# **AVX MOBO® Spring Contact Interconnect Solutions**



Version 12.3



# **Table of Contents**

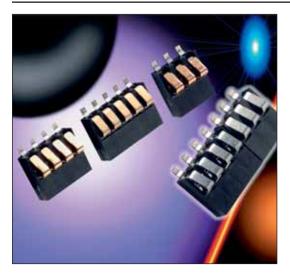


BATTERY CONNECTORS, SERIES 9155	2-16
Battery; Standard Size	2
Battery; Reduced Size	4
Battery; Ultra Low Profile	7
Battery; Solderless	9
Battery; 3.0mm Right Angle	10
Battery; 2.5mm Right Angle	13
SIM CARD CONNECTORS SERIES 9162	17-24
Slide-In SIM	17
SIM Block	19
SIM Connector with Locking Latch	21
SIM/microSD Micro Combination	23
BOARD TO BOARD, SERIES 9158	25-32
SOLO Stacker, 9158 Series	25
Staggered SOLO Stacker, 9188 Series	27
Ultra Low Profile Stacker, 9258 Series	31
I/O CONNECTORS	33-45
Standard I/O, 15 Position, 9157 Series	33
Standard I/O, 19 Position, 9157 Series	37
Reduced Size I/O, 9257 Series	39
Mini I/O, 9257 Series	42

NOTICE: Specifications are subject to change without notice. Contact your nearest AVX Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable, but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all applications.

# 9155 Standard Battery





#### **GENERAL DESCRIPTION**

The standard battery connector is specifically designed for mobile equipment.

The connectors are available in 3, 4 and 5 contact positions all on a 2.50mm pitch. The insulator height provides a 3mm spacing, with various contact nose heights from 1.20mm to 2.60mm, to provide spacing options to the end user.

All contacts are stamped and are rated to 3A, with Gold plating. Parts are supplied in tape and reel for automatic pick and place. Optional retaining brackets are available to provide greater strength when connected to the PCB.

Whatever your requirements, the 9155 series Battery Connector can also be customized to suit your applications.

#### **APPLICATIONS**

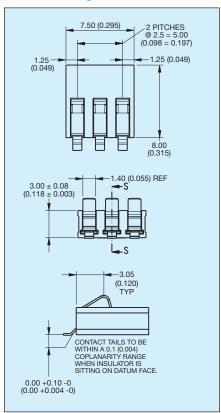
- Mobile Phones
- PDA
- Medical
- PMR
- Industrial

#### **KEY FEATURES AND BENEFITS**

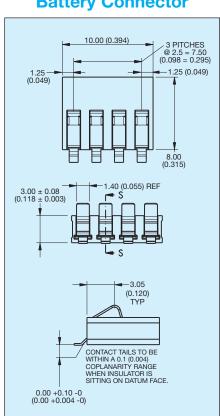
- Suitable for 5000 mechanical cycles.
- Variety of contact heights offered to suit different mechanical designs.
- Connectors can be end to end stackable.
- RoHS Compliant available.



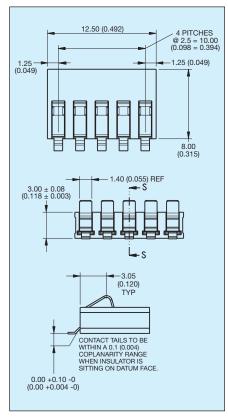
3 Way Battery Connector



4 Way Battery Connector



5 Way Battery Connector

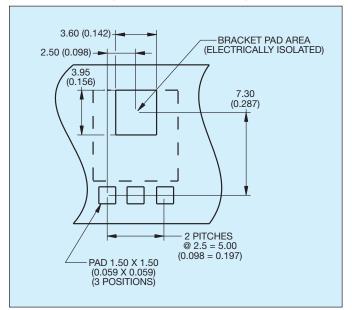




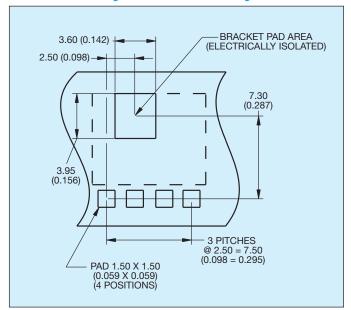
# 9155 Standard Battery



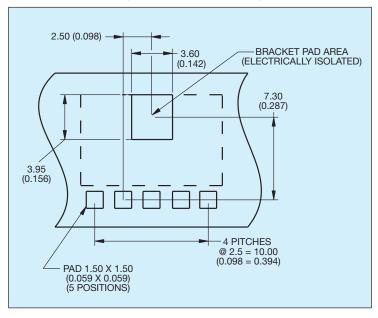
#### 3 Way PCB Board Layout



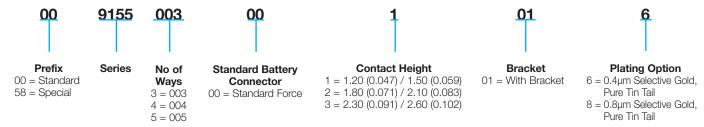
#### 4 Way PCB Board Layout



#### **5 Way PCB Board Layout**



#### **HOW TO ORDER**





# 9155 Size Reduced Battery Connector



#### **GENERAL DESCRIPTION**

The newest product in AVX's Interconnect family of battery connectors saves 50% in volume over the initial 9155 series compression connectors as illustrated in the photograph. These connectors are rated at a full 3 amps per contact on 2.5mm centers. Sizes range from 2 positions through 5 positions and are end to end stackable.

#### **APPLICATIONS**

- Cellular Phones
- Handheld Devices
- Industrial Modules
- Medical Electronics

#### **KEY FEATURES AND BENEFITS**

- 2.4mm insulator height
- 3 amps/contact
- Large SMT mounting area for positive mechanical attachment
- 5k mating cycles
- End-to-end stackable



#### **HOW TO ORDER**









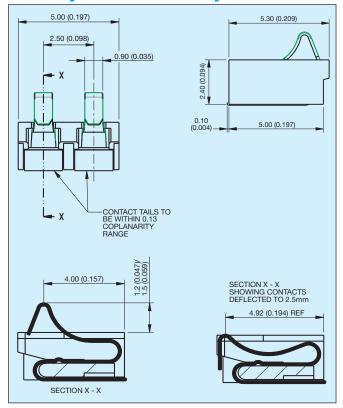
Code	Description	
201	Reduced Size Battery Connector	

Code	Description		
006	0.4µm Selective Gold, Pure Tin Tail		
008	0.8µm Selective Gold, Pure Tin Tail		

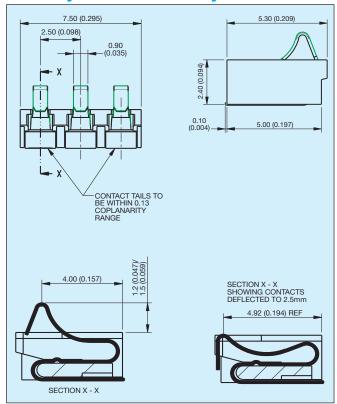


# 9155 Size Reduced Battery Connector

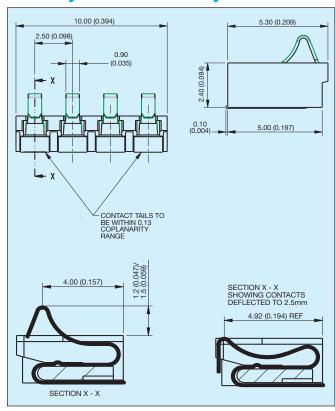
#### 2 Way Reduced Battery Connector



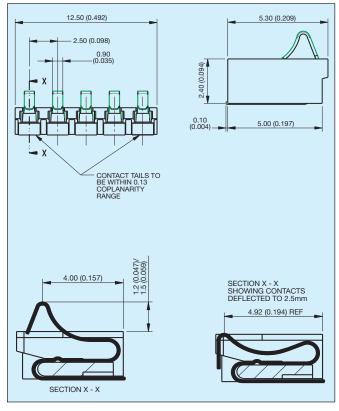
#### **3 Way Reduced Battery Connector**



#### **4 Way Reduced Battery Connector**



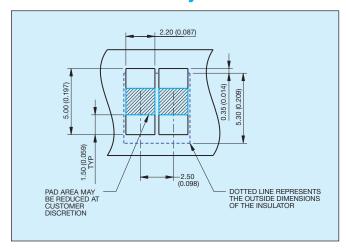
#### 5 Way Reduced Battery Connector



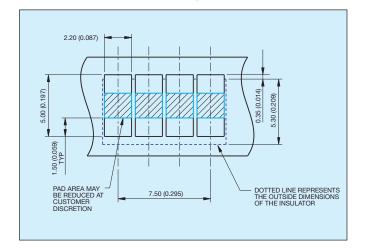


# 9155 Size Reduced Battery Connector

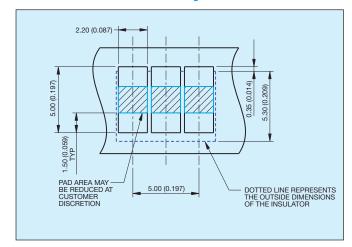
#### 2 Way Reduced Battery Connector PCB Layout



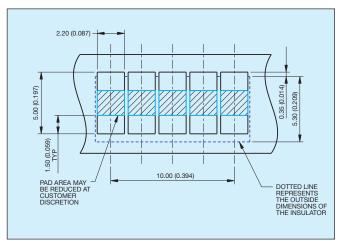
# 4 Way Reduced Battery Connector PCB Layout



# 3 Way Reduced Battery Connector PCB Layout



# 5 Way Reduced Battery Connector PCB Layout



# 9155 Ultra-Low Profile Battery



#### **GENERAL DESCRIPTION**

The AVX Interconnect group has released a new ultra-low profile 3 amp per contact connector for battery pack or slide-in module applications. The compressed "Z" axis height of 1.3mm leads the industry from a profile standpoint. The initial product is in a 2 & 3 position configuration with other sizes expected to follow. The connector has an integral end block to act as a mechanical stop.

