoT/SMART HOME/SECURITY

ELECTRONICS

Call for a better solution.

Attention, everyone: This is the way to bond intercom system panels with cost-effective adhesion that passes dustproof and drop tests. 3M™ Double Coated Tape 93020LE with 3M™ High Strength Acrylic Adhesive 300LSE provides excellent holding power and anti-lifting properties.



Bond plastic to metal.

Hold it all together with 3M™ Double Coated Tape 93020LE with 3M™ Acrylic Adhesive 300LSE.





3M™ Bonding Solutions for Electronics

Wearables/Hearables





WEARABLES/HEARABLES

ELECTRONICS

Solutions that won't wear out.

Smartwatches go with you wherever you go. To hang tough, they have to resist any environment – wet conditions in particular. With high sealing and water and impact resistance properties, 3M™ VHB™ Tape 5980 helps protect your wearable devices so that you can stay connected while on the go.

Smartwatch sealing

Bond metal to glass.

Help make your wearables water resistant with 3M™ VHB™ Tape 5980





WEARABLES/HEARABLES

ELECTRONICS

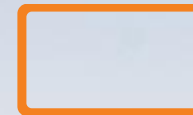
Move with power.

Smartwatches provide a reliable source of information even when we're on the move. That is why the battery needs to be stabilized – especially during very active exercise. With high shock absorption, bonding and sealing, 3M™ VHB™ Tape 5980 helps protect your battery to keep you connected for the marathon ahead.

Smartwatch battery bonding

Bond metal to plastic.

Help absorb shocks and vibrations with 3M™ VHB™ Tape 5980



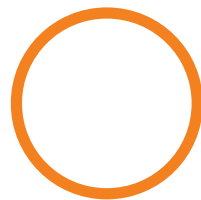


WEARABLES/HEARABLES

ELECTRONICS

Smarter FPC bonding.

Apply heat and pressure for outstanding chemical and water resistant performance. 3M™ Bonding Solutions are designed to resist water, sweat, cleaners, perfumes, skin oils and more.



Bond glass to FPC.

Keep up with the times with 3M™ Chemical-Resistant Adhesive Transfer Tape 96105CR.





WEARABLES/HEARABLES

ELECTRONICS

Safe turns.

Even if most smartwatches use touch displays, users still find it convenient to scroll through menus using a “crown” on the side. This small and important part contains components that need to be bonded carefully. 3M™ Scotch-Weld™ One-Part Adhesive 6101 Off-White provides a unique combination of optimal viscosity, high bonding strength and low temperature curing for careful assembly.

Smartwatch crown bonding

High bonding strength and appropriate viscosity with 3M™ Scotch Weld™ 6101 Off-White.





WEARABLES/HEARABLES

ELECTRONICS

Charge without compromise.

Earphone chargers are essential to avoid running out of power while listening to your favorite music, binge watching the latest series or participating in your next virtual meeting. 3M™ Scotch-Weld™ 1K Epoxy Adhesive 6011LV maintains superior adhesion to difficult-to-bond substrates, including a variety of plastics, and can be dispensed precisely to avoid leaking on other parts.



Bond metal to plastic.

Maintain strong adhesion and precise dispensing with 3M™ Scotch-Weld™ 1K Epoxy Adhesive 6011LV



WEARABLES/HEARABLES

ELECTRONICS

Small size. Strong resistance.

Wireless earphones are getting smaller and more sophisticated. That is why internal components need to be carefully assembled without coming apart over time. 3M™ Scotch-Weld™ 1K Epoxy Adhesive 6011LV provides an ideal combination of resistance to chemicals, adhesion to plastics, good jetting performance, fast curing at low temperature and long stability at room temperature.



Earphone assembly

Reduce the risk of clogging jetting nozzle with 3M™ Scotch-Weld™ 1K Epoxy Adhesive 6011LV.





WEARABLES/HEARABLES

ELECTRONICS

Bond virtually any wearable devices.

Now attaching curved plastic is no problem. 3M™ Double Coated Tapes engineered with 3M™ Acrylic Adhesive 300LSE are designed to provide high initial bond strength and high shear strength to low surface energy substrates.



Bond foam to plastic.

Bond curved plastic pieces to foam or plastic with 3M™ Double Coated Tape 93015LE with 3M™ Acrylic Adhesive 300LSE.



WEARABLES/HEARABLES

ELECTRONICS

Embark on an adventure.

