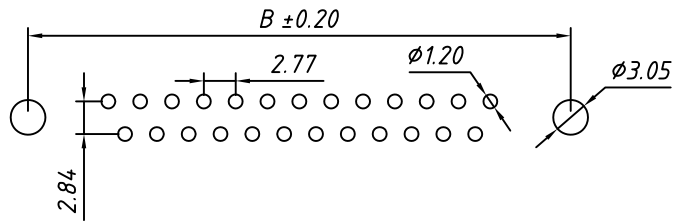
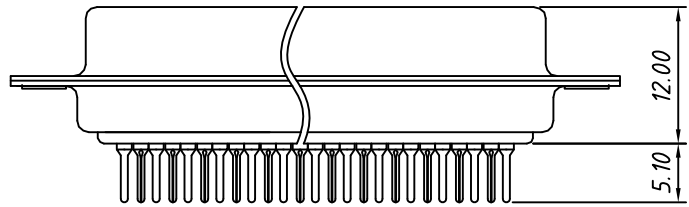
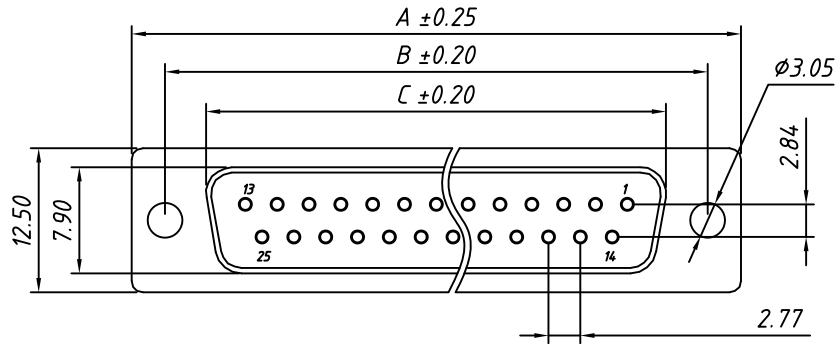


1 RoHS Compliant



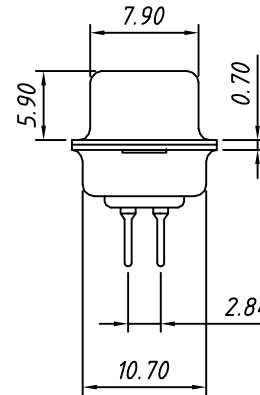
**RECOMMENDED PCB LAYOUT**  
TOLERANCE: ±0.05mm

Number of Contacts	DIMENSION		
	A±0.25	B±0.20	C±0.20
09	30.81	24.99	16.33
15	39.14	33.32	24.66
25	53.04	47.04	38.38
37	69.32	63.50	54.84

**Material:**  
Housing: PBT+30% Glass filled ,UL94V-0  
Contacts: Brass ,Gold Plating or  
Gold Plating on Contact Area,  
Tin on Solder Tail.  
Shell: Steel, Nickel Plating

**Electrical Characteristics:**  
Current Rating: 5 AMP  
Insulator Resistance: 1000MΩ Min. at DC 500V  
Withstanding Voltage: 500V AC (rms) for 1 minute  
Contact Resistance: 20mΩ Max. Initial  
Operating Temperature: -40°C ~ +105°C

Call waiting force		
Contacts	Insertion	Withdraw
09M/09F	≤4.0kgf	≥1.8kgf
15M/15F	≤4.5kgf	≥2.0kgf
25M/25F	≤6.0kgf	≥2.5kgf
37M/37F	≤8.0kgf	≥3.5kgf



