

**1. Scope**

This specification covers the requirements for product performance and test methods of D-SUB series Connectors.

**2. Ordering information**

Refer to the drawing.

**3. Connector dimensions**

Refer to the drawing.

**4. Material**

Housing: PBT+30%G.F (UL 94V-0)

Color :Refer to the drawing;Flammability rating (UL 94V-0)

Contacts terminal: Copper alloy

Plating:Gold on contact area, tin on tail

Shell: SPCC

Plating:Nickel plated

Board lock: SPCC

Plating:Tin plated

Nut/Screw: Copper alloy

Plating:Nickel plated

**5. Accommodated P.C.B layout**

Refer to the drawing.

**6. Rating**

Operating voltage(Max.) 250V AC

Current rating(Max.) 3A (AC/DC)

Temperature range-operating -55°C -- +105°C(Including terminal temperature rese)

**7. Performance**

Test item	Requirement	Test Condition
<b>Electrical Performance</b>		
Contact Resistance	25mΩ Max.	Closed circuit: 100mA Max. Open circuit:20mV Max. (EIA-364-23)
Insulation Resistance	1000 MΩ Min.	Applied DC 500 Volts for 1minute between adjacent terminal. (EIA-364-21)
Withstanding Voltage	No breakdown and flashove	Applied AC 500 Volts and leak current 0.5mA for 1minute between adjacent terminal. (EIA-364-20)

Test item	Requirement		Test Condition
<b>Mechanical Performance</b>			
Connector Insertion Force	Circuits	Insertion Force	Insert and withdraw connectors at a speed of 25±3mm/minute. (EIA364-13)
	9	3.1 kgf Max.	
	15	5.1 kgf Max.	
	25,26	8.5 kgf Max.	
	37,44	10.5 kgf Max.	
	50,62,78	12.0 kgf Max.	
300gf per circuit Max.			
Connector Withdrawal Force	Circuits	Withdrawal Force	Insert and withdraw connectors at a speed of 25±3mm/minute. (EIA364-13)
	9	1.0 kgf Min.	
	15	1.5 kgf Min.	
	25,26	2.0 kgf Min.	
	37,44	3.0 kgf Min.	
	50,62,78	4.0 kgf Min.	
20gf per circuit Min.			
<b>Environmental Performance and others</b>			
Durability	Appearance	No mechanical damage	Operation Speed: 50 to 100 cycles per hours Durability Cycles: 500 Cycles (EIA-364-09)
	Contact resistance	30mΩ Max.	
Humidity	Appearance	No Damage	A mated D-SUB connector shall be placed in a humidity chamber of the following conditions. After the test, the contact resistance, the insulation resistance and the dielectric withstanding voltage shall be measured. Temperature: 40±2°C. Relative Humidity: 90%~95% (RH). Period: 96 hours continuously (EIA-364-31)
	Contact Resistance	30mΩ Max.	
	Insulation Resistance	1000MΩ Min.	
	Withstanding Voltage	No breakdown or flashover	
Temperature Cycling	Appearance	No Damage	A connector shall and subject to the following condition for 5 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room condition for 1 to 2 hours, after which the specified measurements shall be performed. 1cycle a)-55±3°C,30 minutes b) +85±3°C,30 minutes (Transit time shall be with in 3 minutes) (EIA-364-31, Test condition A)
	Contact Resistance	30mΩ Max	
Salt Spray	Appearance	No Damage	Mated connector shall be placed in a salt spray chamber on the following conditions. Salt Solution Density : 5±1% Temperature : 35±2°C Duration : 12Hours (EIA364-26)
	Contact Resistance	30mΩ Max.	

Test item	Requirement	Test Condition
Solderability	Solder entirely 95% of immersed area must show no voids or pinholes.	Fluxed soldering section of header shall be dipped in solder of the following conditions. Solder Temperature: 220+5/-0°C. Immersion Period: 4~5 Seconds Method: Immerse the solder pin of the connector in the solder bath. (EIA-364-52)

**8. Test sequences identification**

Number of Test Samples (Min.)		5	5	5	5	5	5	5	5
Group Amount		5	5	5	5	5	5	5	5
Test Item	Test Description	A	B	C	D	E	F	G	H
1	Examination of Product	1,3	1,6	1,5	1,7	1,9	1,3	1,3	1,3
2	Contact Resistance	2	3,5	2,4		2,6			
3	Insulation Resistance				2,5	3,7			
4	Withstanding Voltage				3,6	4,8			
5	Insertion and Withdrawal Force		2						
6	Durability		4					2	
7	Solderability						2		
8	Humidity				4				
9	Salt Spray					5			
10	Temperature Cycling			3					2