



# ITT

Interconnect Solutions  
Cannon, VEAM, BIW



Ensuring soldier safety

in the harshest environments for

**20 years** and over

**500,000** SINCGARS radios



*Engineered for life*

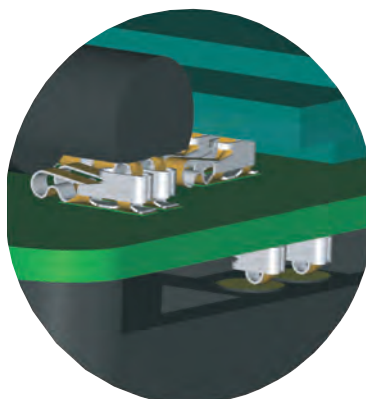
Universal Contact is an independent SMT contact which provides an electrical connection between a device and a PCB. The contact is manufactured as a single piece stamped product, incorporating pre-load and anti-lift features. The Universal Contact has been designed to replace traditional interfaces where the contact is custom designed into the component. It can be used to connect a number of device components in any direction and configuration using the same interface.

### Additional Advantages of using Universal Contacts

- Qualification time reduction - same contact for many components
- Allows standard interface across applications and platforms
- Freedom to position at an angle - not fixed by mating component

### Features & Benefits of the Design

- Range of heights available:
  - 1.3mm contact with the minimum pitch of 1.35mm
  - 1.8mm contact with the minimum pitch of 1.25mm
  - 2.5mm contact the minimum pitch is 1.35mm
  - 3.5 & 4.0mm minimum pitch is 1.45mm
- Solderwell that prevents solder wicking up the contact
- "Side wings" protect the active parts of the contact which prevent contact from overstressing and potential damage
- Domed contact point allows good hertz stress and low contact resistance
- The X-Y-Z movement allows robust connection between the contact and component assembly during shock and vibration
- Compliant with WEEE and RoHS directives.



### Applications

- Handset
- Solderless component interconnect
- I/O connector / Board to board interconnect
- Battery contact / Antenna contact
- Grounding contact / SIM contact
- Laptops & Computers
- Memory Stick
- Home Electronic Devices / White Goods
- Smoke detectors / Security alarm systems
- Home appliances
- Automotive - Keyfob
- Medical - CT scan equipment
- Industrial - Circuit breaker for GPS becon

### Materials & Finishes

|               |  |
|---------------|--|
| Base material | Beryllium Copper   |
| Plating       | Selective Au in contact area 1m<br>min over Au stripe, 0.05 - 0.1 m over<br>Ni 1.0 - 3.0 m |

### Electrical

|                    |                                |
|--------------------|--------------------------------|
| Contact resistance | Max 20 mΩ                      |
| Max current rating | 2.0 amps nominal 3.0 amps peak |

### Environmental

|                       |  |
|-----------------------|--|
| Operating temperature | -40°C and +85°C                                    |
| Humidity              | Operable in 90% relative humidity<br>(temp + 40°C) |

|                |                                      |
|----------------|--------------------------------------|
| Solder systems | Infrared and hot air reflow          |
| Vibration      | In accordance with IEC 68-2-36       |
| Shock          | In accordance with IEC 68-2-27, 30 g |