Ensure you have the best vision for your Augmented / Virtual Reality goggles by using the best lens bonding solutions. Our 3M™ VHB™ Tapes are designed to keep your lens from falling apart so you can stay focused on the journey at hand.



AR / VR Lens Bonding

Bond plastic to glass.

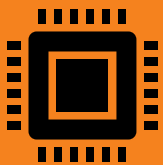
Help protect AR / VR Goggles with 3M™ VHB™ Tape 5906.



3M™ Bonding Solutions for Electronics

Others

3M

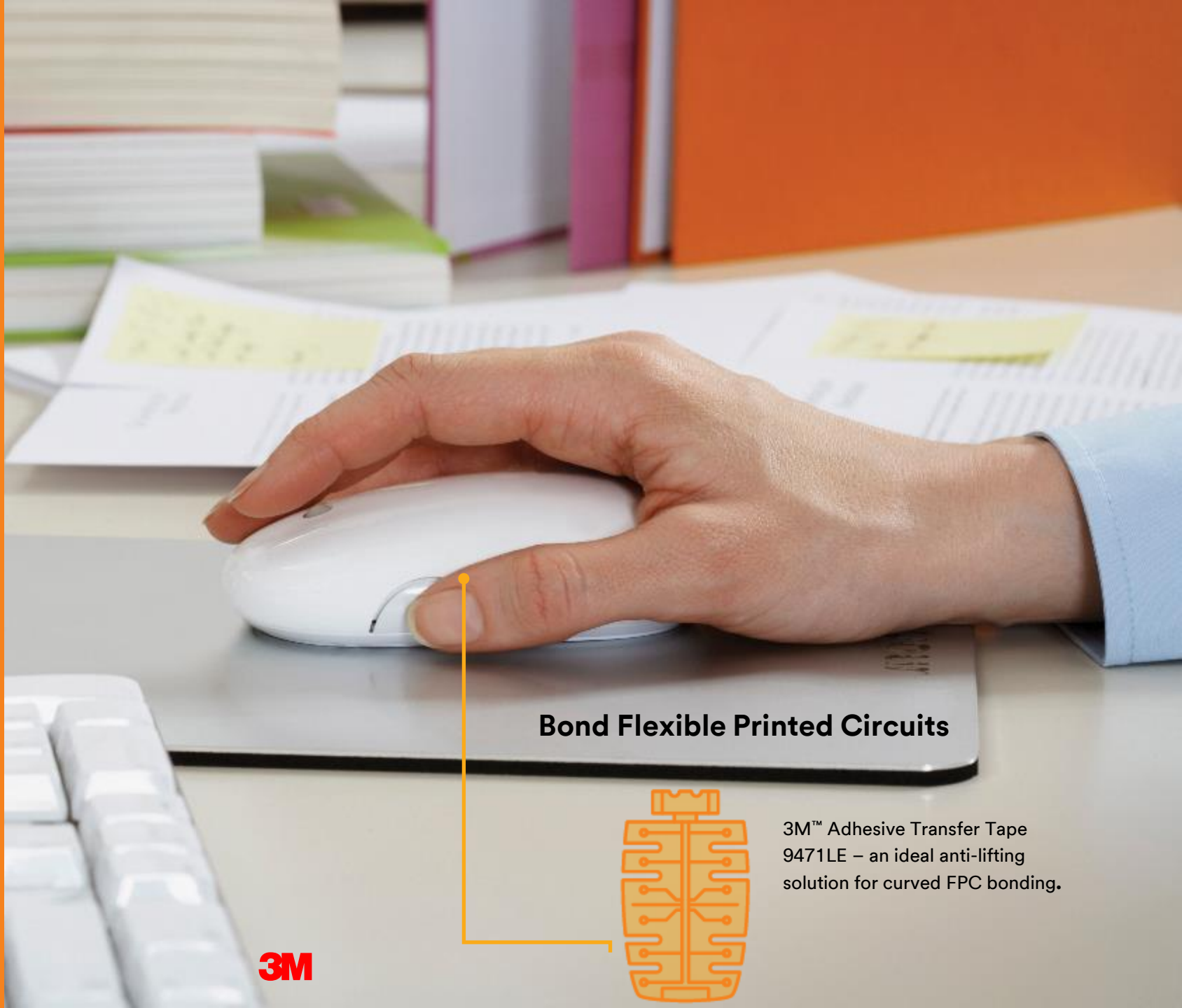


OTHERS

ELECTRONICS

Follow the curves.

