Technical Data | January 2018

Polycarbonate Precision Solder Sphere Carrier Tape

Product description

Polycarbonate Precision Solder Sphere Carrier Tape is designed to meet the growing challenges of packaging and transporting Solder Spheres in tape and reel. Our carrier tape offers an ultra precise pocket cavity design with tighter tolerances to allow for better part capture, improved component registration and reduced concerns associated with component migration. An ultra small pocket hole is available for vacuum designed to enhance component stability during taping applications.

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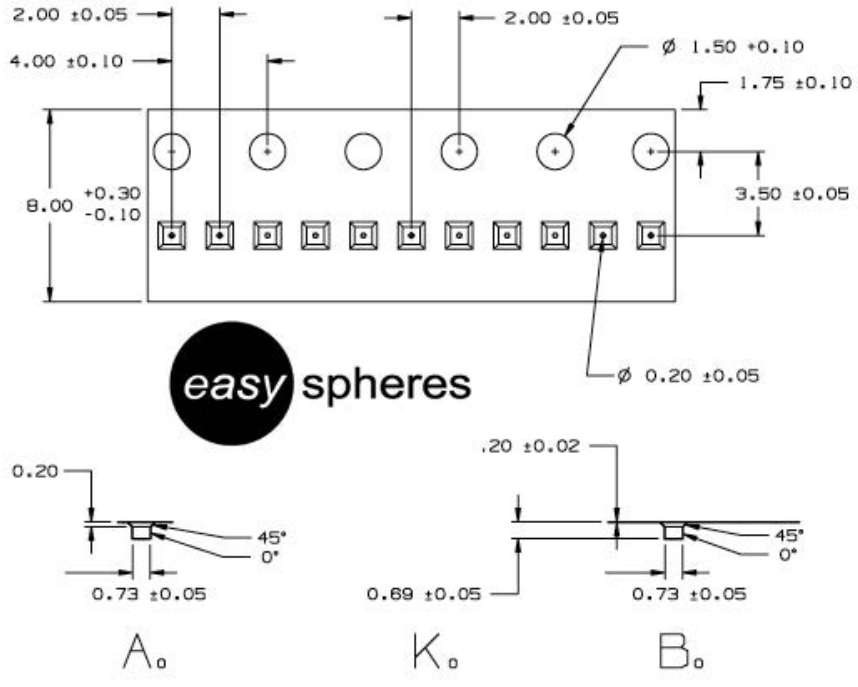
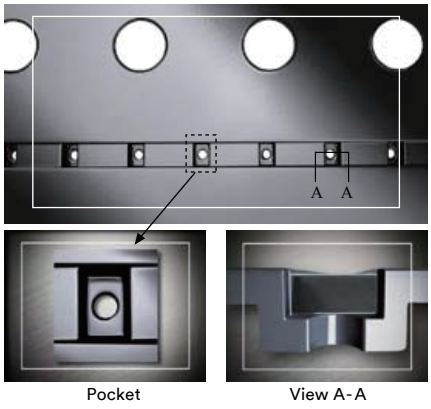
Pocket features

Our Polycarbonate Precision Solder Sphere Carrier Tape is designed to provide tight pocket dimensional tolerances of ± 0.03 mm for Ao, Bo, Ko dimensions and small sidewall draft angles, which allows for better component in pocket fit (part capture) and registration. Additional features consist of a reduced pocket hole (D1) of 0.15 mm to draw vacuum for small component loading applications, combined with flat pocket bottoms, will effectively help reduce component rotation, tilting and flipping concerns for improved throughput.



Carrier Tape Dimensions for 0.024” and 0.025” Solder Balls



Polycarbonate Precision Solder Sphere Carrier Tape for Solder Balls

Polycarbonate Precision Solder Sphere Carrier Tape

Typical mechanical properties – shrinkage

Polycarbonate Precision Solder Sphere Carrier Tape exhibits shrinkage of less than 0.1% for P_0-10, even after 24 hours exposure at 85°C (185°F). This compares favorably to the EIA-481-E Standard which stipulates that the P_0-10, or ten-pitch tolerance, maintain a dimension of 40.0 mm ± 0.2 mm, an implied tolerance of ±0.5%. Carrier shrinkage can result in problems with feeding, pocket position and, in the case of the pocket dimensions, parts sticking in the pockets. The extent of shrinkage in cold-formed polystyrene carrier pockets can be rapidly accelerated by exposure to elevated temperature, and will depend upon the duration of exposure and the maximum temperature reached.

Electrical properties

The electrical and triboelectric properties of Polycarbonate Precision Solder Sphere Carrier Tape have been engineered to help provide protection of static- sensitive components through an effective balance between the electrostatic shielding and electrostatic decay properties of the carrier. Polycarbonate Precision Solder Sphere Carrier Tape exhibits a nominal surface resistivity of $\geq 10^4$ Ω/square and $\leq 10^8$ Ω/square, and also exhibits desirable triboelectric properties which may be appropriate for packaging electrostatically-sensitive components.

Recyclability

Polycarbonate Precision Solder Sphere Carrier Tape is carbon-filled thermoplastic polymer film which can be recycled after use. However, recycling programs for this product may not exist in your area.

Storage conditions and shelf life

Polycarbonate Precision Solder Sphere Carrier Tape should be stored indoors, in its original packaging, in a controlled climate environment, typically at or below 35°C (95°F) and 70% relative humidity. The product must be protected from exposure to direct sunlight. Exposure to elevated humidity reduces the compressive strength of corrugated, cardboard containers. The recommended stacking height must be followed to avoid damaging the packaged product. It is recommended that the product be used on a "first-in, first-out" basis.

Polycarbonate Precision Solder Sphere Carrier Tape is five years from the date of manufacture when stored according to the recommended storage conditions.

easy spheres

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