#### **APPLICATIONS**

- Cellular Phones
- Handheld Devices
- Industrial Modules
- Medical Electronics

# **KEY FEATURES AND BENEFITS**

- Ultra-Low Profile
- 3 amps/contact
- Integral End Stop
- 5k mating cycles





#### **HOW TO ORDER**





No. of Ways	Qty. Per Reel	
2	1500	
3	1200	
	No. of Ways	



Low Profile Battery Connector

Code	Description	Operating Height
101	Low Profile Battery Connector	1.30 (0.051)



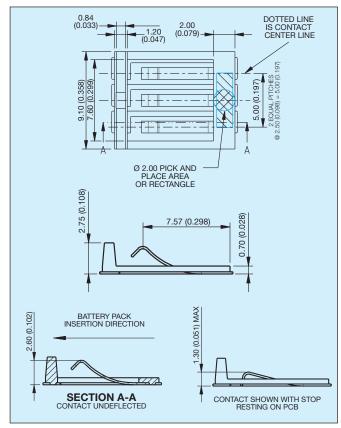
Plating Option

Code	Description
006	0.4µm Selective Gold, Pure Tin Tail
008	0.8µm Selective Gold, Pure Tin Tail

#### 2 Way Low Profile Battery Connector

#### 2.00 1.20 <sup>(0.079)</sup> (0.098)DOTTED LINE IS CONTACT CENTER LINE 2.50 6.60 (0.260) 5.10 (0.201) Ø 2.00 PICK AND PLACE AREA OR RECTANGLE (0.108)0.70 (0.028) 2.75 7.57 (0.298) .30 (0.051) MAX BATTERY PACK INSERTION DIRECTION (0.102)2.60 SECTION A-A CONTACT UNDEFLECTED CONTACT SHOWN WITH STOP

#### 3 Way Low Profile Battery Connector

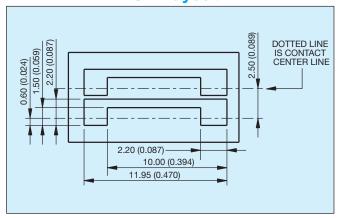




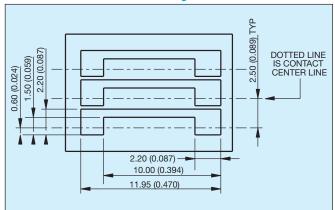
# 9155 Ultra-Low Profile Battery



# 2 Way Low Profile Battery Connector PCB Layout



# 3 Way Low Profile Battery Connector PCB Layout



# 9155 MOBO® Solderless Battery Connectors



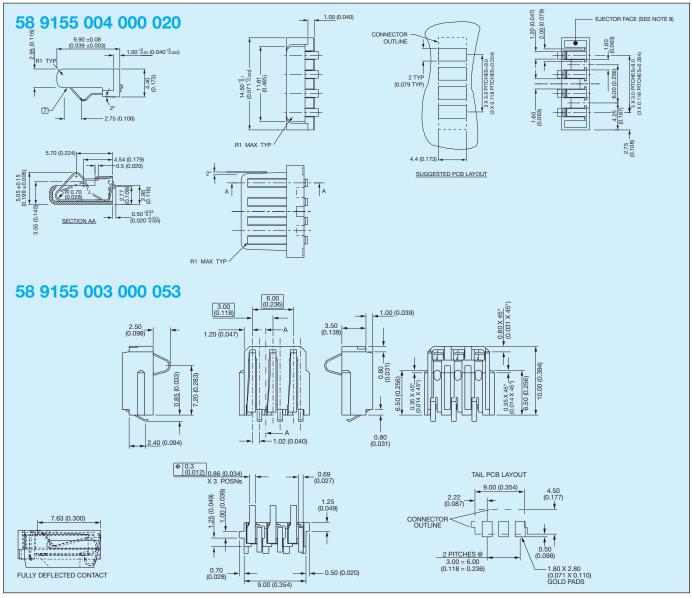


#### **GENERAL DESCRIPTION**

As an addition to our range of Battery connectors we have added a solderless termination option. This option has the termination area gold plated and the contact form is compression to the PCB and to the Battery which is used in the end equipment.

Rated at 3 Amps and 5,000 operations (the same as the SMT version). These battery connectors compliment the existing standard range of RoHS compliant components giving the designer an added option of the solderless termination.

When these connectors are held in place by the casing of the end equipment, the connection to the PCB is achieved by compressing the connector contacts against the PCB and against the actual battery. It is the housing which maintains the connection.







#### **GENERAL DESCRIPTION**

A further addition to the battery connector range offered by AVX is a 90 degree version. On a 3mm pitch, offered in 2 to 5 contact positions and rated as with all of the battery range at 3 amps. The connector's design is small and compact to minimize its profile yet stable while having a contact point 4.61mm above the PCB.

The stability comes from the addition of extra SMT anchor brackets that are in between the SMT contact pads and both at the front of the connector and within the row of the contact SMT pads.

As with the other 9155 series of battery connectors offered by AVX the 90 degree version is rated at 3 amps and 5000 mating cycles, RoHS compliant and using high temperature plastic enables the connectors to be processed at up to 260°C.

#### **APPLICATIONS**

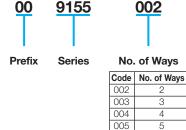
- Mobile phones
- Digital music players
- Hand held terminals
- Data terminals or any other small portable device

#### **FEATURES AND BENEFITS**

- Simple designed spring contact
- End to end stackable for larger pin counts
- Additional contact anchor brackets to added stability on the PCB
- Robust to shock and vibration
- Selectively plated contact area



#### **HOW TO ORDER**





Right Angle
Battery Connector

Code Description

	Battory Connector		
Code Description		Description	
301 Right Angle 3.0		Right Angle 3.00mm	
Battery Conn		Battery Connector	

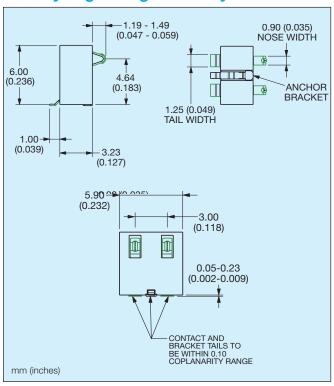


**Plating Option** 

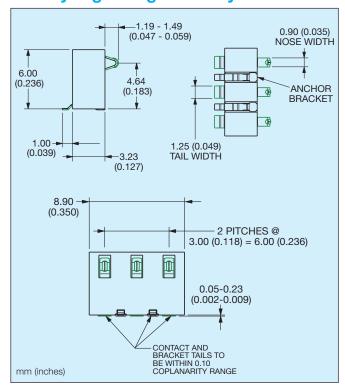
Code	Description	
006	0.4µm Selective Gold, Pure Tin Tail	
008	0.8µm Selective Gold, Pure Tin Tail	



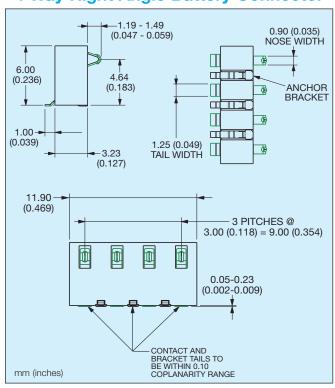
#### 2 Way Right Angle Battery Connector



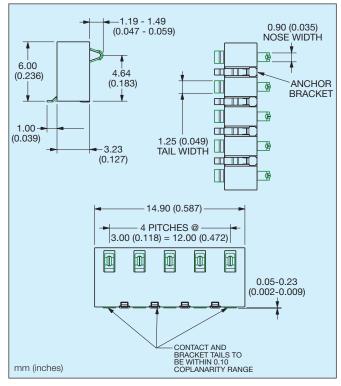
#### 3 Way Right Angle Battery Connector



