

## Connector Solutions

### Panasonic Connectors For Tough And Demanding Applications

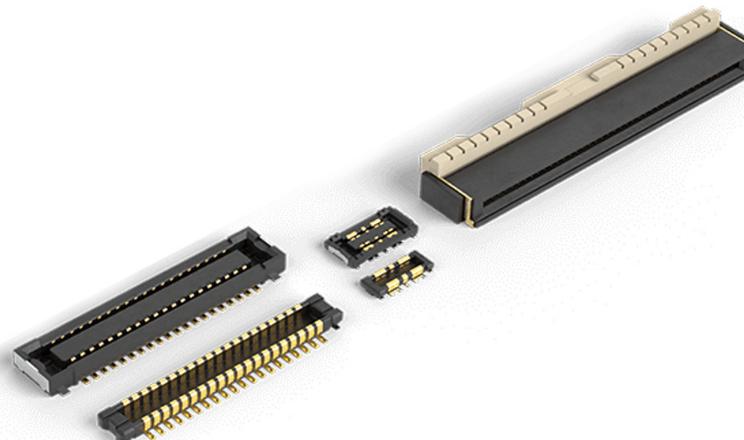
The Panasonic Connector product line offers Narrow Pitch and High Current Connectors in Board-to-Board, Board-to-FPC, and other combination options and FPC/FFC Connectors, along with other specialty Connectors. Panasonic's industry-leading ***Tough Contact*** construction offers the opportunity to design very durable Connectors for extremely tough and rugged applications, even applications that need to satisfy extreme environmental conditions.

Engineered and manufactured for durability and long lifetime,

Panasonic ***Tough Contact*** Connectors increase:

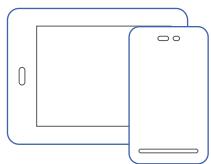
- Tolerance to Twisting and Dropping
- Resistance to Dust and Foreign Particles
- Resistance to Corrosive Gases

***TOUGH CONTACT***

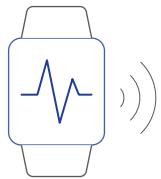


# TOUGH CONTACT FOR TOUGH APPLICATIONS

Panasonic's *Tough Contact* Connectors withstand physical impact, are resistant to dust, dirt, solder flux, and are resistant against corrosive gases. High reliability makes these Connectors suitable for applications such as Smart Phones, Wearable Devices, Smart Glasses, Hearing Aids, Drones, Blood Glucose Meter and much more.



Smart Phone / Tablet



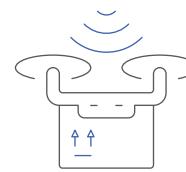
Smart Watch



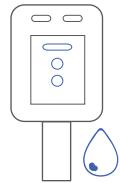
Smart Glasses



Hearing Aid



Drone

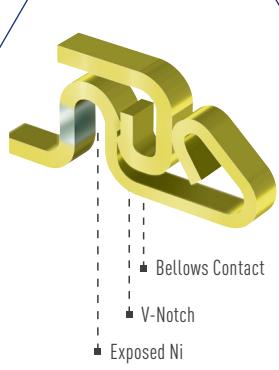


Blood Glucose Meter

## TOUGH AGAINST PHYSICAL IMPACT

### Bellows Contact Construction Gives Tough Contact Connectors Increased Tolerance To Twisting And Dropping

Panasonic uses high-precision metal processing to create a curved molding that provides the right amount of spring tension at the contacts. Giving an increased ability to withstand excessive shock when dropped.



## TOUGH AGAINST DUST, DIRT AND FLUX

### V-Notch Improves Contact Reliability Through Increased Resistance To Dust And Foreign Particles

Contact pressure per unit area is increased by using the edge as the contact. Not only does this increase the ability to remove flux and foreign particles but can prevent their entry altogether.

- Two Point Contacting
- Surface Contact to Edge Contact



Typical Contact

Double Contacts Are Effective In Keeping Flux & Foreign Particles From Entering

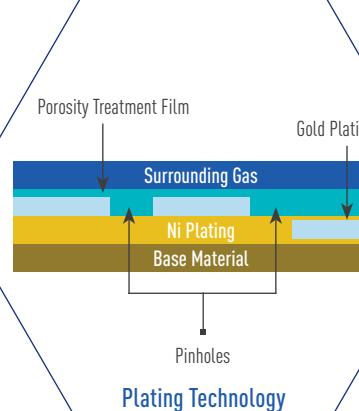
V-Notch Contact

## TOUGH AGAINST CORROSIVE GASES

### Panasonic's Porosity Treatment Improves Resistance To Corrosive Gases

This treatment coats the connectors' surface with a very thin film to seal pinholes in the gold plating. Panasonic developed this technology to ensure the same contact reliability for thin gold plating as that of thick gold plating.