Flexible Printed Circuits (FPCs) are in virtually everything. As flex bonding is not a one-size-fits-all solution, the success of your intricate design requires a specific, reliable FPC bonding method. When designing devices with curved shapes, 3M™ Adhesive Transfer Tape 9471LE is an ideal bonding solution to help avoid lifting over time.

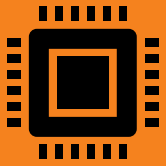


Bond Flexible Printed Circuits



3M™ Adhesive Transfer Tape 9471LE – an ideal anti-lifting solution for curved FPC bonding.





OTHERS

AUTOMOTIVE

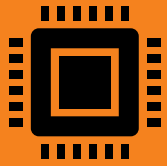
Get more mileage out of displays.

Help protect automotive interior screens from impact with this bonding solution. 3M™ VHB™ Tape 5952 is designed for shock absorption performance and great sealing. It reduces the risk of broken screens, dust contamination and offers exceptional design flexibility.

Automotive Display Bonding

Help protect and seal interior displays with 3M™ VHB™ Tape 5952.





OTHERS

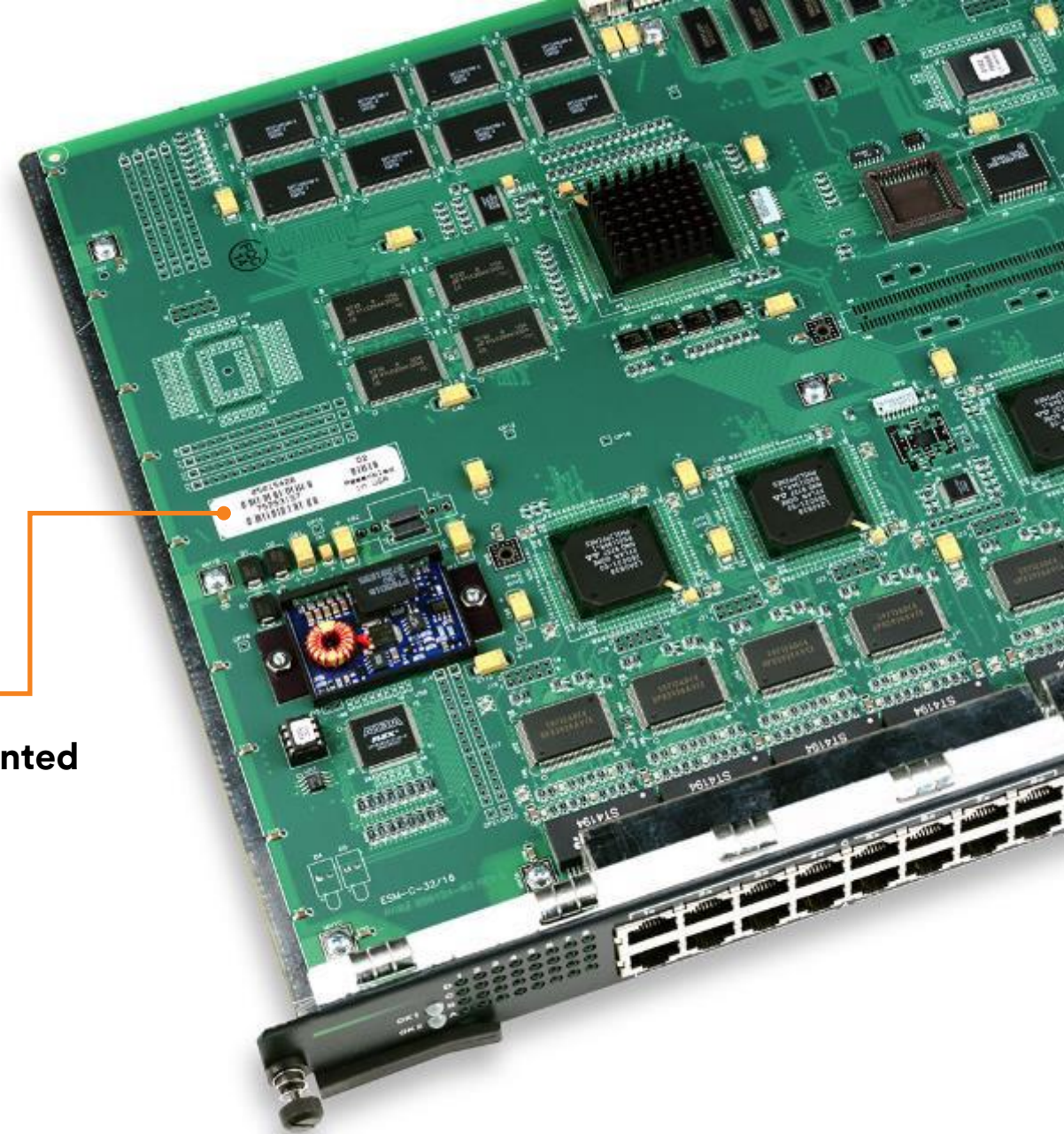
ELECTRONICS

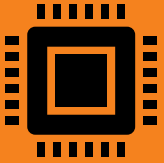
Easily identify Printed Circuit Board (PCB) labels.

Identification and tracking labels that ensure PCB traceability are essential during assembly. Our labels are thermal transfer printable and heat resistant and feature high-resolution barcodes and excellent scan-ability.

Attach labels to Printed Circuit Boards.

Get labels that work the circuit with 3M™ Thermal Transfer Acrylate Label Material 3921.