#### 4 Way Right Angle Battery Connector



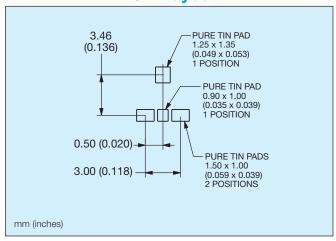
#### **5 Way Right Angle Battery Connector**



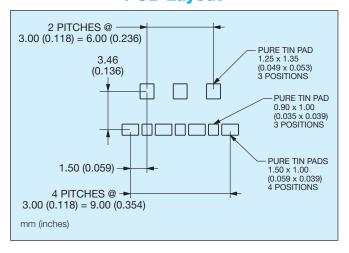




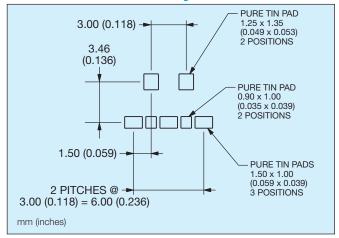
# 2 Way Right Angle Battery Connector PCB Layout



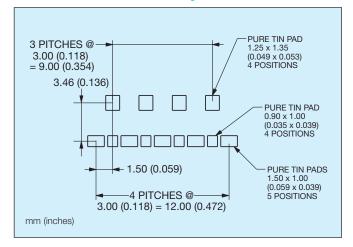
# 4 Way Right Angle Battery Connector PCB Layout



# 3 Way Right Angle Battery Connector PCB Layout



# 5 Way Right Angle Battery Connector PCB Layout







#### **APPLICATIONS**

- Mobile Phones
- Digital Music Players
- Any Handheld Devices

#### **HOW TO ORDER**



No. of Ways	
Code	No. of Ways
002	2
003	3
004	4
005	5



Right Angle
Battery Connector

ode Description

Code	Description	
541	Right Angle 2.5mm	
	Battery Connector	

#### **GENERAL DESCRIPTION**

AVX extends the battery connector range with the addition of a low profile 2.5mm pitch right angle connector. This connector is offered in 2 to 5 positions and is rated at 3 amps. The connector's design is small and compact to minimize its profile yet functionally stable having a contact point at 2.20mm above the PCB.

The unique design of this stamped contact allows for a maximum insulator height of 4.0mm which makes it size compatible with more expensive pogo pin style battery connectors.

The complete family of battery connectors from AVX offer all of the same advantages; Beryllium Copper base material for enhanced contact performance, a full 3 amp current rating, selective gold plating for 5000 mating cycles and high temperature plastic for RoHS soldering.

#### **KEY FEATURES AND BENEFITS**

- · Reliable stamped contact with coined nose
- Full 1.5mm nose deflection for large operating range
- Two anchor tabs for mechanical stability
- 5000 cycle durability rating
- Minimized X, Y and Z package dimensions



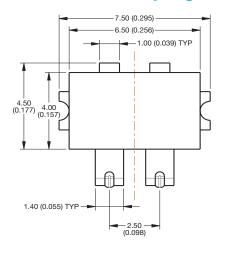


#### **Plating Option**

	Code Description	
006 0.4µm Selective Gold, Pure Ti		0.4µm Selective Gold, Pure Tin Tail
	008	0.8µm Selective Gold, Pure Tin Tail

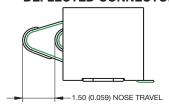


#### 2 Way Right Angle Battery Connector

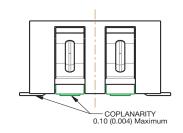


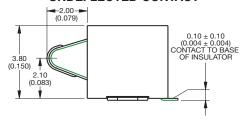


#### **DEFLECTED CONNECTOR**

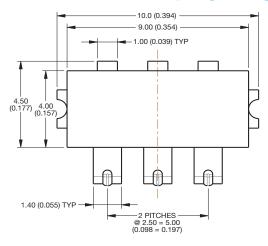


#### **UNDEFLECTED CONTACT**



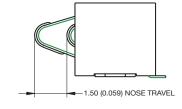


#### 3 Way Right Angle Battery Connector

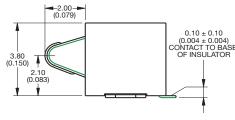


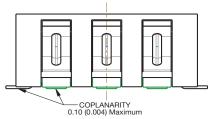


#### **DEFLECTED CONNECTOR**



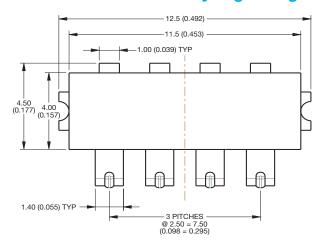
#### UNDEFLECTED CONTACT

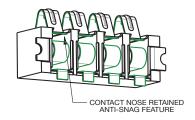




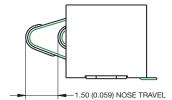


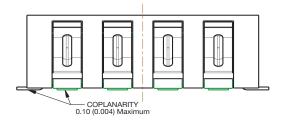
#### **4 Way Right Angle Battery Connector**



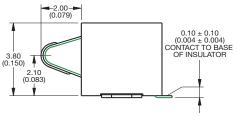


#### **DEFLECTED CONNECTOR**

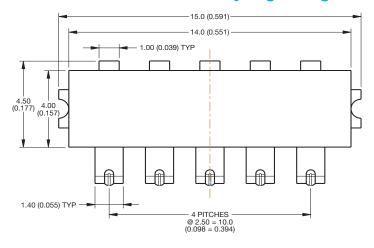


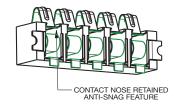




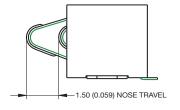


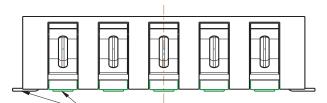
#### **5 Way Right Angle Battery Connector**





#### **DEFLECTED CONNECTOR**





COPI ANARITY 0.10 (0.004) Maximum

# 0.10 ± 0.10 (0.004 ± 0.004) CONTACT TO BASE OF INSULATOR 3.80 (0.150) 2.10 (0.083)

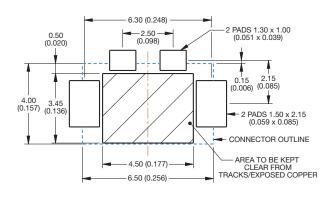
UNDEFLECTED CONTACT

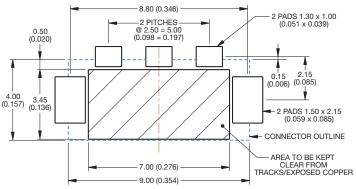




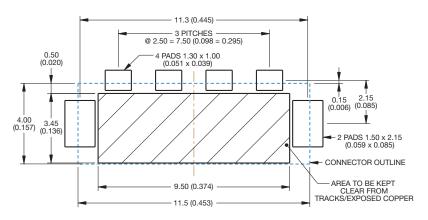
# 2 Way Right Angle Battery Connector PCB Layout

# 3 Way Right Angle Battery Connector PCB Layout

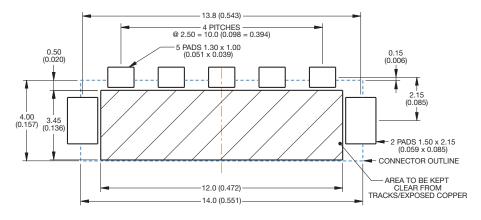




# 4 Way Right Angle Battery Connector PCB Layout



# 5 Way Right Angle Battery Connector PCB Layout





### 9162 Slide-In SIM Card Connector





#### **GENERAL DESCRIPTION**

The standard SIM connector is specifically designed for handheld devices requiring secure subscriber identification.

Following on from the introduction of our standard SIM block with an offering of 3 standard heights, 0.80mm, 1.60mm, or 2.40mm, AVX is now adding another standard to the 9162 series SIM connectors, the slide-in SIM.

Unlike SIM blocks which require SIM card guides to aid insertion, removal and retention of the SIM card, the slide-in SIM has guides as part of the connector mold design.

Contacts are stamped, gold plated, rated 0.5A, and 5000 mechanical cycles. Our contact design is specifically rounded to avoid any possible damage during and after card insertion to the card itself, assuming normal use. The design also incorporates protection features to avoid contact damage during this operation such as contact snagging.

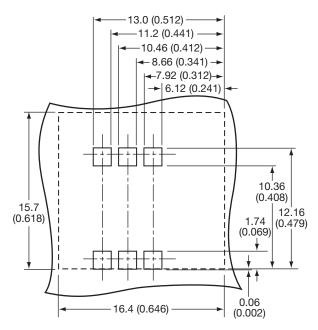
Please contact the appropriate sales office for further details of this service.

#### **KEY FEATURES AND BENEFITS**

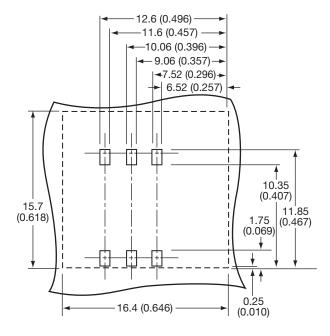
- Produced for use with mini SIM cards.
- The insulator is molded from high temperature plastic enabling the connector to be used in convection or infrared soldering processes.
- Supplied on tape and reel packaging for pick and place assembly.
- The all plastic design, assuming normal use prevents damage to the SIM card on insertion.
- Optional SMT contact size:
   Standard SMT contact size 1.60mm x 1.60mm
   Narrow SMT contact size 1.05mm x 0.60mm
- RoHS Compliant available.



