

International Sensor Systems Technology Overview

Technology	Multi Chip Module	Thick Film Hybrid	Chip-on-Board	Surface Mount	Through Hole
Description	Utilizes multiple unpackaged die on single, multi-layer laminate or ceramic substrate	Utilizes thick film technology on ceramic base. Component attachment may be surface mount or die wire.	Utilizes die and wire technology or flexible laminate material.	Utilizes laminate PCB or ceramic substrate with surface mount components. Options for thick film processing.	Utilizes laminate printed circuit board (PCB) with discrete components.
Base Materials	Alumina (Al ₂ O ₃), Aluminum Nitride (AlN), Beryllia (BeO), Epoxy-Glass Polyimide-Kevlar Laminate Sheets, Flex	Alumina (Al ₂ O ₃), Aluminum Nitride (AlN), Beryllia (BeO)	Epoxy-glass Polyimide-Kevlar Laminate Sheets, Flex	Alumina (Al ₂ O ₃), Aluminum Nitride (AlN), Beryllia (BeO), Epoxy-Glass Polyimide-Kevlar Laminate Sheets, Flex	Epoxy-glass Polyimide-Kevlar Laminate Sheets, Flex
Conductors	Gold (Au) Palladium Gold (PdAu) Platinum (Pt), Silver (Ag) Palladium Silver (PdAg)	Gold (Au), Palladium Gold (PdAu), Platinum (Pt), Silver (Ag), Palladium Silver (PdAg)	Copper (Cu) with Gold plated pads	Gold (Au), Palladium Gold (PdAu), Platinum (Pt), Silver (Ag), Palladium Silver (PdAg), Copper (Cu)	Copper (Cu)
Dielectrics	Thick film glasses Epoxy-glass Polyimide-Kevlar, laminate sheets Screened/Fired Paste	Thick film glasses Non-Conductive Epoxy Screened/Fired Paste	Epoxy-glass Polyimide-Kevlar Laminate Sheets	Thick film glasses Epoxy-glass Polyimide-Kevlar Laminate Sheets	Epoxy-glass Polyimide-Kevlar Laminate Sheets
Resistors	Surface Mount Package or Cermet Screened on resistive material	Surface Mount Package or Cermet Screened on resistive material	Surface Mount Package or Cermet Screened on resistive material	Surface Mount Package or Cermet Screened on resistive material	Discrete Metal Carbon Screen Cured Polymer
Processes	Sequence: Print, Dry, Fire (conductor, dielectric, resistor pastes) Automated Surface Mount Component Placement Infrared Reflow, Die Attach, Wire Bonding.	Sequence: Print, Dry, Fire (conductor, dielectric, resistor pastes) Automated Surface Mount Component Placement Infrared Reflow, Die Attach, Wire Bonding.	Sequence: Screen Solder Paste Automated Surface Mount Component Placement Infrared Reflow Die Attach, Wire Bonding.	Sequence: Print, Dry, Fire (conductor, dielectric, dielectric pastes) or Print, Dry, Fire (resistor pastes) Automated Surface Mount Component Placement Infrared Reflow	Sequence: Through-Hole Insertion Wave Solder



International Sensor Systems, Inc.

P.O. Box 345, Aurora, NE 68818

Ph: 1-800-260-6287 Fx: 402-694-6180