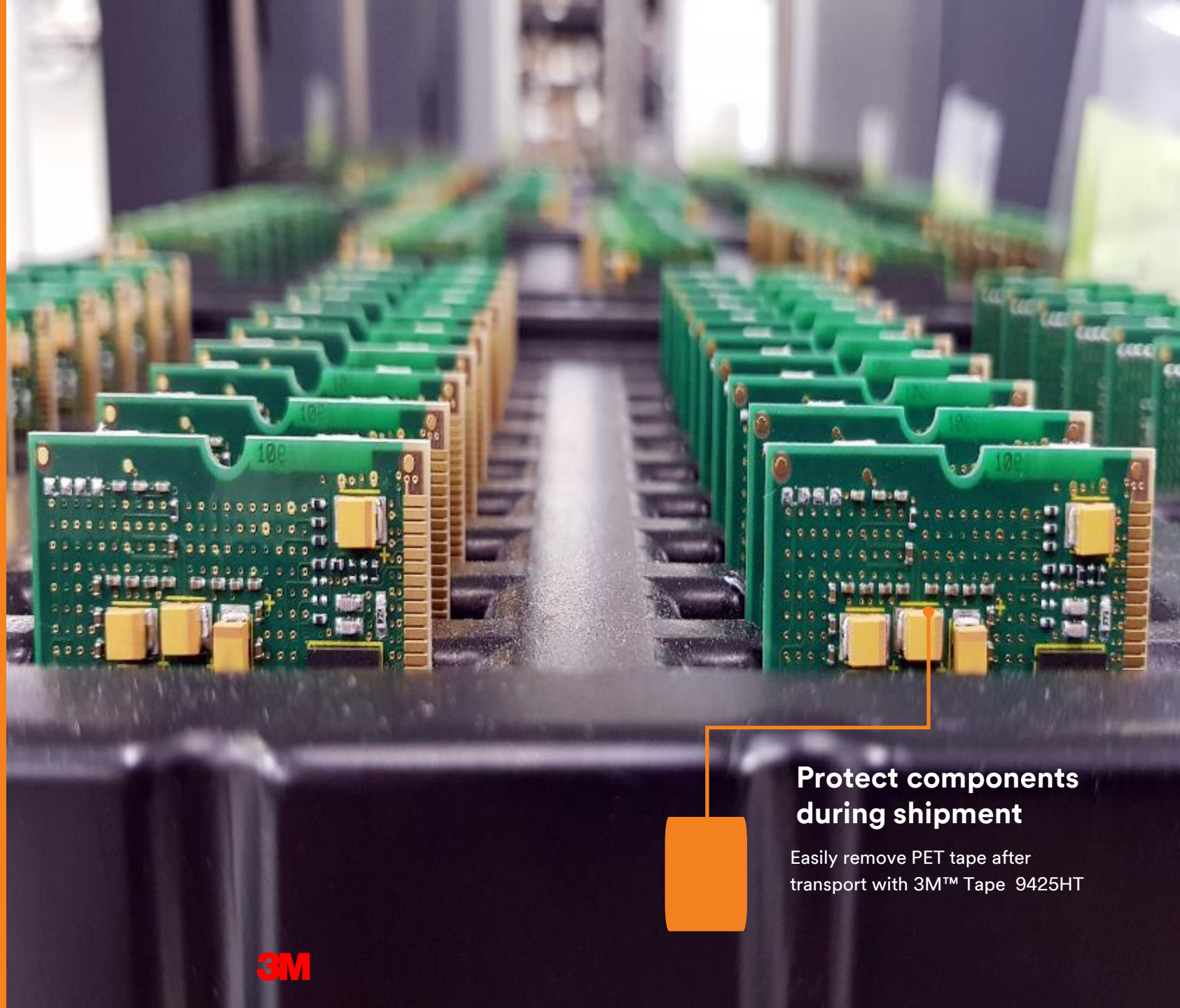


OTHERS

ELECTRONICS

Stick, remove, repeat.

Printed Circuit Boards (PCBs) are fragile and need to arrive safely before integration into a device. Films used to protect PCBs during transport need to be easily removed. 3M™ Removable Repositionable Double Coated Tape 9425HT combines a permanent adhesive on one side and a medium tack adhesive for easier removal on the other side.