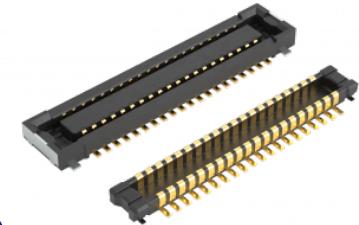
- Improved Corrosion Resistance
- Improved Insertion/Removal Durability
- Improved Contact Reliability for Digital Signals



# NARROW (FINE) PITCH CONNECTORS

## High-Reliability Contact Structure

Panasonic's industry-leading *Tough Contact* design provides customers with the reliability that is required when developing the latest electronic or wearable devices. The Panasonic Narrow Fine Pitch Connectors product line-up includes both Board-to-Board and Board-to-FPC options. Backed by our staff of technical engineers, Panasonic offers hands-on technical support solutions from design-in assistance to manufacturing. Discover how Panasonic Narrow Pitch Connectors can elevate your applications.



## Features And Benefits:

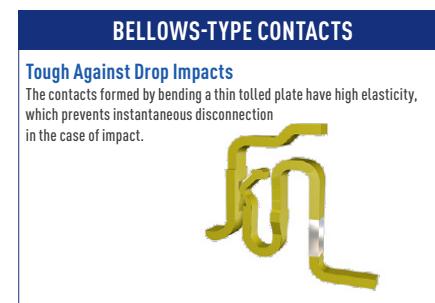
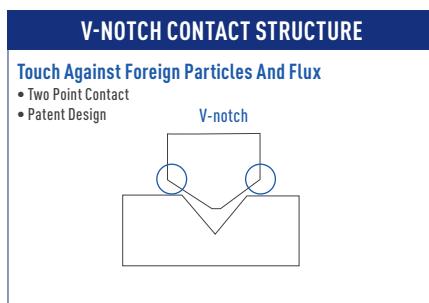
- Best in Class Shock And Vibration Resistance
- High Transmission Capability
- Tactile Feel/Secure Connection
- Enhanced Mounting Strength
- *Tough Contact* Construction
- Highly Reliable Contact Structure
- Smooth Insertion Guide
- Low Complanarity

Board-to-FPC Only				
Series	S35	A35S	A4S	F4S
Part Number (Socket)	AXG1**	AXE7**	AXE5**	AXT5**
Part Number (Header)	AXG2**	AXE8**	AXE6**	AXT6**
Terminal Pitch (mm)	0.35	0.35	0.4	0.4
Rated Current/Pin	0.3A/Pin	0.25A/Pin	0.3A/Pin	0.3A/Pin
Rated Current For All Pins Combined	5A Total	4A Total	5A Total	5A Total
Rated Voltage (AC/DC)	60V	60V	60V	60V
Mated Height (mm)	0.6, 0.8	0.8	0.8, 1.0	1.0
Socket Width (mm)	1.7	2.5	2.5	3.6
Header Width (mm)	1.5	2.0	2.0	2.6
Number Of Contacts By Mated Height				
0.6 Mated Height	6, 10, 12, 16, 20, 24, 30, 34, 40, 44, 50, 54, 60			
0.8 Mated Height	12, 24, 34, 44	10, 12, 16, 20, 24, 30, 34, 40, 44, 50, 54, 60, 64, 70, 80, 100	10, 12, 14, 16, 20, 24, 30, 34, 40, 44, 50, 54, 60, 64, 70, 80	
1.0 Mated Height			10, 12, 14, 20, 24, 30, 40, 44, 50, 54, 60, 70, 80	10, 16, 20, 24, 26, 30, 34, 40, 42, 48, 50, 60, 70, 80

