

TAPE ON REEL & WAFFLE PACKAGING

SPM recognizes that many more industries these days are turning to robotics in the manufacturing assembly arena to gain distinct and competitive efficiencies. This ever-improving technology requires the presentation of piece parts to the robot in a very precise manner, routinely at high rates of assembly speeds. Both SPM's Tape on Reel and Waffle Packing of components provide this precision service for numerous companies with these high quality requirements. We have many years of expertise in the packaging services industry and are always enhancing our capabilities through new equipment, equipment modifications and process improvements. Our engineering and technical staff members are always up to a new challenge and are ready and available to make sound recommendations for your specific manufacturing needs.

➤ Heat Sinks

Aluminum, moly, Silvar™, copper and various other materials in standard or unusual shapes can be placed in pockets for automatic loading. Multi layer parts can also be placed so that they can be picked up and loaded uniformly.

➤ Wire Bond and Die Bond Pads

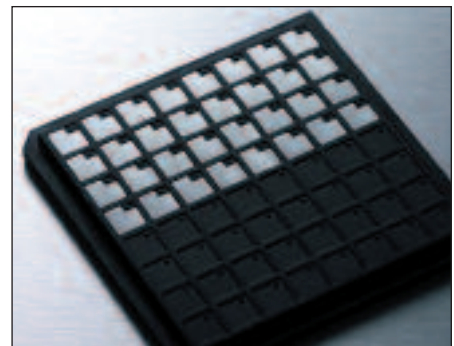
Clad materials such as solder on nickel, aluminum on copper, aluminum on copper on solder can be oriented in the x-y axis with either material facing upward. Parts can be placed in either embossed tape (with heat seal or pressure seal cover tape), or Surftape™. Utilizing Surftape™, the parts can be held within .002 of the pockets centerline.

➤ Known Good Die in Tape on Reel

In our class 10K clean room SPM mounts die from wafer or waffle pack into tape. The tape can be either embossed or Surftape™. The die, which must be tested and ink-dotted, can be placed flat or inverted. If bumped, the bumps can be placed up or down (down only in embossed tape).

➤ Outside or Contract Taping

SPM has become a major supplier for taping other manufacturers' parts, providing services for everything from large packages (1.00 x .650 x .070 thick) to small intricate four slide produced pieces. Fast turnaround at competitive prices has made SPM a leader in the contract taping business, whether delivery requirements are in the USA or International locations.





PACKAGING SERVICE OPTIONS & CAPABILITIES



COMPONENT SIZE

Manual and Semi-Automated Loading	Automated Loading
<ul style="list-style-type: none"> ▶ Square, Rectangle, Disc and Odd Shapes without orientation ranging from 0.008 in. up to 1.000 in. plus. ▶ Square, Rectangle, Disc and Odd Shapes with orientation ranging from 0.015 in. up to 1.000 in. plus. 	<ul style="list-style-type: none"> ▶ Square, Rectangle, Disc and Odd Shapes with orientation. Sizes ranging from 0.040 in. and up.

STANDARD CARRIER TAPE SPECIFICATIONS

Pocket Tape	Surf Tape™
<ul style="list-style-type: none"> ▶ Style “A” is Punched Cavity/ Paper Tape (top and bottom cover tape required). Available sizes: 8, 12, 16, 24mm. ▶ Style “B” is Embossed Pocket/ Polycarbonate Tape (top cover tape required). Available sizes: 8, 12, 16, 24, 32, 44, 56, 72, 88, 120mm. 	<ul style="list-style-type: none"> ▶ Punched Plastic Carrier with a flexible adhesive base. Available sizes: 8, 12, 16, 24, 32, 44mm.

Note: Open tool for a wide spectrum of component types and dimensions.

MISCELLANEOUS PACKAGING SERVICE SPECIFICATION

Cover Tapes	Plastic Reels	Waffle Packs
Heat activated seal (HA) or Pressure sensitive (PSA). Available sizes: 5.5, 9.5, 13.5, 21.5, 25.5, 37.5, 49.5, 65.5, 81.5mm.	Antistatic (A) or Conductive (C) materials available. Available sizes: 7,11,13 in.; and dependent upon tape width 8,12, 16, 24, 32, 44mm.	Standard 2x2 or 4x4 trays for bare die or thin film devices provide a wide choice of grid matrix-formed compartments. Available sizes: Device Specific, 0.01 in. up to over 1.000 in.

▶ Quality/ Inspection Process Commitment

SPM is dedicated to the activity of supplying defect free components. 100% visual inspection is provided on every reel and package. All orders are processed through our high quality environment that is maintained in accordance with QS-9000/ ISO 9002 standards.

We conform to EIA Standards or customer specific requirements when requested and appropriate.

Process instructions are developed for each new customer item ordered and this includes control plans and SPC charting. We manufacture in an ESD/ Humidity controlled environment. A variety of tube and other custom packaging services are available with our same high quality guidelines.

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