Flash Memory Cards

Highlights

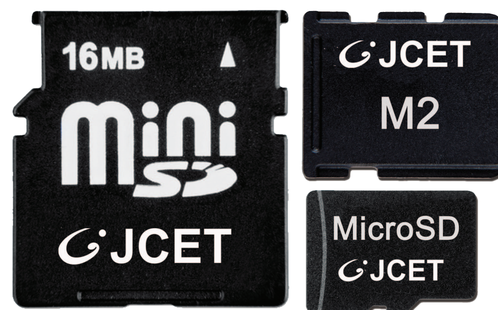
- Complete turnkey services (wafer to card test)
- Mixed IC technology & SMT components
- Standard and green materials sets
- Multi-die, side-by-side & stacked

Features

- Body sizes up to 20 x 30mm
- Traditional IC packaging process flows
- Wafer backgrinding & polishing
- Surface mount technology
- Die stacking
- Die level & pre-packed memory supported
- Die attach with epoxy & film
- Wire bonding (traditional, reverse, FFL, etc.)
- Vacuum molding
- Laser & ink marking
- Singulation using blade, waterjet, edge grinder or laser
- Chamfering
- Lid attach using B-stage epoxy or ultrasonic welder
- Mechanical card assembly
- Label attach
- High speed integrated curve-cutting
- Lead-free & green materials set
- Memory & Final Test capabilities

Applications

- Digital still & video cameras
- Mobile handsets
- GPS devices
- PDAs, MP3 players, etc.



Description

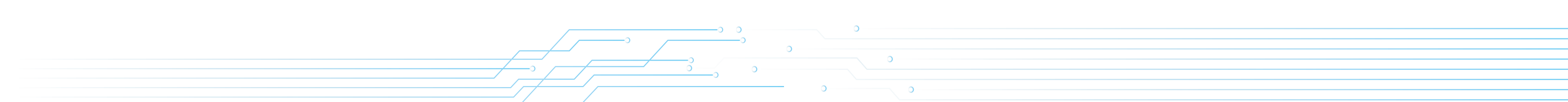
We offer a variety of memory card formats in addition to value-added package assembly and test services. A majority of our card packaging processes are common with traditional packaging and leverage the most up-to-date technologies and processes unique to memory cards, including integrated curve-cutting, labelling, mechanical card assembly and card packaging.

We have solutions that utilize bare die level assembly, pre-packaged die assembly or a combination of both. The Micro-SD is an example of an integrated solutions using NAND and controller die. In addition to assembly, we offer memory and card test services, with dedicated test resources to support test development as required.

Memory Card Formats

We offer tooling for the following memory card formats:

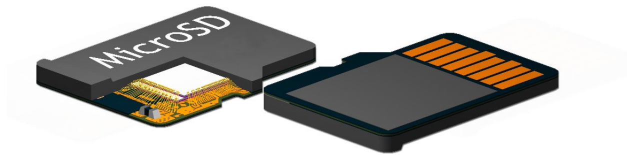
- SD Card
- Mini SD
- Micro SD
- Memory Stick
- MS Pro Duo
- MS Micro



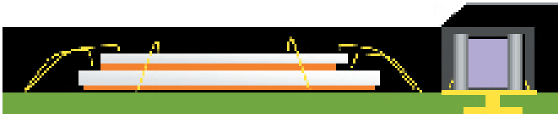
Specifications

Die Thickness	60 – 355µm (2.4 - 14mils)
Gold Wire	0.6 - 1.3µm diameter, 99.99% Au
SMT Components	0603, 0402, 0201, 01005, odd parts, x-tals, filters, LEDs, etc.
Bill of Materials	Standard and lead-free
Packing Options	JEDEC tray or tape & reel

Cross Sections



Micro SD-SiP



SD-SiP

Reliability

Temperature Cycling	-40°C ~125°C, 1000 cycles
Thermal Shock	-40°C ~80°C, 100 cycles
Unbiased HAST	130°C/85% RH/33.3psia, 100 hrs
High Temperature Storage	150°C, 1000 hrs
Low Temperature Storage	-40°C, 168 hrs
Blend Test	15N at center 5X
Drop Test	1.5m height, 6 surfaces
Twist Test	.5Nm torque, 5X CW, 5X CCW
Salt Water Spray	3% NaCl @ 35°C, 24 hrs

Package Configurations

A variety of wirebond stacked die configurations are in production and under development. In addition, many standard package configurations can be integrated to address customer specific solutions.

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