#### **Standard SMT Contact Layout**



#### **Narrow SMT Contact Layout**

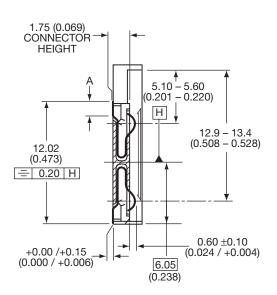




# 9162 Slide-In SIM Card Connector

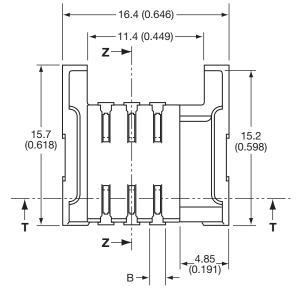


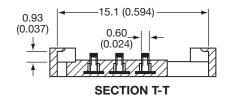
#### **Connector Height 1.75mm**



**SECTION Z-Z** 

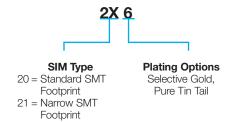
Standard		Narrow
Α	1.46 (0.057)	1.05 (0.041)
В	1.60 (0.063)	0.60 (0.024)





#### **HOW TO ORDER**



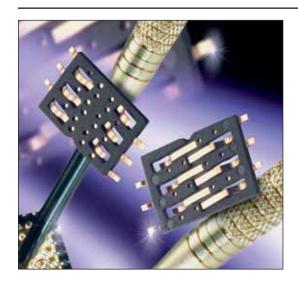




XXX

### 9162 SIM Card Block





#### **GENERAL DESCRIPTION**

The standard SIM connector is specifically designed for handheld devices requiring secure subscriber identification.

The connectors are available in a standard 6 pin configuration on a 2.54mm pitch with a 0.8mm height.

Contacts are stamped, gold plated, rated at 0.5A, and 5000 mechanical cycles.

Our contact design is specifically rounded to avoid any possible damage during and after card insertion to the card itself, assuming normal use. The design also incorporates protection features to avoid contact damage during this operation such as contact snagging.

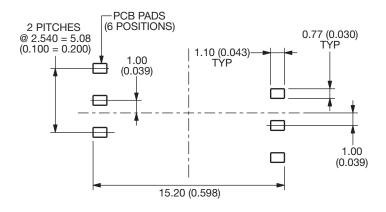
Please contact the appropriate sales office for further details.

#### **KEY FEATURES AND BENEFITS**

- Produced for use with both full ISO cards and mini SIM cards.
- The insulator is molded from high temperature plastic enabling the connector to be used in convection or infrared soldering processes.
- Supplied on tape and reel packaging for pick and place assembly.
- · RoHS Compliant.



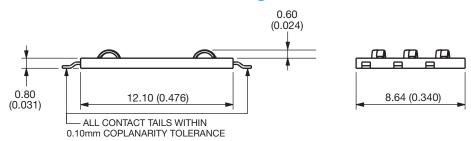
#### 0.8mm PCB Pad Layout

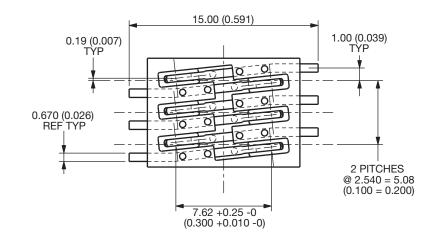


# 9162 SIM Card Block

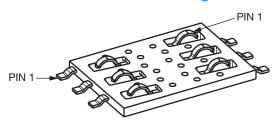


#### **Connector Height 0.8mm**





#### **Illustration of Pin Configuration**



# HOW TO ORDER 00 9162 006 006 080 Prefix Series Number of Contacts SIM Type 006 = Selective Gold, Pure Tin Tail

# 9162 SIM Connector with Locking Latch





#### **GENERAL DESCRIPTION**

For 9162 Slide-IN & 9162 SIM/microSD

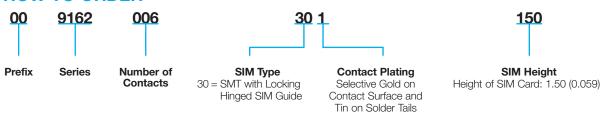
- · Accepts GSM Standard 11.11 cards
- Secure locking latch mechanism
- · Robust, good resistance against shock and vibration
- SIM Installed Height 1.50mm
- Polarized to eliminate improper insertion of the card

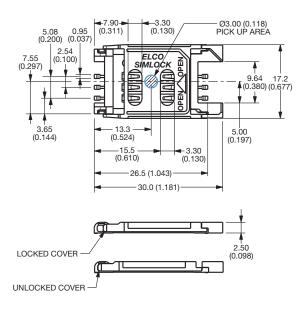
#### **KEY FEATURES AND BENEFITS**

- SMT with locking hinged guide
- 2.50mm connector height
- Selective gold on mating surface/tin on solder tails
- Tape and reel packaging

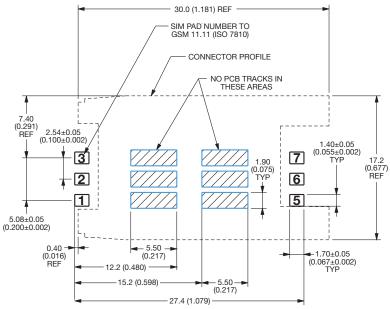


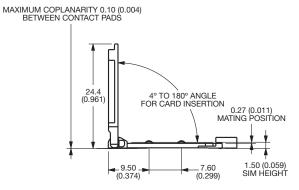
#### **HOW TO ORDER**





#### **Suggested PCB Layout**

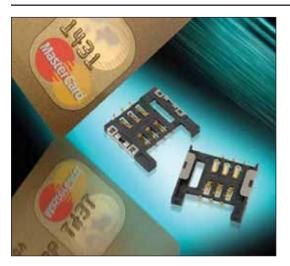






# 9162 Slide-In Low Profile **SIM Connector**





#### **GENERAL DESCRIPTION**

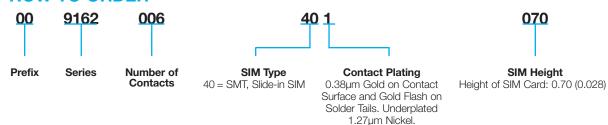
- Six position Slide-In SIM
- Low Profile 0.70mm to SIM base
- Side bracket to add solder security
- SIM guidance using the side walls

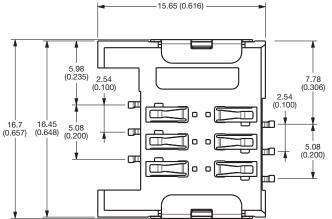
#### **KEY FEATURES AND BENEFITS**

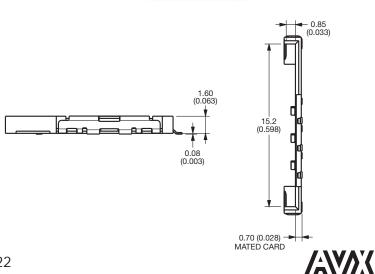
- SMT Slide-In SIM
- Molded in high temperature LCP
- 0.38µm Gold on contact surface and gold flash on contact tails
- 1.60mm connector height
- · Tape & Reel packaging



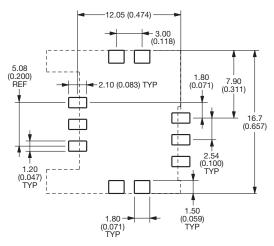
#### **HOW TO ORDER**







#### **Suggested PCB Layout**



# 9162 SIM/microSD Micro Combination Connector





#### **GENERAL DESCRIPTION**

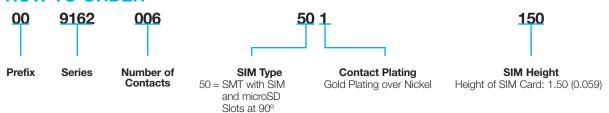
- Six position slide-in SIM connector & Push-Push microSD connector
- Allows two cards to be inserted into the same connector
- Card detect switch on the microSD

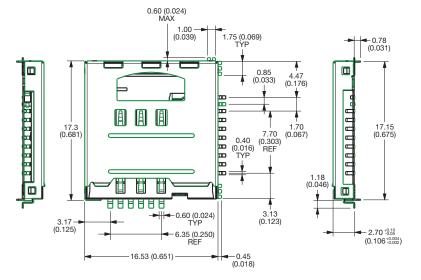
#### **KEY FEATURES AND BENEFITS**

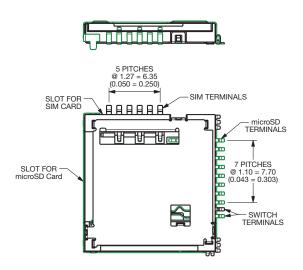
- Space saving connector combination
- Integrates 2 connectors into 1
- Contact Plating: Gold
- Insulator molded from LCP UL94 V-O
- Low profile 1.50mm to SIM
- 2.70mm connector height



