

## 3M™ Electrically Conductive Double-Sided Tape 9760

### Product Description

3M™ Electrically Conductive Double-Sided Tape 9760 is an XYZ electrically conductive tape which consists of conductive nonwoven fabric (Ni/Cu) coated with one side removable electrically conductive pressure sensitive acrylic adhesive (PSA). It offers excellent handling characteristics and conductivity through the thickness (Z-axis) and in the plane (XY plane).

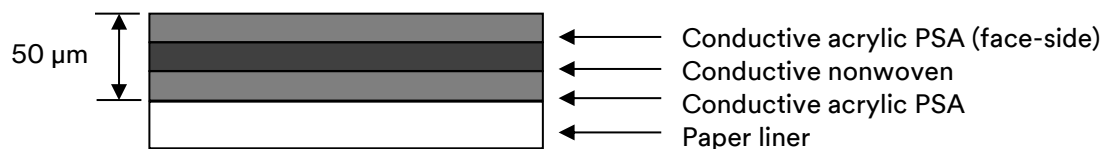
3M tape 9760 series is used for conductive connection in applications such as for ESD grounding, EMI shielding and EMI gasket attachment to electronic and electrical devices. It may be used as grounding tape for electrical modules, or combined with many types of foils or fabrics to make laminate shielding solutions to provide a customized shielding solution. This tape series may also be used to attach foam cores for EMI gaskets to electronic device surfaces or cabinetry.

3M tape 9760 series may be applied in strips or die cut to specific shapes and sizes to meet the design. It is available in standard and custom widths and lengths. The standard length is 50M. Please contact your 3M representative to review custom width and length options.

### Key Features

- XYZ-conductivity through the adhesive
- Excellent conformability and quick bonding
- Conductive nonwoven has different kinds of adhesion on each side
- Good handling and workability

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## Product Construction/Material Description

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

3M™ Electrically Conductive Double-Sided Tape 9760 Series	
Property	Value
Adhesive type	Conductive acrylic pressure sensitive adhesive (PSA)
Carrier type	Conductive nonwoven (Ni/Cu)
Tape thickness	50 µm nominal (typical thickness tolerance 45 - 57 µm)
Liner type and color	White PCK with “3M Electronics” logo in red

## Applications

3M™ Electrically Conductive Double-Sided Tape 9760 is used for conductive connection of ESD grounding, EMI shielding and EMI gasket attachment to electronic and electrical devices.

It consists of conductive acrylic pressure sensitive adhesive with different adhesion on the two sides. Face side\* adhesive of 3M tape 9760 is intentionally designed with “removable” property and allows clean removal from most FPC (Flexible Printed Circuit) or other kinds of surfaces, while back side\* adhesive of 3M tape 9760 provides strong adhesion to most metal EMI shields or electronic device covers. 3M tape 9760 may be applied in strips or die cut to specific shapes and sizes to meet the design.

## Application Techniques

Note: Carefully read and follow the manufacturer’s precautions and directions for use when working with solvents. Tape application below 10°C (50°F) is not suggested. Once properly applied, low temperature holding power generally satisfactory.

The bond strength of 3M tape 9760 depends on the amount of adhesive-to-surface contact developed during application and substrate type and surface conditions.

1. Firm application pressure helps develop better wet-out and adhesive contact and may lead to improved bond strength as well as electrical conductivity. Pressure must be applied to the bond area after assembly to ensure sufficient wet-out of the 3M tape 9760 adhesive to the substrates and to engage the conductive acrylic adhesive fillers with the substrates to make electrical connection. Mechanical pressure (roller, metal bar) or finger pressure at 5-15 psi. (Optimally the application conditions are determined via a set of Design of Experiments (DOE) using a range of application pressures, dwell time and temperatures (suggested initial range might include 5-15 psi, 2-5 seconds, 21°C-38°C).
2. Heat may be applied simultaneously with pressure to improve wetting, final bond strength and electrical conductivity. Suggested temperature range to evaluate is in the 38°C-60°C range.
3. To obtain optimum adhesion, the bonding surfaces must be clean, dry and well unified. Some typical surface cleaning solvents are isopropyl alcohol or heptane.