# NARROW (FINE) PITCH CONNECTORS

	Board-to-Board and Board-to-FPC					Board-to-Board Only	
Series	P4S	P4S Shield Type	P4	P5KF	P5K	P5KS	
Part Number (Socket)	AXT3**	AXT3**	AXK7**	AXK5F**	AXK5**	AXK5S**	
Part Number (Header)	AXT4**	AXT4**	AXK8**	AXK6F**	AXK6**	AXK6S**	
Terminal Pitch (mm)	0.4	0.4	0.4	0.5	0.5	0.5	
Rated Current/Pin	0.3A/Pin	0.3A/Pin	0.3A/Pin	0.5A/Pin	0.5A/Pin	0.5A/Pin	
Rated Current For All Pins Combined	5A Total	5A total	5A Total	10A Total			
Rated Voltage (AC/DC)	60V	60V	60V	60V	60V	60V	
Mated Height (mm)	1.5, 2.0, 2.5, 3.0	1.5	1.5, 2.0, 2.5, 3.0, 3.5	1.5, 2.0, 2.5	3.0	4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 8.0, 9.0	
Socket Width (mm)	3.6	3.8	5.1	5.8	5.8	5.4	
Header Width (mm)	2.35	2.35	3.96	3.3	4.6	5.0	
Number Of Contacts By Mated Height							
1.5 Mated Height	10, 16, 20, 24, 26, 30, 34, 38, 40, 50, 60, 70, 80, 90, 100	14, 38, 50, 74	20, 24, 30, 40, 50, 60, 70, 80, 100	10, 12, 16, 20, 24, 30, 34, 40, 50, 60, 70, 80			
2.0 Mated Height	20, 30, 40, 90, 100		20, 24, 30, 40, 50, 60, 70, 80	10, 12, 16, 20, 24, 30, 34, 40, 50, 60, 70, 80, 100			
2.5 Mated Height	20, 30, 40, 60, 80, 100		20, 24, 30, 40, 50, 60, 70, 80	10, 12, 16, 20, 24, 30, 34, 40, 50, 60, 70, 80, 100			
3.0 Mated Height	20, 30, 60, 80, 100		20, 24, 30, 40, 50, 60, 80				20, 30, 40, 50, 60, 70, 80, 100, 120
3.5 Mated Height			20, 30, 40				
4.0 - 5.5 Mated Height						20, 24, 30, 34, 40, 50, 60, 70, 80, 100	
6.0 - 9.0 Mated Height						20, 30, 40, 50, 60, 70, 80, 100	

## Four Key Features Of **TOUGH CONTACT** Structure



# HIGH CURRENT CONNECTORS

## Ideal For Faster And More Efficient Battery Charging Of Portable Devices

Panasonic offers various High Current Board-to-Board Connectors suitable for applications that require a connection to a power source or battery. These High Current Connectors have low mated height profiles, high reliability, and feature Panasonic's *Tough Contact* technology.



### Features And Benefits:

- High Current Rating
- Multiple High Current Lines
- *Tough Contact* Construction
- Fewer Pins Required For Power
- Highly Reliable Contact Structure

	Board-to-FPC Only				Board-to-Board And Board-to-FPC	
Series	R35K	A35UH	A35P	B01	B02	P4SP
Part Number (Socket)	AXF5K**	AXF5D**	AXF5A**	AXF3**	AXF3**	AXF5G**
Part Number (Header)	AXF6K**	AXF6D**	AXF56A**	AXF4**	AXF4**	AXF6G**
Terminal Pitch (mm)	0.35	0.35	0.35	Not Applicable	Not Applicable	0.4
Rated Current/Pin	3.0A Power Terminals (x2)	Power: 5.0A (x2)	Power: 1.5 A/pin contact (x4) or 1.25 A/pin contact (x8)	3.0A Power Terminals (x2)	5.0A Power Terminals (x4)	Power: 1.0 A/Pin Power (x10)
Rated Current for All Pins Combined	0.3A Signal Pins	Signal: 0.3A (5.0A total)	Signal: 0.5A (12A total)	0.3A Signal Pins (x2)	0.3A Signal Pins (x4)	Signal: 0.5 A/Pin (12A Total)
Rated Voltage (AC/DC)	30V	30V	30V	30V	30V	30V
Mated Height (mm)	0.6	0.6	0.8	0.6, 0.8	0.7	1.5, 2.5, 3.0
Socket Width (mm)	1.3	2.2	2.5	2.4	2.2	3.6
Header Width (mm)	1.1	1.8	2.0	1.8	1.8	2.35
Number Of Contacts By Mated Height						
0.6 Mated Height	4 (2 Signal And 2 Power)	10, 12, 16, 20, 24, 30, 34, 40, 44, 50, 54, 60, 70		6 (2 Signal And 4 Power)		
0.7mm Mated Height					8 (4 Signal And 4 Power)	
0.8 Mated Height			10, 12, 16, 20, 24, 30, 34, 40, 44, 50, 54, 60, 64, 70, 80, 100	6 (2 Signal And 4 Power)		
1.5 Mated Height						10, 16, 20, 24, 26, 30, 34, 38, 40, 50, 60, 70, 80, 90, 100
2.5 Mated Height						20, 30, 40, 60, 80, 100
3.0 Mated Height						20, 30, 60, 80, 100