**Mechanical** See selection table on the right for contact forces at specific mating heights

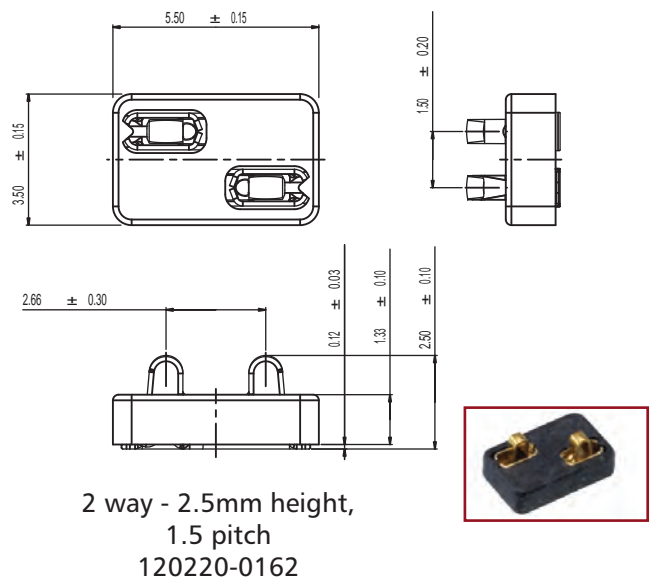
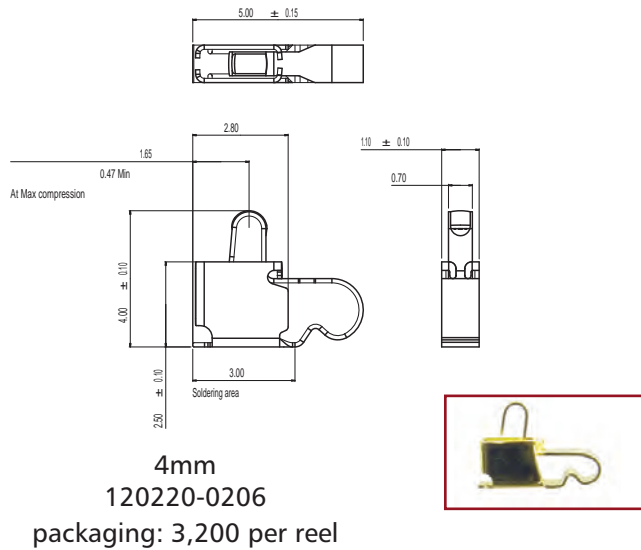
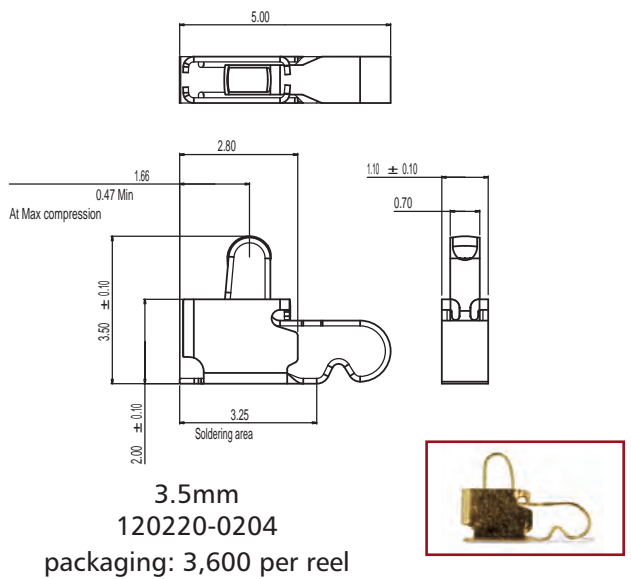
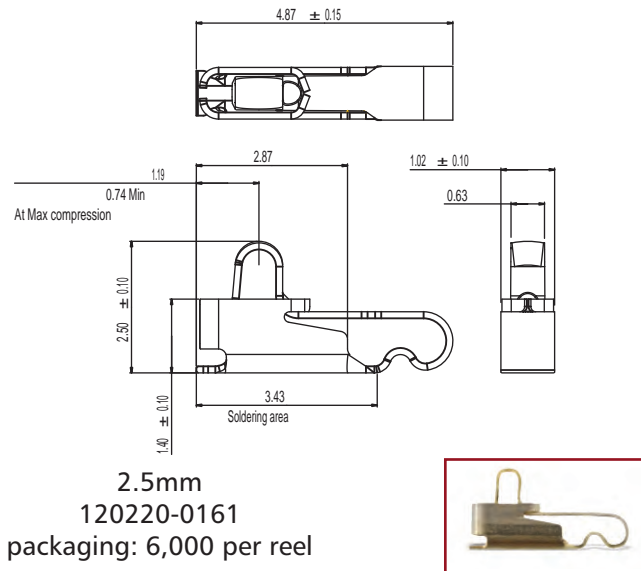
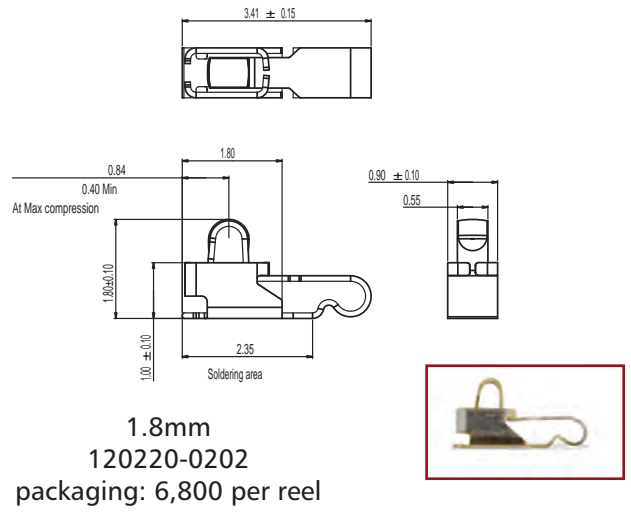
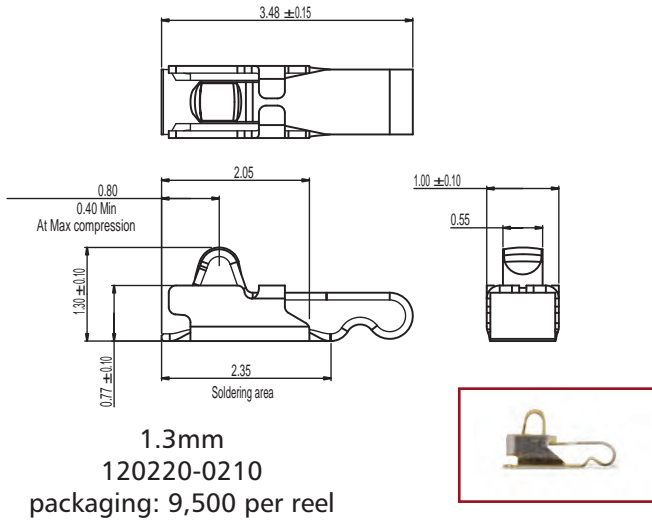
Maximum mating cycle based on mating PCB plated with 0.05 Au over 2.0 m Ni = 3,000 cycles. (Wear resistance is subject to mating component surface finish and plating type, increased mating component plating spec = increased mating cycles.)