**Order Information**

**L - KLS1 - 221 - XX - F - X**

RoHS \_\_\_\_\_

D-SUB Connector, \_\_\_\_\_  
2 Row Through Hole

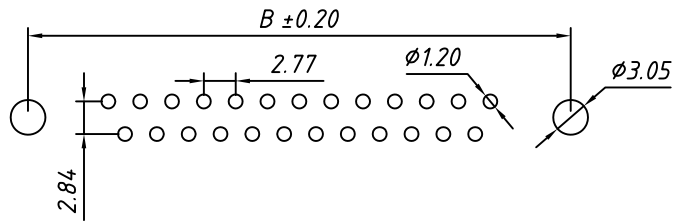
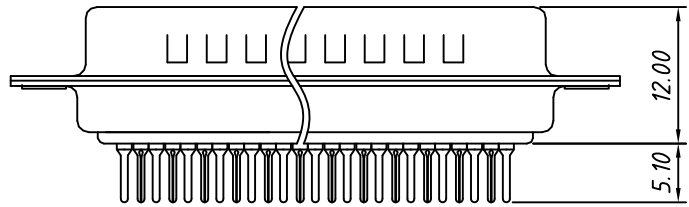
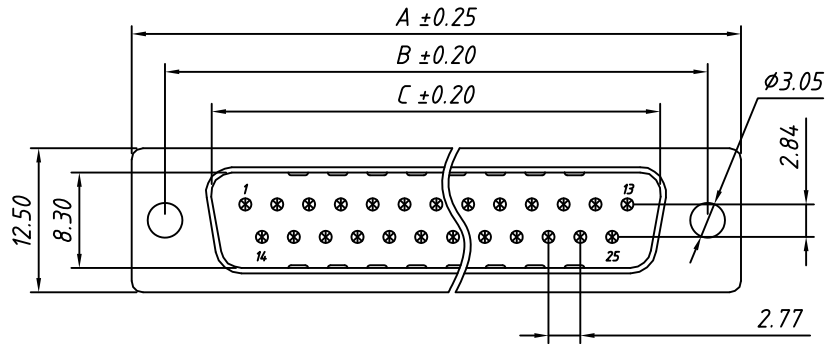
Number of Contacts \_\_\_\_\_

Connector type: F-Female \_\_\_\_\_

Housing Color: \_\_\_\_\_  
B-Black L-Blue W-White

GENERAL TOLERANCE	PROJECTION		Description:
X. ±0.30	UNITS	mm	D-SUB Connector, Panel Mount, Through Hole, Female
.X ±0.25	SCALE	1:1	
.XX ±0.20	Draw by:	Daniel	KLS P/N: L-KLS1-221-XX-F-X
ANGLE TOLERANCE	Check by:	Daniel	NingBo KLS ELECTRONIC CO.,L TD.
X. ±3°	Date	2018-03-01	
.X ±2°	SHEET	1 OF 1	

1 RoHS Compliant

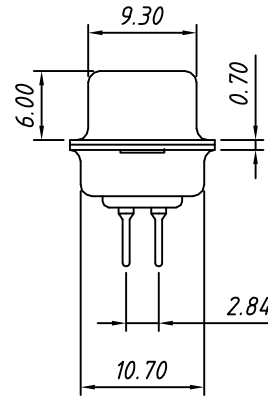


RECOMMENDED PCB LAYOUT  
TOLERANCE: ±0.05mm

Material:  
Housing: PBT+30% Glass filled, UL94V-0  
Contacts: Brass, Gold Plating or  
Gold Plating on Contact Area,  
Tin on Solder Tail.  
Shell: Steel, Nickel Plating

Electrical Characteristics:  
Current Rating: 5 AMP  
Insulator Resistance: 1000MΩ Min. at DC 500V  
Withstanding Voltage: 500V AC (rms) for 1 minute  
Contact Resistance: 20mΩ Max. Initial  
Operating Temperature: -40°C ~ +105°C

Call waiting force		
Contacts	Insertion	Withdraw
09M/09F	≤4.0kgf	≥1.8kgf
15M/15F	≤4.5kgf	≥2.0kgf
25M/25F	≤6.0kgf	≥2.5kgf
37M/37F	≤8.0kgf	≥3.5kgf



