ITT

Interconnect Solutions
Cannon, VEAM, BIW

Ensuring solider safety

in the harshest environments for

20 years and over

500,000 SINCGARS radios

Engineered for life

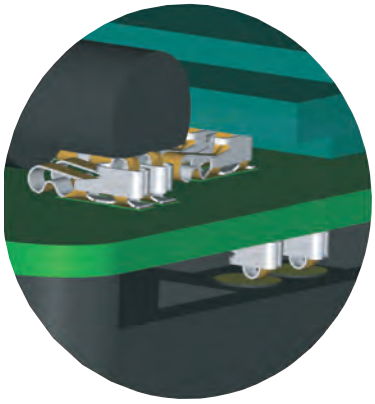
Universal Contact is an independent SMT contact which provides an electrical connection between a device and a PCB. The contact is manufactured as a single piece stamped product, incorporating pre-load and anti-lift features. The Universal Contact has been designed to replace traditional interfaces where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

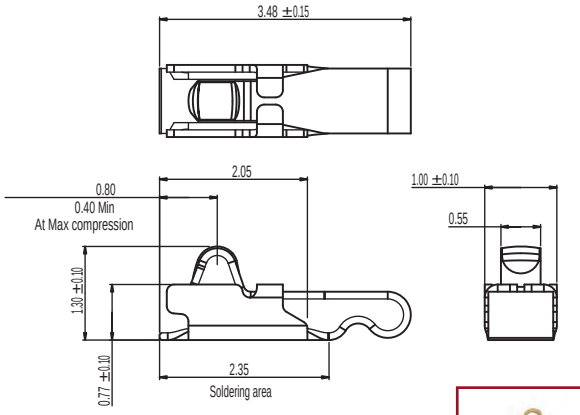
Mechanical — See selection table on the right for contact forces at specific mating heights

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.)

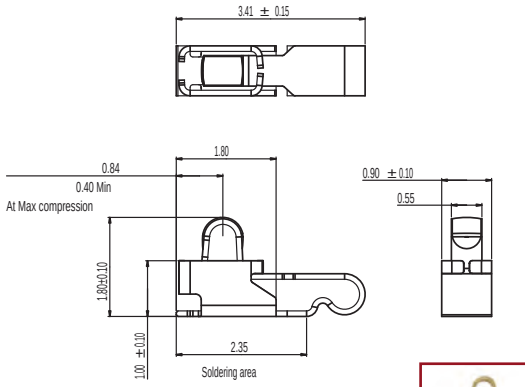
Packaging — Packaged in 12mm wide tape & reel packaging to EIA-481 standards

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

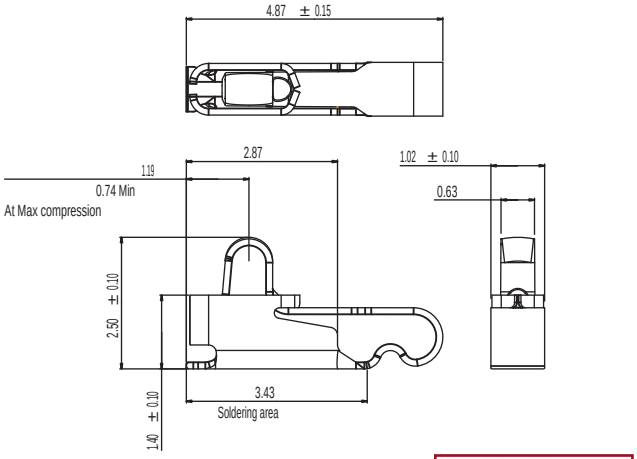
Dimensions shown in inches (mm)



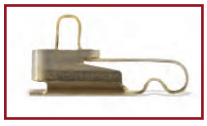
1.3mm
120220-0210
packaging: 9,500 per reel

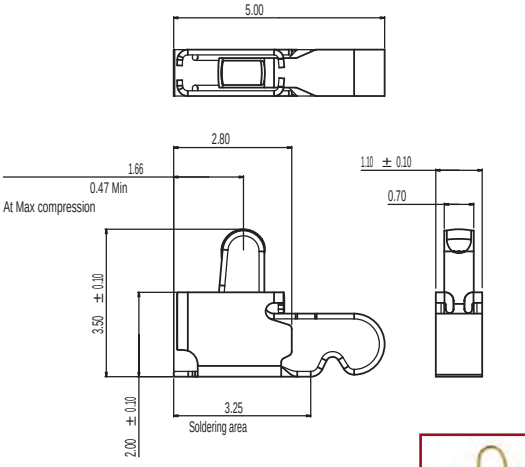


1.8mm
120220-0202
packaging: 6,800 per reel

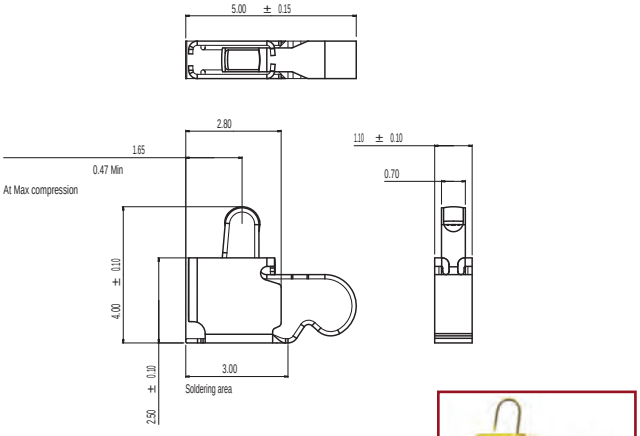


2.5mm
120220-0161
packaging: 6,000 per reel

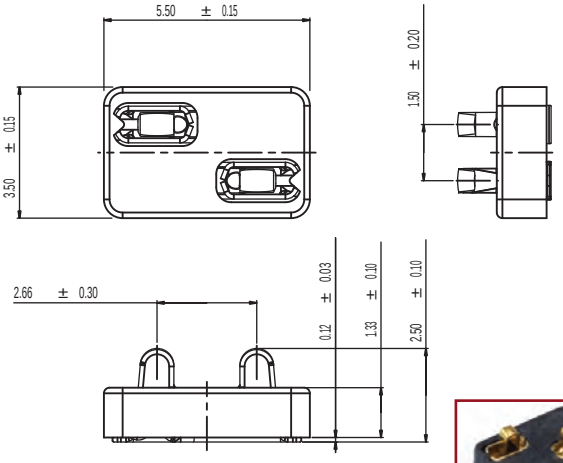




3.5mm
120220-0204
packaging: 3,600 per reel



4mm
120220-0206
packaging: 3,200 per reel



2 way - 2.5mm height,
1.5 pitch
120220-0162

Mouser Electronics

Authorized Distributor

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ITT Cannon:

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