**Packaging** Packaged in 12mm wide tape & reel packaging to EIA-481 standards

| MATING HEIGHT    | 1.3mm                          | 1.8mm    | 2.5mm    | 3.5mm    | 4.0mm    |
|------------------|--------------------------------|----------|----------|----------|----------|
|                  | FORCE (N) AT COMPRESSED HEIGHT |          |          |          |          |
| 0.90             | 0.58                           |          |          |          |          |
| 1.00             | 0.51                           | 0.87     |          |          |          |
| 1.10             | 0.44                           | 0.80     |          |          |          |
| 1.20             | 0.37                           | 0.74     |          |          |          |
| 1.30             | Pre-load                       | 0.68     |          |          |          |
| 1.40             |                                | 0.62     |          |          |          |
| 1.50             |                                | 0.56     | 0.58     |          |          |
| 1.60             |                                | 0.49     | 0.55     |          |          |
| 1.70             |                                | 0.43     | 0.52     |          |          |
| 1.80             |                                | Pre-load | 0.49     |          |          |
| 1.90             |                                |          | 0.46     |          |          |
| 2.00             |                                |          | 0.42     | 0.94     |          |
| 2.10             |                                |          | 0.39     | 0.91     |          |
| 2.20             |                                |          | 0.36     | 0.87     |          |
| 2.30             |                                |          | 0.33     | 0.83     |          |
| 2.40             |                                |          | 0.30     | 0.80     |          |
| 2.50             |                                |          | Pre-load | 0.76     | 1.30     |
| 2.60             |                                |          |          | 0.73     | 1.27     |
| 2.70             |                                |          |          | 0.69     | 1.24     |
| 2.80             |                                |          |          | 0.65     | 1.22     |
| 2.90             |                                |          |          | 0.62     | 1.19     |
| 3.00             |                                |          |          | 0.58     | 1.16     |
| 3.10             |                                |          |          | 0.55     | 1.13     |
| 3.20             |                                |          |          | 0.51     | 1.11     |
| 3.30             |                                |          |          | 0.47     | 1.08     |
| 3.40             |                                |          |          | 0.44     | 1.05     |
| 3.50             |                                |          |          | Pre-load | 1.02     |
| 3.60             |                                |          |          |          | 1.00     |
| 3.70             |                                |          |          |          | 0.97     |
| 3.80             |                                |          |          |          | 0.94     |
| 3.90             |                                |          |          |          | 0.91     |
| 4.00             |                                |          |          |          | Pre-load |
| Spring Rate N/mm | 0.68                           | 0.62     | 0.32     | 0.36     | 0.28     |



# Contacts





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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