Protect components during shipment

Easily remove PET tape after transport with 3M™ Tape 9425HT

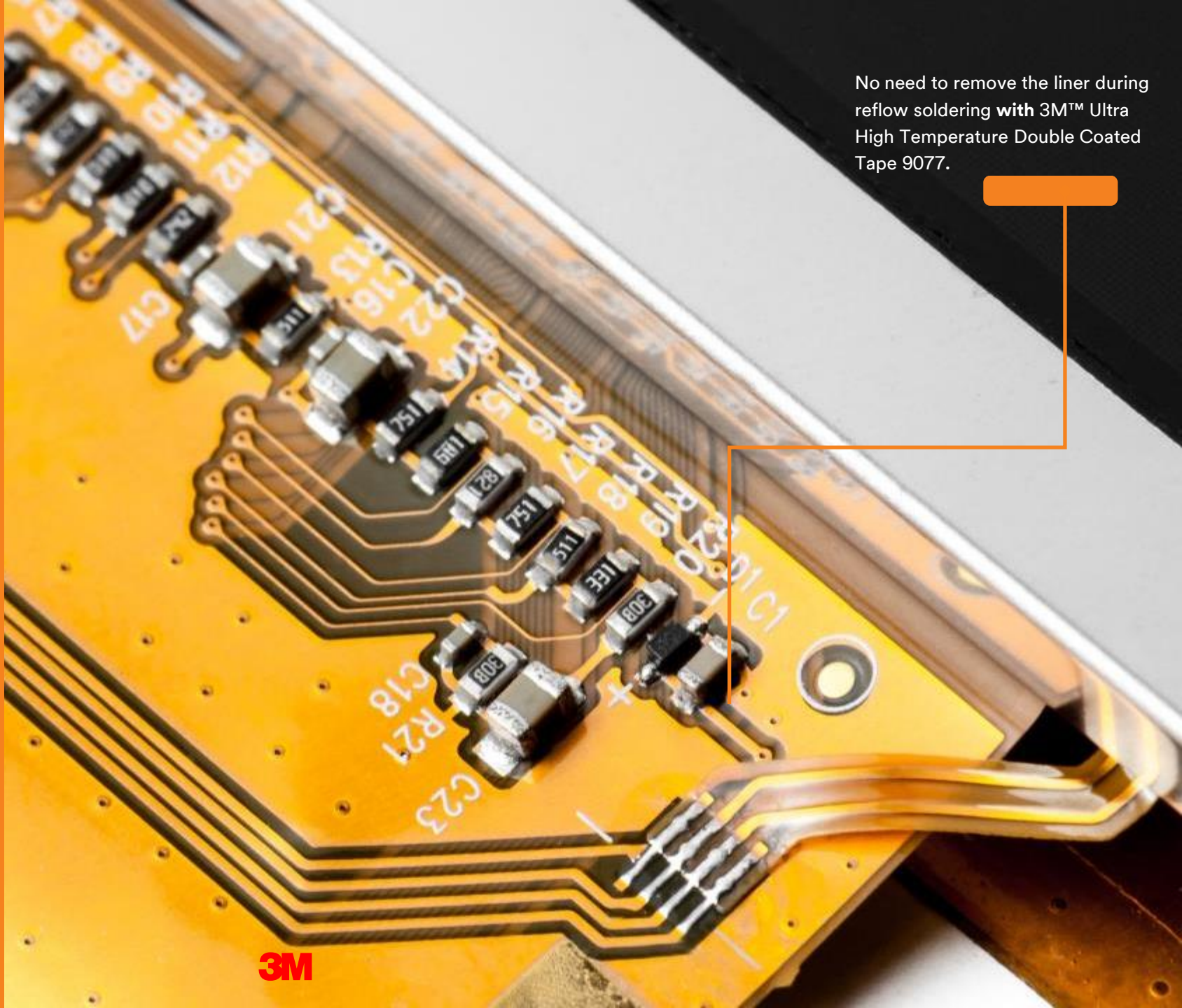


ELECTRONICS

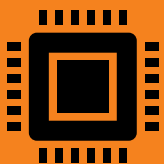
Beat reflow soldering.

Reflow soldering is a widely used method for attaching surface mount components to Printed Circuit Boards (PCBs). 3M™ Ultra High Temperature Double Coated Tape 9077 has a non-woven carrier and a high temperature release liner that is designed to survive short term exposure to 500°F/260°C for lead-free solder reflow. It also maintains high adhesion strength in high temperatures and has excellent holding power and low outgas.

No need to remove the liner during reflow soldering **with 3M™ Ultra High Temperature Double Coated Tape 9077.**



3M



OTHERS

ELECTRONICS

Power your ride.

E-bikes and e-scooters rely on a battery that cannot let you down. That's why they need to resist any weather condition including rain, snow or mud. With closed-cell technology that provides high sealing performance, 3M™ VHB™ Tape 4914 can help provide water resistance to any battery button or component for a fun ride in any weather.

