

Interconnect Solutions Cannon, VEAM, BIW

# **Ensuring solider safety**

in the harshest environments for

20 years and over

500,000 SINCGARS radios







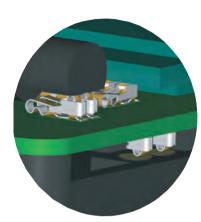
Universal Contact is an independent SMT contact which provides an electrical connection between a device and a PCB. The contact is manufactured as a single piece stamped product, incorporating pre-load and anti-lift features. The Universal Contact has been designed to replace traditional interfaces where 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

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- Automotive Keyfob
- Medical CT scan equipment
- Industrial Circuit breaker for GPS beckon

#### **Materials & Finishes**

Base material Beryllium Copper

Plating Selective Au in contact area 1m

min over Au stripe, 0.05 - 0.1 m over

Ni 1.0 - 3.0 m

#### **Electrical**

Contact resistance  $\underline{\text{Max 20 m}\Omega}$ 

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

 $(temp + 40^{\circ}C)$ 

Solder systems

Infrared and hot air reflow

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

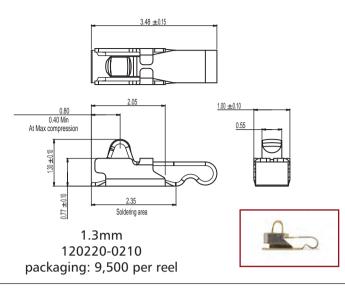
Maximum mating cycle based on mating PCB plated with 0.05 Au over 2.0 m Ni = 3,000 cycles. (Wear resistance is subject to mating component surface finish and plating type, increased mating component plating spec = increased mating cycles.)

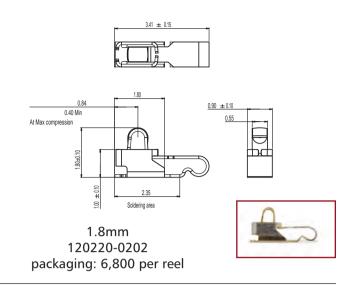
Packaging Packaging to EIA 481 standards

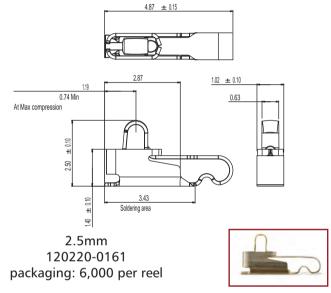
packaging to EIA-481 standards

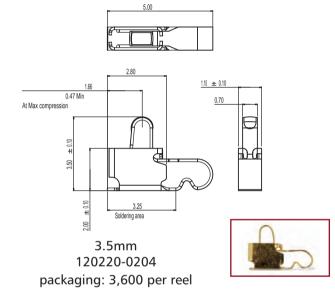
MATING	1.3mn	1.8mn	2.5mn	3.5mr	4.0mn
ΣI	FORCE (N) AT COMPRESSED HEIGHT				
0.90	0.58				
1.00	0.51	0.87	1		
1.10	0.44	0.80			
1.20	0.37	0.74			
1.30	Pre-load	0.68			
1.40	1	0.62			
1.50		0.56	0.58		
1.60		0.49	0.55		
1.70		0.43	0.52		
1.80		Pre-load	0.49		
1.90			0.46		
2.00			0.42	0.94	
2.10			0.39	0.91	
2.20			0.36	0.87	
2.30	1		0.33	0.83	
2.40			0.30	0.80	
2.50	M		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	0.68	0.62	0.32	0.36	0.28
N/mm	10.7			100	

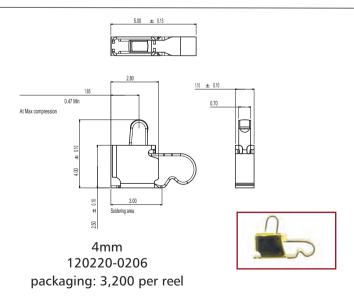


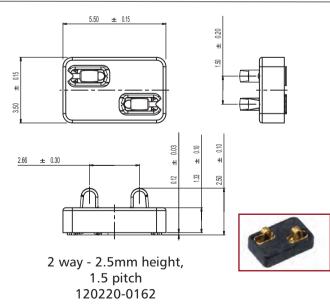














Dimensions shown in inches (mm) Specifications and dimensions subject to change