# FPC/FFC CONNECTORS

## Low Profile And Slim Size Zero Insertion Force Connectors

Panasonic offers Flexible Printed Circuit (FPC) Connectors and Flat Flex Cable (FFC) Connectors. These Connectors can be used in a wide range of digital device applications. The terminal pitch of these Connectors ranges between 0.3mm to 0.5mm, with a mounting height from 0.9mm to 1.8mm.

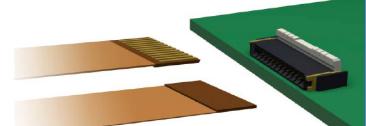


FPC		FPC And FFC		
Series	Y3B	Y5B	Y5BW	Y5BH
Part Number	AYF33*	AYF53**35	AYF53**65T	AYF56**35
Terminal Pitch (mm)	0.3	0.5	0.5	0.5
Current (A)	0.2A/Pin	0.5A/Pin	0.5A/Pin	0.4A/Pin
Voltage (AC/DC)	50V	50V	50V	50V
Mounting Height (mm)	0.9	1	1	1.8
Width (mm)	3.15	3.2	3.2	3.9
Number Of Contacts	7, 8, 9, 13, 15, 21, 23, 25, 27, 31, 39, 45, 51, 61, 71	4, 5, 6, 8, 10, 12, 14, 16, 24, 28, 30, 32, 34	2, 3, 4, 6, 8, 10, 12, 14, 22, 26, 28, 30, 32	40

## Three Key Features Of FPC Connectors

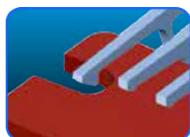
### DOUBLE TOP AND BOTTOM CONTACTS

Eliminating the need of choosing either a top or bottom contact type Connector depending on the FPC wiring conditions.

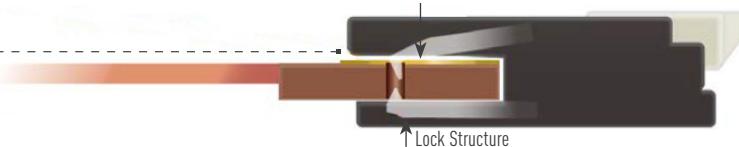


### FPC HOLDING CONTACTS FOR Y3BW/Y5BW

**High Holding Force Achieved By The Lock Structure**  
The holding contacts are engaged with the notches on both ends of an FPC

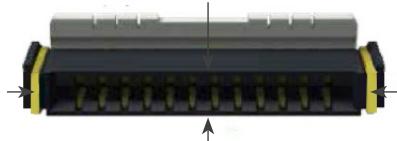


**Temporarily Holding An FPC To Prevent Displacement**  
Temporary holding (displacement prevention)

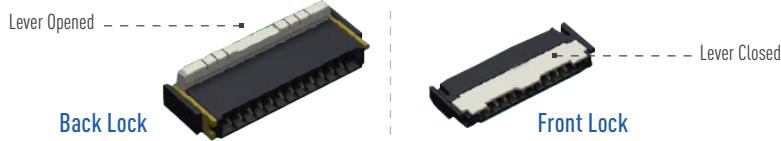


### BACK LOCK STRUCTURE

The four mold walls of the FPC inlet prevent displacement of the inserted FPC.



Man-hours of assembly time can be reduced by delivering the Connectors with their levers opened.



This lever is located on the opposite side of the FPC inlet, so tilting of the FPC will not affect the lever.



To Learn More:  
<https://na.industrial.panasonic.com/products/connectors>

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