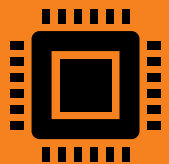


E-Bike Battery Sealing

Bond plastic to mylar to plastic

Help seal buttons with 3M™

VHB™ Tape 4914

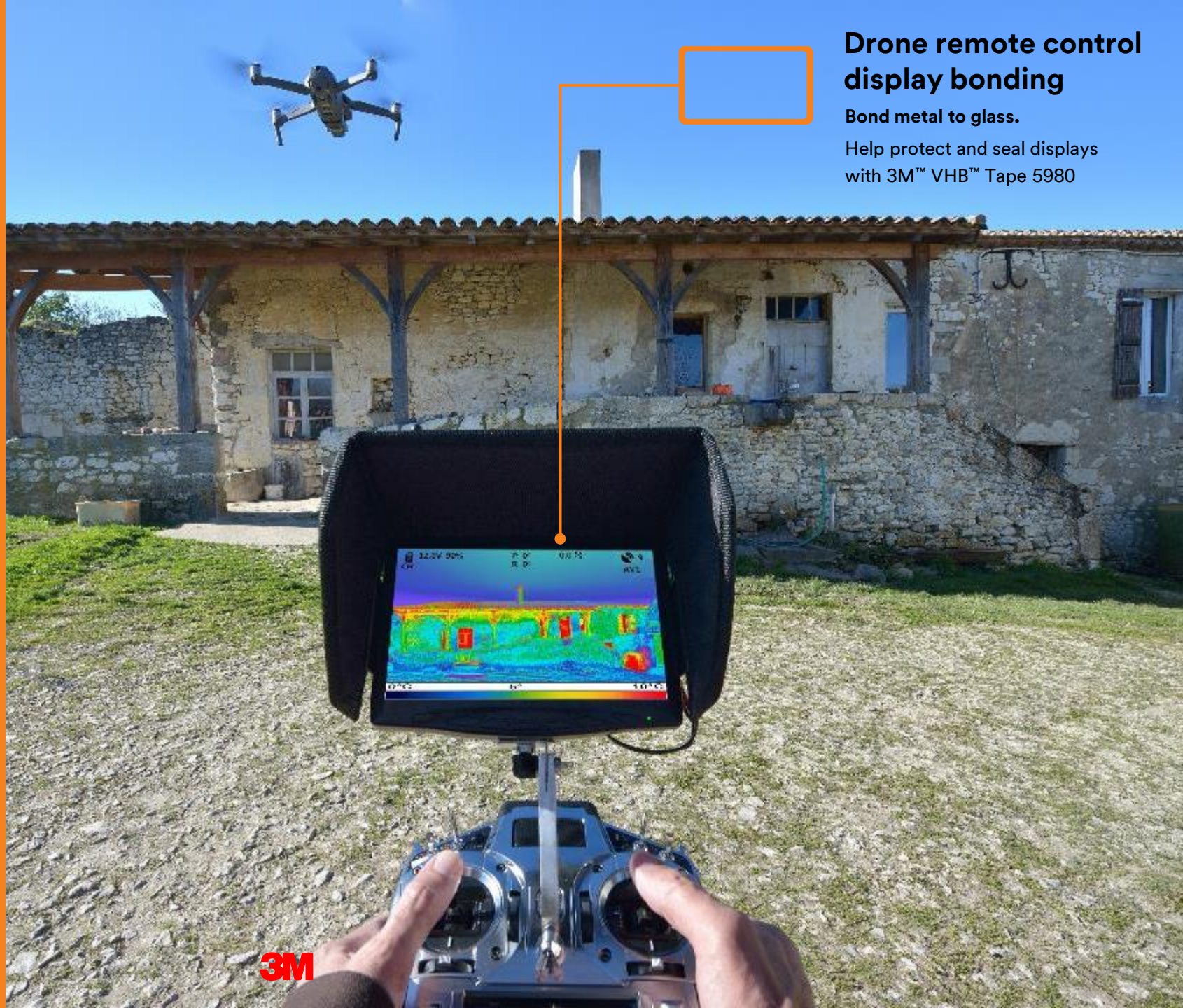


OTHERS

ELECTRONICS

Stay in control.

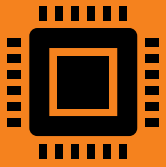
Drones are increasingly used for taking pictures, filming and real time analysis of hard to access locations. A reliable display is needed to always stay in control. With high drop resistance and sealing, 3M™ VHB™ Tape 5980 helps keep your display together so that you can see what your drone is seeing.



Drone remote control display bonding

Bond metal to glass.

Help protect and seal displays with 3M™ VHB™ Tape 5980



OTHERS

ELECTRONICS

Create drop-resistant drone touch panels.

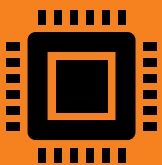
Drones are flying off the shelves, so make the most of this opportunity. Our touch panel bonding solutions are conformable and hold up — even if the landings are less than perfect.



Bond glass to plastic.

Help make sales soar with anti-lifting, drop-resistant 3M™ Conformable Double Coated Tape 93425.





OTHERS

ELECTRONICS

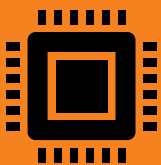
Stylish digital camera name plate bonding.

Picture this: 3M™ Double Coated Tape 93010LE with 3M™ Acrylic Adhesive 300LSE for good adhesion on hard-to-bond elastomer substrates. Plus, get die-cut capability and a thin profile for a beautiful finish.