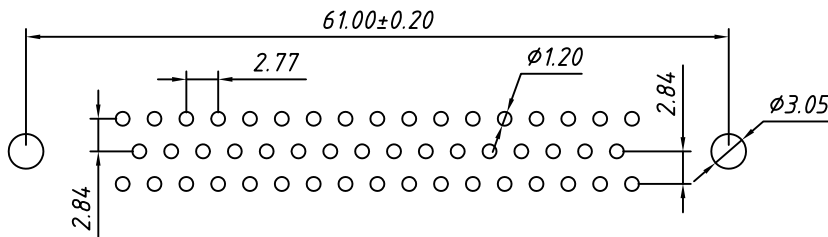
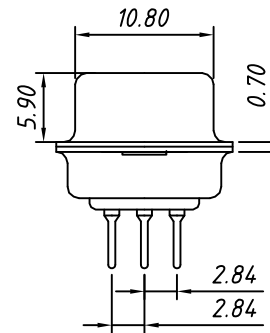
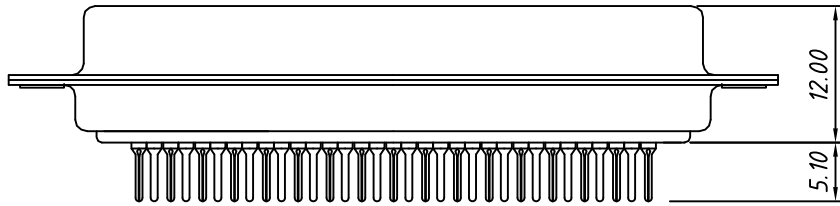
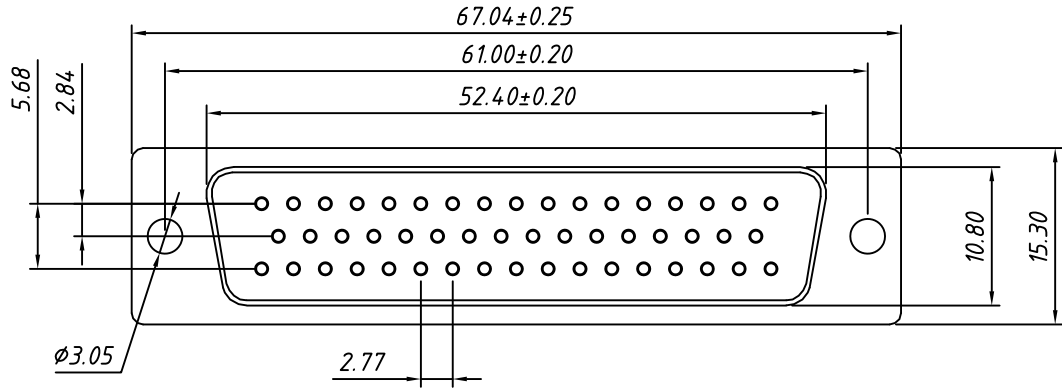
Order Information

L - KLS1 - 221 - XX - M - X  
 RoHS \_\_\_\_\_  
 D-SUB Connector, \_\_\_\_\_  
 2 Row Through Hole \_\_\_\_\_  
 Number of Contacts \_\_\_\_\_  
 Connector type: M-Male \_\_\_\_\_  
 Housing Color: \_\_\_\_\_  
 B-Black L-Blue W-White

Number of Contacts	DIMENSION		
	A±0.25	B±0.20	C±0.20
09	30.81	24.99	16.92
15	39.14	33.32	25.25
25	53.04	47.04	38.96
37	69.32	63.50	55.42

GENERAL TOLERANCE	PROJECTION		Description:
X. ±0.30	UNITS	mm	D-SUB Connector, Panel Mount, Through Hole, Male
.X ±0.25	SCALE	1:1	
.XX ±0.20	Draw by:	Daniel	KLS P/N: L-KLS1-221-XX-M-X
ANGLE TOLERANCE	Check by:	Daniel	NingBo KLS ELECTRONIC CO.,L TD.
X. ±3°	Date	2018-03-01	
.X ±2° .XX ±1°	SHEET	1 OF 1	

1 RoHS Compliant



RECOMMENDED PCB LAYOUT  
TOLERANCE: ±0.05mm

**Material:**  
Housing: PBT+30% Glass filled, UL94V-0  
Contacts: Brass, Gold Plating or Gold Plating on Contact Area, Tin on Solder Tail.  
Shell: Steel, Nickel Plating