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## Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes. Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is shipped with the commercialized product.

3M™ Electrically Conductive Double-Sided Tape 9760		
Property	Value	Test Method
180° Peel Adhesion (dwell 20min@ RT)	Face side: 0.07 N/mm Back side: 0.6 N/mm	ASTM D3330* (Adhesion to SUS)
Surface Resistance of Adhesive	≤80 mΩ	3M ETM-1**
Contact Resistance through Adhesive	≤10 mΩ	3M ETM-11***

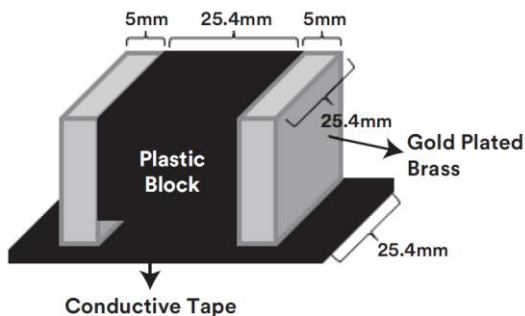
\*Tested in accordance with ASTM D3330 test method.

\*\*3M Test Method: ETM-1 as described below

\*\*\*3M Test Method: ETM-11 as described below

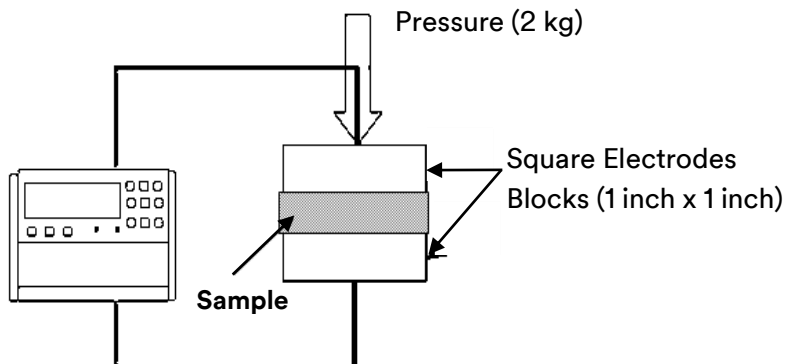
### 3M ETM-1: XY-Axis Electrical Resistance through Adhesive\*\*

Prepare the tape strip in 25.4 mm width and place the adhesive side of the tape down on to a clean glass plate using light finger pressure. Place the gold-plated block jig (500 g weight) onto the backing side of conductive tape, then start measuring the DC resistance between the electrodes with micro-ohm meter and record the resistance after 15 ~ 60 seconds.



### 3M ETM-11: Z-Axis Electrical Resistance through Adhesive\*\*\*

ETM-11, measured on 1 square inch surface area, CR Unit: Ω/inch<sup>2</sup>



# 3M™ Electrically Conductive Double-Sided Tape 9760

## Storage and Shelf Life

The shelf life of 3M™ Electrically Conductive Double-Sided Tape 9760 is 12 months from the date of manufacture when stored in the original packaging materials and stored at 21°C (70°F) and 50% relative humidity.

## Certificate of Analysis (COA)

The 3M Certificate of Analysis (COA) for this product is established when the product is commercially available from 3M. The commercially available product will have a COA specification established. The COA contains the 3M specifications and test methods for the products performance limits that the product will be supplied against. The 3M product is supplied to 3M COA test specifications and the COA test methods. Contact your local 3M representative for this product's COA.

This technical data sheet may contain preliminary data and may not match the COA specification limits and/or test methods that may be used for COA purposes.

Final product specifications and testing methods will be outlined in the products Certificate of Analysis (COA) that is shipped with the commercialized product.

Safety Data Sheet: Consult Safety Data Sheet before use.

Regulatory: For regulatory information about this product, contact your 3M representative.

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