

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.

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
- Iow 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.

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		

Max 20 m Ω

Electrical

Contact resistance Max current rating

Environmental

Operating temperature	-40°C and +85°C
Humidity	Operable in 90% relative humidity
	$(\text{temp} + 40^{\circ}\text{C})$
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

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

2.0 amps nominal 3.0 amps peak

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



- 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

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

MATING HEIGHT	1.3mm	1.8mm	2.5mm	3.5mm	4.0mm	
MI	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		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	L.,		0.39	0.91		
2.20			0.36	0.87		
2.30			0.33	0.83		
2.40	1.1		0.30	0.80		
2.50	10		Pre-load	0.76	1.30	
2.60				0.73	1.27	
2.70	22			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	8			Pre-load	1.02	
3.60					1.00	
3.70					0.97	
3.80	1				0.94	
3.90					0.91	
4.00					Pre-load	
Spring	Land.	A.S.S.S.	Sec. and	Sec.	Church	
Rate N/mm	0.68	0.62	0.32	0.36	0.28	

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