#### **HOW TO ORDER**



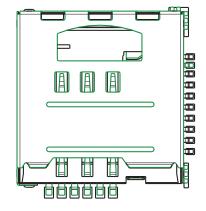




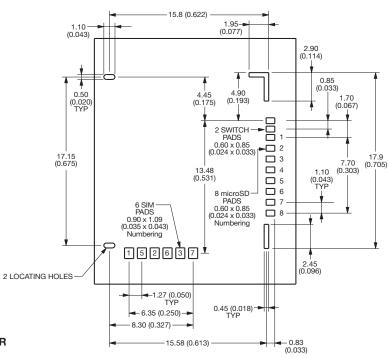
# 9162 SIM/microSD Micro Combination Connector



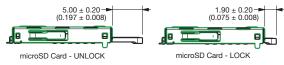
#### Connector on PCB

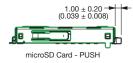


#### **Recommended PCB Layout**

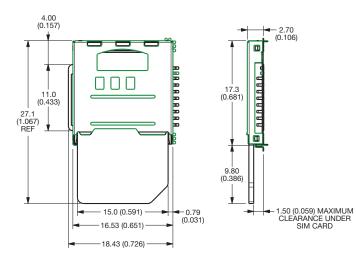


## PCB SPACE USED BY CONNECTOR CARDS FULLY INSERTED

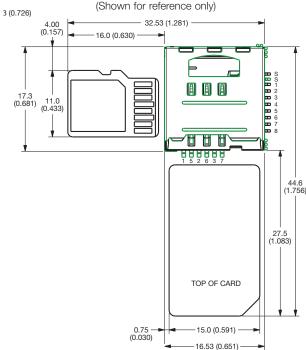




NO CLEARANCE UNDER microSD Card



#### CARDS EXTRACTED



#### CONTACT FUNCTIONS (ISO7816):

- 1. Supply Voltage Vcc
- 2. Reset
- 3. Clock
- 5. Ground
- 6. Program Voltage Vpp
- 7. I/O

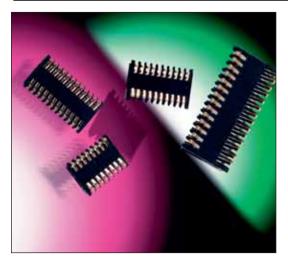
#### MICRO SD FUNCTIONS:

- S. Switch
- S. Switch
- 1. DAT 2
- 2. CD/DAT 3
- 3. CMD
- 4. Vdd
- 5. Clock 6. Vss
- 7. DAT 0
- 8. DAT 1



### 9158 SOLO STACKER





#### **GENERAL DESCRIPTION**

The MOBO® series 9158 is a one-piece connector used to connect two PCBs within mobile phones, pagers, PDAs, security, handheld scanners, etc. in a cost-effective manner.

A standard range is available with 16, 20, 24 and 28 contacts to suit stack heights of 1.90mm to 3.30mm. Other contact variants are also available up to 5.10mm, in custom housings. The SOLO STACKER can allow a spacing tolerance of up to  $\pm 0.30$ mm and still provide reliable connections between the PCBs, even if they are not parallel.

SOLO STACKER is designed for PCB surface mounting and is supplied in tape and reel packaging. Gold plated pads on the mating PCB or suitable flex circuits provide connection between the boards.

Whatever your requirements this SOLO STACKER can also be customized to suit your applications.

#### **APPLICATIONS**

Suitable applications include:

- Mobile Phones
- PDA
- Medical
- PMR
- Industrial
- Security
- Handheld Scanner

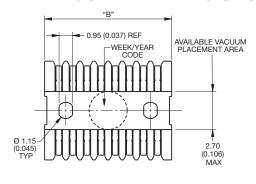
#### **KEY FEATURES AND BENEFITS**

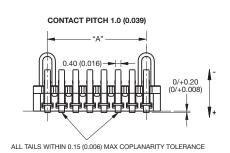
Single piece Connector – no mating half connector required to connect two boards together which means:

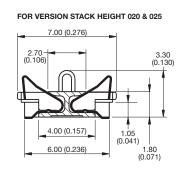
- · Reduced assembly time.
- Only one part to purchase and stock.
- Due to the unique contact design, the mating device does not have to be parallel.
- Extremely robust when subjected to shock and vibration.
- · Cost effective.
- Helps reduce tolerance accumulation within system.



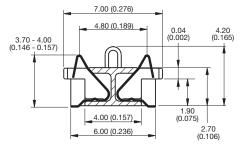
#### DRAWINGS AND DIMENSIONS







#### FOR VERSION STACK HEIGHT 030



Number of Positions	Part Number	Α	В
16	00-9158-016-XXX-XXX	7	9.00
20	00-9158-020-XXX-XXX	9	11.00
24	00-9158-024-XXX-XXX	11	13.00
28	00-9158-028-XXX-XXX	13	15.00

A = Number of contact pitches at 1mm

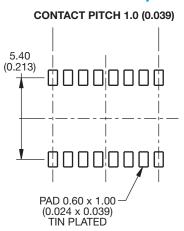
B = Connector Length

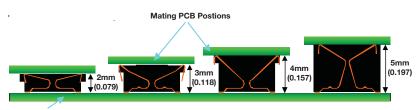


# 9158 SOLO STACKER



#### **SMT PCB Footprint**





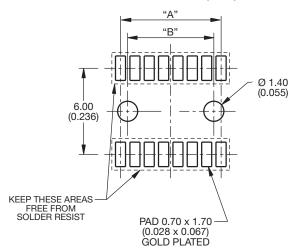
SMT PCB

Mating Height	Standard Positions			Special Positions*					
	16	20	24	28	4	18	30	32	40
2mm	Х	Х	Х	Х					
3mm	Х	Х	Х	Х				Х	
4mm					Х	Х			Х
5mm							Х		

Other sizes available on request.

#### **Mating PCB Footprint** for version stack height 020 & 030

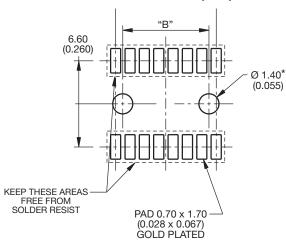
#### **CONTACT PITCH 1.0 (0.039)**



<sup>\*</sup> Used for Boss versions only.

#### **Mating PCB Footprint** for version stack height 025

#### **CONTACT PITCH 1.0 (0.039)**



**HOW TO ORDER** 

00	9158
Prefix 00 = Standard	Series

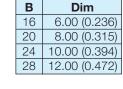
XXX No of



Stack Height 020 = 1.9mm to 2.1mm 025 = 2.1mm to 2.7mm 030 = 2.8mm to 3.3mm 06

#### **Plating Variation** 06 = Selective Gold 0.25µm Gold Plated

Contact Nose, Pure Tin Tail





В

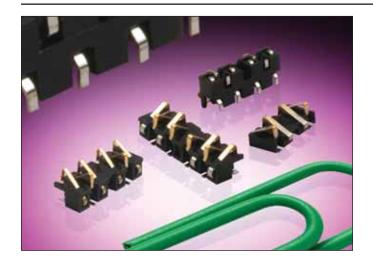
#### **PCB Location Bosses**

1 = With PCB Location Bosses 2 = Without PCB Location Bosses



<sup>\*</sup>Please consult with factory for availability.





#### **GENERAL DESCRIPTION**

The SOLO series 9188 is a one-piece connector used to connect two PCBs in a cost effective manner.

A standard range is available with 4, 6, 8 staggered contacts to suit stack heights of 1.1mm to 2.1mm (see table below).

SOLO Stacker is designed for PCB surface mounting and is supplied in tape and reel packaging. Gold plated pads on the mating PCB or suitable flex circuits provide connection between the two boards.