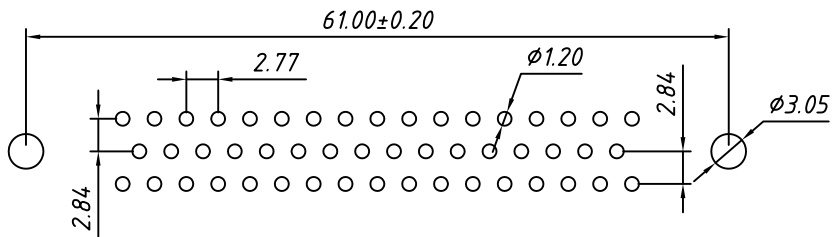
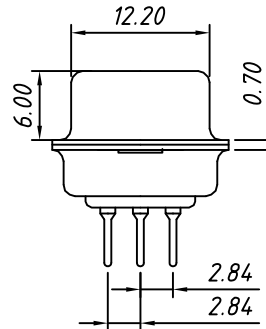
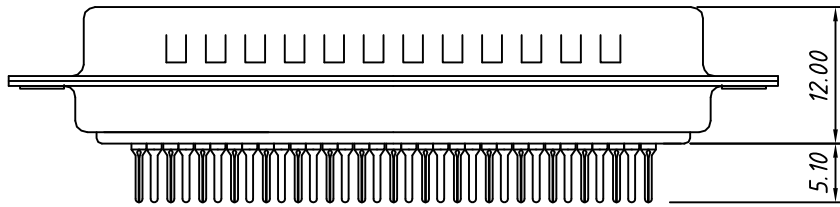
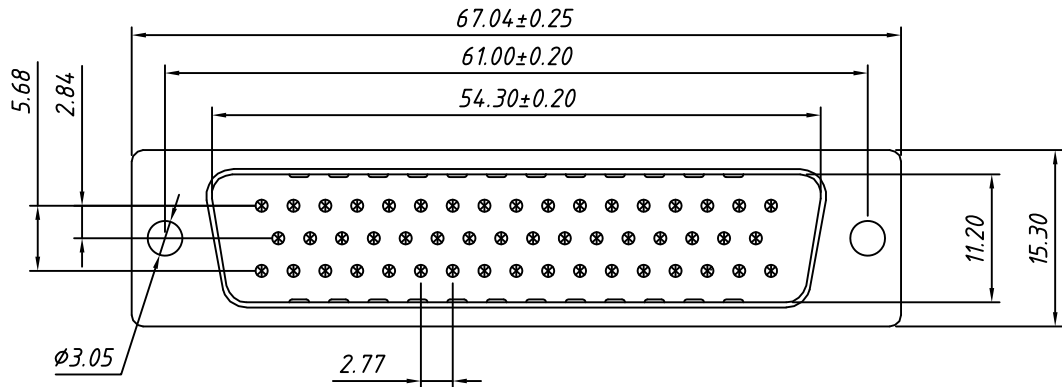
**Electrical Characteristics:**  
Current Rating: 5 AMP  
Insulator Resistance: 1000MΩ Min. at DC 500V  
Withstanding Voltage: 500V AC (rms) for 1 minute  
Contact Resistance: 20mΩ Max. Initial  
Operating Temperature: -40°C ~ +105°C

**Order Information**

L - KLS1 - 221 - 50 - F - X  
 RoHS \_\_\_\_\_  
 D-SUB Connector, Through Hole \_\_\_\_\_  
 Number of Contacts \_\_\_\_\_  
 Connector type: F-Female \_\_\_\_\_  
 Housing Color: \_\_\_\_\_  
 B-Black L-Blue W-White

GENERAL TOLERANCE	PROJECTION		Description:
X. ±0.30	UNITS	mm	D-SUB Connector, Panel Mount, Through Hole, Female KLS P/N: L-KLS1-221-50-F-X
.X ±0.25	SCALE	1:1	
.XX ±0.20	Draw by:	Daniel	
ANGLE TOLERANCE	Check by:	Daniel	NingBo KLS ELECTRONIC CO., L TD.
X. ±3°	Date	2018-03-01	
.X ±2°	SHEET	1 OF 1	
.XX ±1°			

1 RoHS Compliant



RECOMMENDED PCB LAYOUT  
TOLERANCE:±0.05mm

**Material:**  
Housing: PBT+30% Glass filled ,UL94V-0  
Contacts: Brass ,Gold Plating or  
Gold Plating on Contact Arer,  
Tin on Solder Tail.  
Shell: Steel, Nickel Plating

**Electrical Characteristics:**  
Current Rating: 5 AMP  
Insulator Resistance: 1000MΩ Min. at DC 500V  
Withstanding Voltage: 500V AC (rms) for 1 minute  
Contact Resistance: 20mΩ Max. Initial  
Operating Temperature: -40°C ~ +105°C

**Order Information**

L - KLS1 - 221 - 50 - M - X  
RoHS  
D-SUB Connector,  
Through Hole  
Number of Contacts  
Connector type: M-Male  
Housing Color:  
B-Black L-Blue W-White

GENERAL TOLERANCE	PROJECTION		Description:
X. ±0.30	UNITS	mm	D-SUB Connector, Panel Mount, Through Hole, Male
.X ±0.25	SCALE	1:1	
.XX ±0.20	Draw by:	Daniel	KLS P/N: L-KLS1-221-50-M-X
ANGLE TOLERANCE	Check by:	Daniel	NingBo KLS ELECTRONIC CO.,L TD.
X. ±3°	Date	2018-03-01	
.X ±2°	SHEET	1 OF 1	
.XX ±1°			