

Parlex Flip Chip Contact Plate



innovating motion

Parlex Flex Circuits and Microelectronic Products

- ▶ Johnson Electric, through its Parlex brand, provides world-class design, prototyping, and value added assembly for flexible circuits, printed electronics, flat flexible cabling and microelectronics.
- ▶ Johnson Electric has the broadest range of flexible interconnects, smart card contact plates, secure flex circuits and sensor products to serve global telecom, payment, electronic identification, automotive, medical, business machines, aerospace, defense and industrial customers.
- ▶ Custom circuits are developed based on proprietary designs, processes and materials including dielectrics, conductors, printed electronics technology and the expert formulation of inks.
- ▶ We provide unique microelectronic design and solutions as an integral part of our customers' advanced system products.

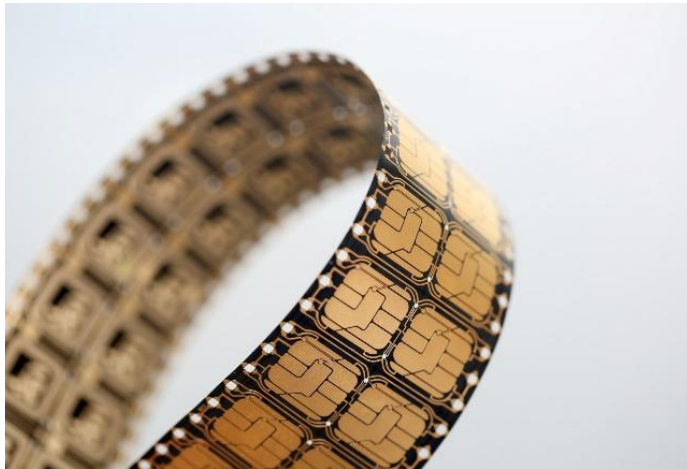
Parlex Flip Chip Contact Plates

- ▶ Applications
 - ▶ Telecommunication SIM Card
 - ▶ Payment Card
 - ▶ Health Care Card
 - ▶ ID Card

- ▶ Technology Leadership
 - ▶ Custom-engineered solutions
 - ▶ Secured Identification
 - ▶ Reliable communication
 - ▶ Long Life
 - ▶ Anti-Corrosion

Parlex Flip Chip Contact Plates Benefits

- ▶ Reliability: Double sided high density circuitry enabling the most reliable dual interface module in the industry
- ▶ Customization: Unique metallization (Ni, Au, Pd) and substrate color selection (transparent, black and white) for product differentiation.



Gold plated Dual Interface



Palladium plated Dual Interface

Technical Description: SIM Card Contact Plate

- ▶ Application: Flip Chip Module for SIM cards
- ▶ Base dielectric: Double sided 75 μ m adhesiveless PET
- ▶ Copper Plating: 15 μ m (maximum) thickness on both sides
- ▶ Standards: Master IQR 1.9E, ISO 7810, ISO 7816 and ISO 10373-1

Finishing	Finishing thickness		PET Color
	ISO side Minimum Nickel / Gold	Chip side Minimum Nickel / Gold	
Grey Gold (Nickel Plating)	2.5 μ m / 0	2.5 μ m / 0	Transparent
Gold	2.5 μ m / 0.035 μ m	2.5 μ m / 0.02 μ m	Transparent

Technical Description: Payment Card Contact Plate

- ▶ Application: Flip Chip Module for payment cards
- ▶ Base dielectric: Double sided 75µm adhesiveless PET
- ▶ Copper plating: 15 µm (maximum) thickness on both sides
- ▶ Standards: Master Card IQR 1.9E, ISO 7810, ISO 7816 and ISO 10373-1

Type	Finishing	Finishing thickness		PET Color
		ISO side Minimum Nickel / Gold or Palladium	Chip side Minimum Nickel / Gold or Palladium	
Contact	Gold	2.5µm / 0.05µm	2.5µm / 0.02µm	Transparent / Black
Contact	Palladium	2.5µm / 0.05µm	2.5µm / 0.02µm	Transparent / Black
Dual Interface	Gold	2.5µm / 0.05µm	2.5µm / 0.02µm	Transparent / Black
Dual Interface	Palladium	2.5µm / 0.05µm	2.5µm / 0.02µm	Transparent / Black

Parlex Flip Chip Contact Plate

Technology leadership

- ▶ Custom-engineered solutions
- ▶ Best contact performance
- ▶ Highest cosmetic differentiation
- ▶ Unique anti-corrosion coating

The Safe Choice

- ▶ Industry leader in Flip Chip contact plate technology
- ▶ Best connection reliability
- ▶ Long Life
- ▶ Johnson Electric Production System