#### **APPLICATIONS**

Suitable applications include:

- Handheld Devices:
  - Phones
  - Scanners
  - Radios
  - Medical Diagnostic
  - Security Devices

#### **KEY FEATURES AND BENEFITS**

Single piece connector – no mating half required to connect two boards together which means:

- · Reduced assembly time
- Only one part to purchase and stock
- Due to the unique contact design, the mating device does not have to be parallel
- Helps reduce tolerance accumulation within system



#### **HOW TO ORDER**





004

006

008

Code No. of Ways



 Stack Height

 Code
 Height
 No. of Ways

 012
 1.1mm to 1.3mm
 4 only

 020
 1.9mm to 2.1mm
 6 & 8 only

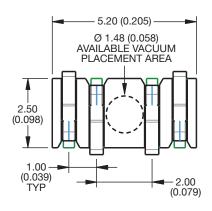
012

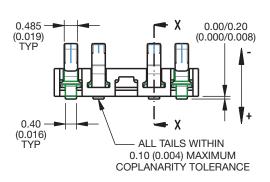


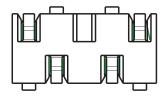
Plating Variation
06 = Selective Gold
0.25µm
Gold Plated
Contact Nose,
Pure Tin Tail
No Bosses



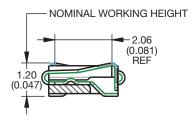
#### 4 Way Staggered Stacker







#### MATING CONDITION

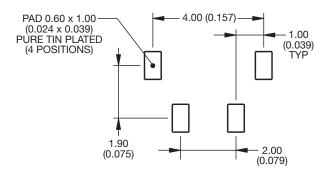


# SECTION ON X - X CONTACT NOSE HEIGHT 1.60 (0.063) REF (0.098) 1.00 (0.039) (0.118)

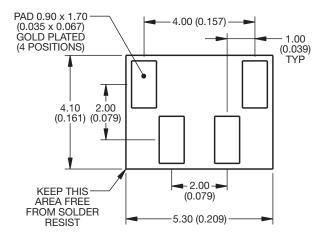
1.90/2.20

(0.075/0.087)

#### **SMT PCB FOOTPRINT**



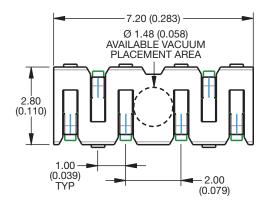
#### MATING PCB FOOTPRINT

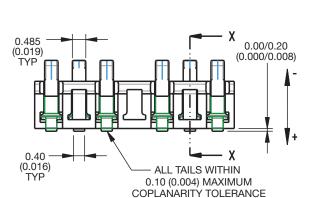


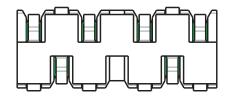




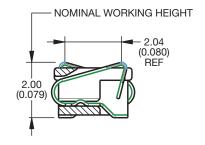
#### 6 Way Staggered Stacker



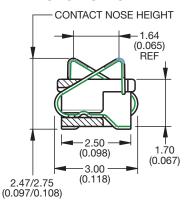




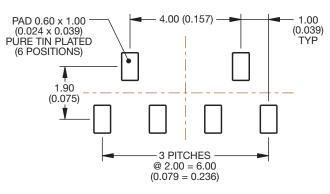
#### **MATING CONDITION**



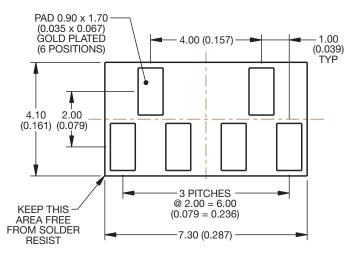
#### **SECTION ON X - X**



#### **SMT PCB FOOTPRINT**



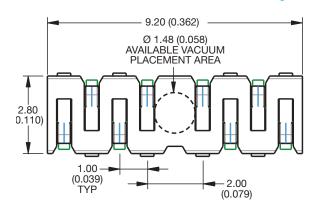
#### MATING PCB FOOTPRINT

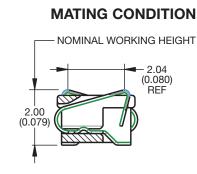






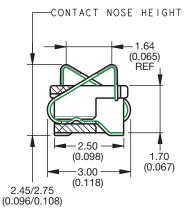
#### 8 Way Staggered Stacker

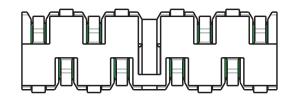




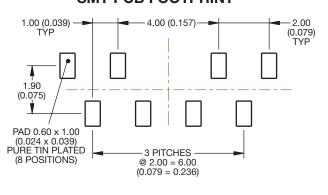
# 0.40 — X — X — 0.10 (0.004) MAXIMUM COPLANARITY TOLERANCE



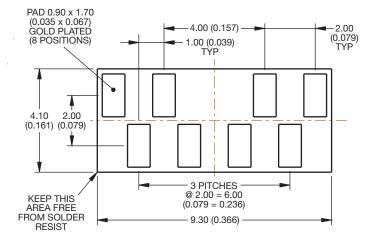




#### **SMT PCB FOOTPRINT**



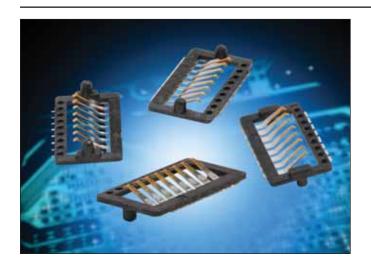
#### MATING PCB FOOTPRINT





### 9258 Ultra Low Profile Stacker





#### GENERAL DESCRIPTION

The SOLO series 9258 is a one-piece connector used to connect two PCBs in a cost effective manner.

This connector is a 1.0mm pitch available in an 8 position with stack heights of 0.40mm and 0.80mm. It is available with or without location bosses.

This connector is designed for PCB surface mounting and is supplied in tape and reel packaging. Gold plated pads on the mating PCB or suitable flex circuits provide connection between the boards.

#### **APPLICATIONS**

Suitable applications include:

- Mobile phones
- Handheld scanners
- Portable medical devices
- Display interface

#### **KEY FEATURES AND BENEFITS**

Single piece connector – no mating half connector required to connect two boards together which means:

- · Reduced assembly time
- Only one part to purchase and stock
- Due to the unique contact design, the mating device does not have to be parallel
- Extremely robust when it comes to shock and vibration



#### **HOW TO ORDER**







#### **PCB Location Bosses**

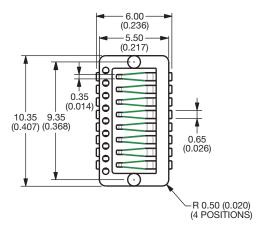
- 1 = With Mating PCB Location Bosses (top side)
- 2 = Without PCB Location Bosses
- 3 = With SMT PCB Location Bosses (bottom side)
- 4 = With SMT and Mating PCB Location Bosses (top and bottom sides)

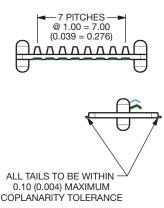
## 9258 Ultra Low Profile Stacker

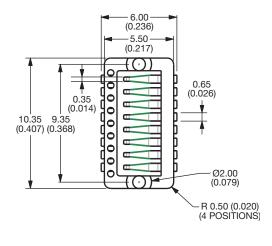


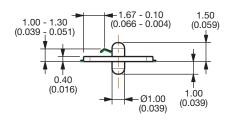
#### 0.4mm Ultra Low Profile Stacker

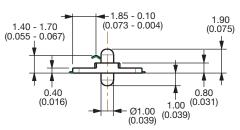
#### 0.8mm Ultra Low Profile Stacker





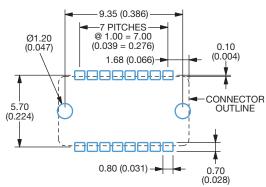


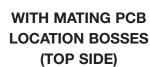


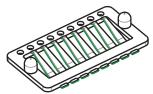


#### PROPOSED SMT PCB LAYOUT

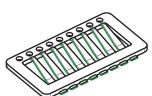
**ALL PADS PURE TIN PLATE** 



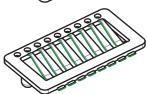




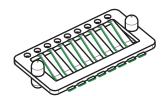
WITHOUT PCB LOCATION BOSSES



WITH SMT PCB LOCATION BOSSES (BOTTOM SIDE)

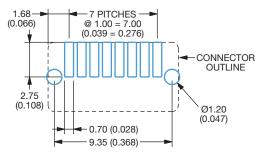


WITH PCB AND SMT LOCATION BOSSES



#### PROPOSED MATING PCB LAYOUT

**ALL PADS GOLD PLATE** 





### 9157 I/O Connector





#### **GENERAL DESCRIPTION**

The 9157 series was specifically designed for portable equipment.

AVX now offers this two-part system as a standard product. The fixed SMT socket is designed to be housed within the confined dimensional constraints of the portable device.

The plug/cover connector has sprung contacts and is designed for termination to accessory equipment. The connector is designed to house fifteen signal contacts on a 1mm pitch rated at 1.5A. There is the option to include a switching RF coax.

A cradle SMT plug connector for docking applications is also available as standard and has the option of including a SMT RF coax.

Whatever your requirements, the 9157 series can also be customized to suit your application.

#### **APPLICATIONS**

Suitable applications include:

- Mobile Phones
- PDA
- Medical
- Docking/Charging for any portable device

#### **KEY FEATURES AND BENEFITS**

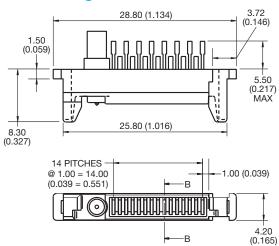
- Patented 20° angled face on the socket gives self-cleaning face when mated with plug.
- Metal Latching area integral to socket which saves PCB real estate.
- Integral to socket is a mechanical  $50\Omega$  switching coax for SMT termination.
- Single sprung plug contact design gives ten thousand mating cycles and cleaning/wiping action.
- Customer has option to terminate own RF coax using AVX custom tooling: 06-9157-7116-01-000.
- SMT plug has unique location pyramids that give positive alignment to portable device, and assist blind mating.
- RoHS Compliant.