Bond elastomer to plastic.

Smile! You'll get a strong bond with 3M™ Double Coated Tape 93010LE with 3M™ Acrylic Adhesive 300LSE.



OTHERS

ELECTRONICS

Display the way to bond panels.

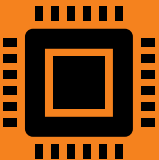
3M™ Double Coated Tape 93015LE with 3M™ Acrylic Adhesive 300LSE allows you to bond decoration panels to LCD commercial displays quickly and robustly, with good strength on low surface energy surfaces.



Bond plastic to metal.

Give commercial displays a flawless finish with 3M™ Double Coated Tape 93015LE with 3M™ Acrylic Adhesive 300LSE.





OTHERS

ELECTRONICS

Big screens. Better bonding.

Large monitors are used in both office and manufacturing environments. They are a key interface for design or industrial processes. Because of the weight of the display, a reliable bonding solution is often needed. With high holding power and shock absorbing performance, 3M™ VHB™ Tape 4914 helps protect your large displays so you can be as efficient as possible.

Monitor Display Bonding

Bond metal to glass.

Help hold together large displays with 3M™ VHB™ Tape 4914.



Thank you.

For more information visit
3M.com/electronicsbonding

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Electronics Device Bonding
3M Center, Building 225-3S-06
St. Paul, MN 55144-1000
1-800-362-3550 phone
1-877-369-2923 fax
www.3M.com/electronicbonding