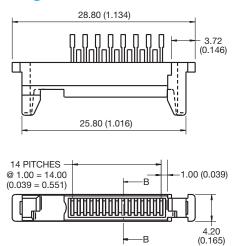
## 9157 I/O Connector



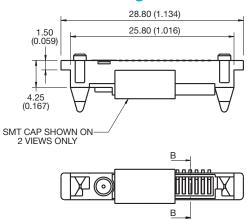
#### **Plug Wire with Coax**



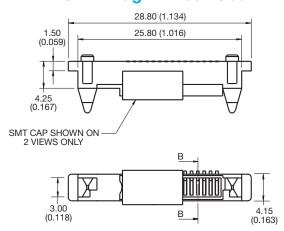
#### **Plug Wire without Coax**

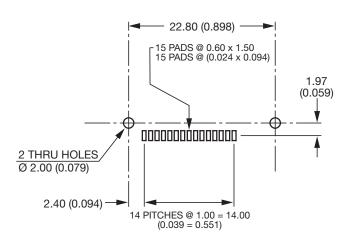


#### **SMT Plug with Coax**

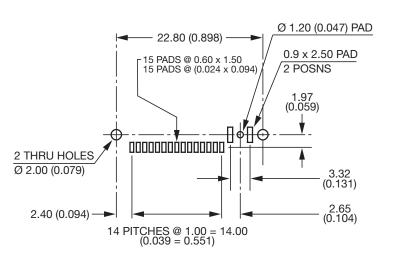


#### **SMT Plug without Coax**





SUGGESTED PCB LAYOUT



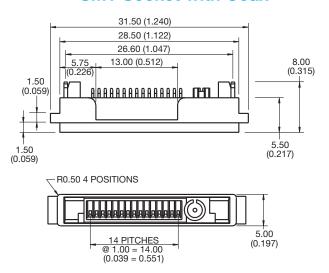
SUGGESTED PCB LAYOUT



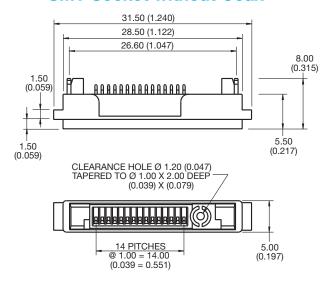
## 9157 I/O Connector



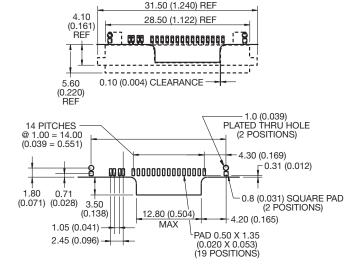
#### **SMT Socket with Coax**

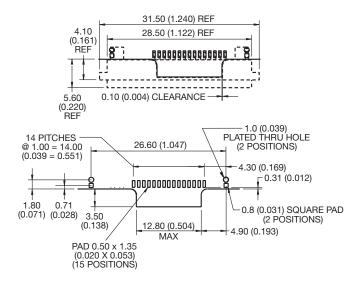


#### **SMT Socket without Coax**



#### **SMT PAD LAYOUT**

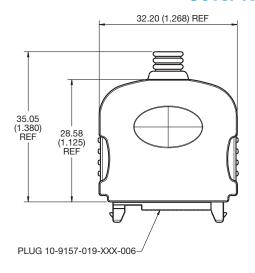


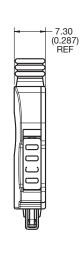


# 9157 I/O Connector



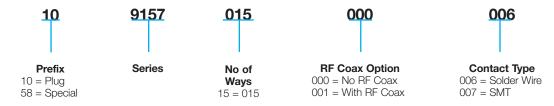
### **Cover Kit**



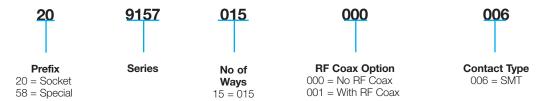


### **HOW TO ORDER**

## **Plug Options - Example**



## **Socket Options - Example**



## Cover Options - Example \* Parts supplied in kit form



Patent: 2276285 5540599

Note: Application tooling to terminate coax cable 06-9157-7116-01-000.



# 9157 MOBO® 19 Way I/O Connector





### **GENERAL DESCRIPTION**

Based on our standard 15 way 9157 I/O family, AVX has now released a family 19 way devices. This range includes a SMT 90 degree plug, a wire socket version that is used with the standard 9157 cover and a SMT socket for charging applications.

Options with the 90 degree SMT socket include the sealing of the connector contacts and the connector to the housing up to IP67. There is also an option to have an EMLB (early mate, late break) on pins 1 and 19.

To achieve the seal to the device housing, it may be necessary to customize the device housing design.

On the SMT 90 degree version, we also have the capability of an integrated DC jack, enabling both the DC jack and the 19 way cover to be plugged in at the same time.

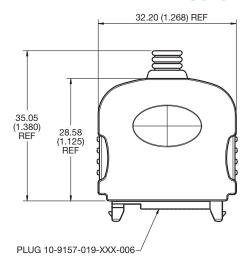
### **AVAILABLE DEVICES:**

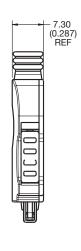
10 9157 019 000 006 10 9157 019 000 007 20 9157 019 000 006

30 9157 97 XX 00 000

Plug wire version SMT charging version 90 degree SMT socket Cover options see page 36

### **Cover Kit**

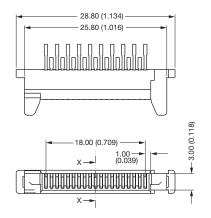




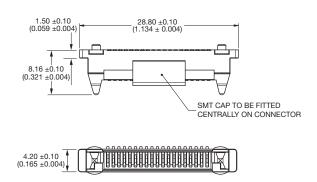
# 9157 MOBO® 19 Way I/O Connector



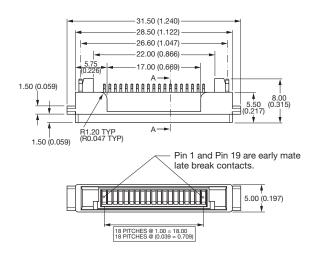
## **Plug Wire**



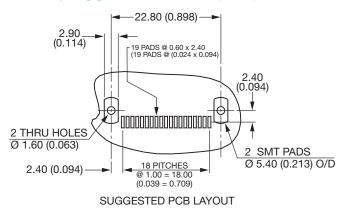
## **SMT Plug**



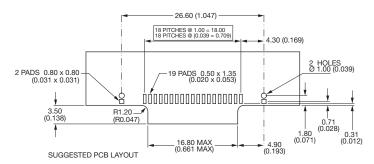
### **SMT Socket**



# SMT Plug (Suggested PCB Layout)



# SMT Socket (Suggested PCB Layout)





# 9257 Reduced Size I/O Connector





### **GENERAL DESCRIPTION**

An I/O interconnect system designed for portable equipment.

AVX offers this plug and socket reduced size system as a standard product. The fixed SMT socket is designed to be mounted on a PCB and housed within a portable device. The plug is designed for cable termination with options of single and double sided contacts and customizing the overmold cover or parts can be supplied as connector only for sub contract termination. The socket connector houses 16 contacts in two rows on 1.25mm pitch with a rating of 1 amp per contact. Both connectors are RoHS compliant.

### **APPLICATIONS**

Suitable applications include:

- Cellular Phones
- Handheld Devices
- Industrial Modules
- Medical Electronics

### **KEY FEATURES AND BENEFITS**

- No latching is required due to the click design of the contacts.
- Optional customization of the overmold cover.
- Options of single row (8 way) or dual row (16 way) plug connector.
- Compact size to optimize PCB real estate.
- Metal outer cover provides integrated PCB location and solder tab.
- Positive alignment and orientation of the plug and socket.
- 5K mating cycles and 1 amp rated.

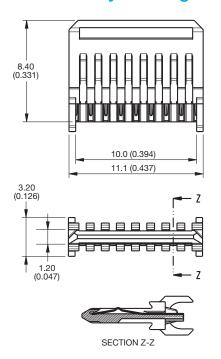


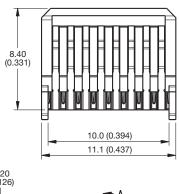
# 9257 Reduced Size I/O Connector

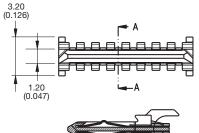


## Single Sided 8 Way I/O Plug Connector

## **Dual Sided 16 Way I/O Plug Connector**

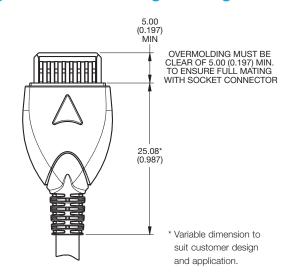






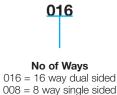
SECTION A-A

## **Suggested Overmolding for Plug Connector**



### **HOW TO ORDER**









### Notes:

- 1. All dimensions are for reference only unless toleranced.
- 2. For full product specification refer to AVX spec 201-01-089.
- 3. Parts packed in tube with 50 parts per tube.

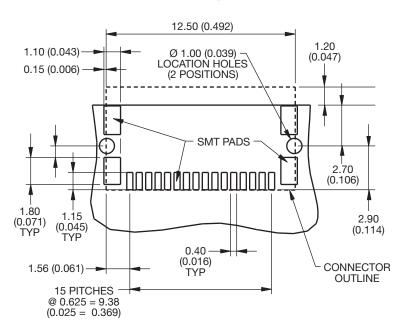


# 9257 Reduced Size I/O Connector



#### 16 Position I/O Socket POLARIZATION : **CHAMFER** SOLDER BRACKET/SHIELD 12.50 (0.492) 6.75 (0.266) -(0.020)3.00 SECTION Z - Z (0.118)0.25 (0.010) TYP 0.80 **FRONT VIEW** (0.031) TYP -3.90 (0.154)**REAR VIEW END VIEW LOCATION PEGS**

## **PCB Layout**



### **HOW TO ORDER**



Packing Details	
Reel Qty.	1100
Pack Qty.	5500

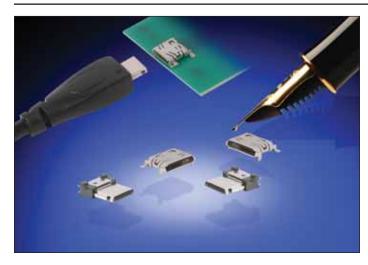
#### Notes:

- 1. 16 Way I/O Socket.
- 2. For full product specification refer to AVX spec 201-01-089.
- 3. General tolerance ±0.20 (0.008) unless otherwise stated.
- 4. SMT feet within 0.13 (0.005) coplanarity.









### **GENERAL DESCRIPTION**

AVX offers the 12 way mini I/O connector as a standard product. The fixed SMT socket is designed to be mounted on a PCB and housed within a portable device. The plug is designed for cable termination with options of single and double sided contacts. Parts can be supplied as connectors only for sub contract termination, or with a custom overmold cover. The socket connector houses 12 contacts in a single row on 0.50mm pitch.

### **APPLICATIONS**

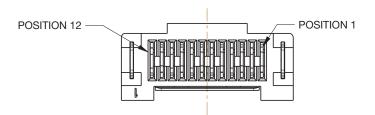
- Medical Electronics
- Cellular Phones
- Industrial Modules
- · Hand Held Devices

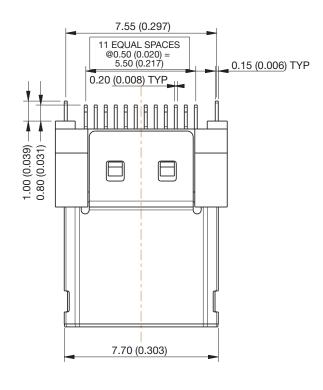
### **KEY FEATURES AND BENEFITS**

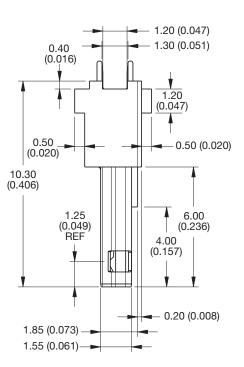
- No latching required due to the click design of the contacts.
- Optional customization of the overmold cover.
- Compact size to optimize PCB real estate.
- Metal outer cover provides integrated PCB location and solder tab.
- Positive alignment and orientation of the plug and socket.

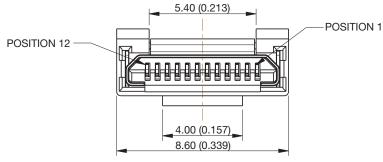


### 9257 STANDARD 12 WAY MINI I/O PLUG







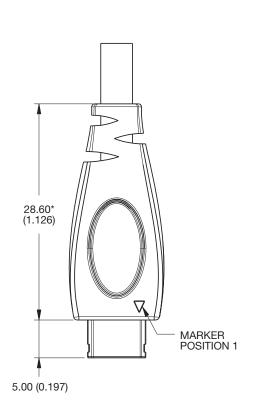


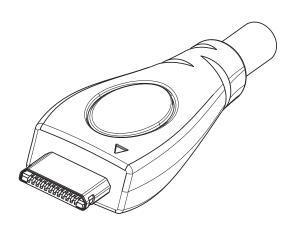
### **HOW TO ORDER**





### SUGGESTED OVERMOLDING FOR PLUG CONNECTOR







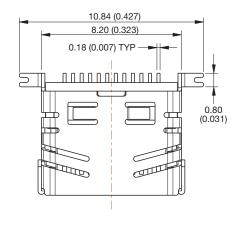


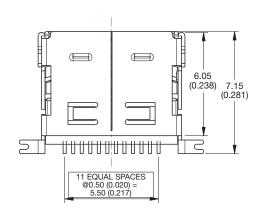
DIMENSION MARKED WITH A \* ARE VARIABLE DIMENSION TO SUIT CUSTOMER DESIGN AND APPLICATION

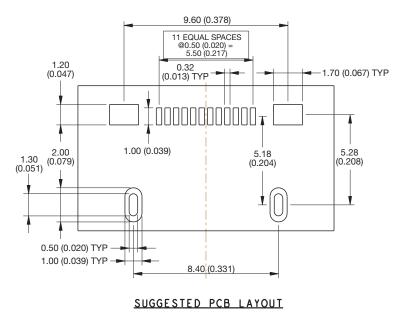


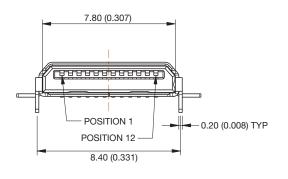


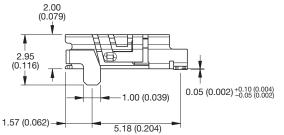
### 9257 STANDARD 12 WAY MINI I/O SOCKET











### **HOW TO ORDER**



#### **AMERICAS**

AVX Greenville, SC Tel: 864-967-2150

**AVX Northwest, WA Tel:** 360-699-8746

AVX Midwest, IN Tel: 317-861-9184

AVX Mid/Pacific, CA Tel: 408-988-4900

AVX Northeast, MA Tel: 617-479-0345

AVX Southwest, CA Tel: 949-859-9509

AVX Canada Tel: 905-238-3151

**AVX South America** Tel: +55-11-4688-1960

### **EUROPE**

AVX Limited, England Tel: +44-1276-697000

AVX S.A.S., France Tel: +33-1-69-18-46-00

AVX GmbH, Germany Tel: +49-0811-95949-0

AVX SRL, Italy Tel: +39-02-614-571

**AVX Czech Republic** Tel: +420-57-57-57-521

AVX/ELCO UK Tel: +44-1638-675000

ELCO Europe GmbH Tel: +49-2741-299-0

AVX S.A., Spain Tel: +34-91-63-97-197

AVX Benelux Tel: +31-187-489-337

### **ASIA-PACIFIC**

AVX/Kyocera (S) Pte Ltd., Singapore

Tel: +65-6286-7555

AVX/Kyocera, Asia, Ltd., Hong Kong

Tel: +852-2363-3303

AVX/Kyocera Yuhan Hoesa, South Korea Tel: +82-2785-6504

> AVX/Kyocera HK Ltd., Taiwan

Tel: +886-2-2656-0258

AVX/Kyocera (M) Sdn Bhd, Malaysia

Tel: +60-4228-1190

AVX/Kyocera International Trading Co. Ltd., Shanghai

Tel: +86-21-3255 1933

AVX/Kyocera Asia Ltd., Shenzen

Tel: +86-755-3336-0615

AVX/Kyocera International Trading Co. Ltd., Beijing

Tel: +86-10-6588-3528

AVX/Kyocera India Liaison Office

Tel: +91-80-6450-0715

### **ASIA-KED**

(KYOCERA Electronic Devices)

KED Hong Kong Ltd. Tel: +852-2305-1080/1223

KED Hong Kong Ltd. Shenzen

Tel: +86-755-3398-9600

KED Company Ltd. Shanghai

Tel: +86-21-3255-1833

KED Hong Kong Ltd. Beijing

Tel: +86-10-5869-4655

KED Taiwan Ltd. Tel: +886-2-2950-0268

KED Korea Yuhan Hoesa, South Korea

Tel: +82-2-783-3604/6126

KED (S) Pte Ltd. Singapore

Tel: +65-6509-0328

Kyocera Corporation Japan

Tel: +81-75-604-3449

## **Contact:**





Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию.

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России, а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научноисследовательскими институтами России.

С нами вы становитесь еще успешнее!

### Наши контакты:

Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург,

Промышленная ул, дом № 19, литера Н,

помещение 100-Н Офис 331