
DVI CONNECTOR

1. SCOPE

This specification covers performance, tests and quality requirements for DVI connector.

2. APPLICABLE DOCUMENT

The following documents form a part of this specification to the extent specified herein. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

Test Report: 501-57321 Rev: O

3. REQUIREMENTS

3.1. DESIGN AND CONSTRUCTION

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2. MATERIALS

- A. Housing: Thermoplastic High Temperature, UL94V-0.
- B. Contacts: Copper Alloy, Gold plating on contact area,
100 μ inch (min) Tin-lead or Tin-copper plating on soldertails,
50 μ inch (min) Nickel underplated all over.
- C. Shell: Steel
- D. Boardlocks: Copper Alloy.
- E. Screwlocks: Copper Alloy.

3.3. RATINGS

- A. Current Rating: 1.5 A
- B. Voltage Rating: 40 VAC
- C. Operating temperature: -20°C to 85°C.

DWN	DATE	APVD	DATE
Angus Wu	15-MAR-2005	Wei-Jer Ke	15-MAR-2005

FZ00-XXXX-05

3.4. TEST CONDITION

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1.

3.5. TEST REQUIREMENTS AND PROCEDURES SUMMARY

TEST DESCRIPTION	REQUIREMENT	PROCEDURED
Examination of product	Meets requirements of product drawing and Specification.	Visual inspection No physical damage
ELECTRICAL		
Contact Resistance	20 mΩ (max),Initial Δ R <20mΩ ,Final	EIA- 364-23 20mV,100mA max.
Shell Resistance	50 mΩ (max)	EIA-364-83 Measure from receptacle shell leg to plug cable at 5Vdc max,and 100mA max.
Insulation Resistance	1000 megahms (min)	EIA- 364-21 Apply 500V(DC) for 1 minutes.
Dielectric Withstanding Resistance	No creeping discharge or flashes occurred.	EIA- 364-20 Apply 500V(AC) between adjacent contacts.
Impedance	100Ω +/-15%	EIA-364-108 Risetime = 330 ps(10%~90%)
Crosstalk	5% (max)	EIA-364-90 Risetime = 330 ps(10%~90%)
Rise Time Degradation	160 ps maximum	EIA-364-102 Differential measure signal reisetime degradation.
MECHANICAL		
Durability	See Note.	EIA- 364-09 Connector shall be subjected to 100 cycles of insertion and withdrawal at a maximum rate of 100 cycles per hour.
Mating Force	4.5 kgf (max)	EIA- 364-13 Speed rate of 12.5mm/min.
Unmating Force	4 kgf (max) 1 kgf (min)	EIA- 364-13 Speed rate of 12.5mm/min.
Contact Retention Force	600 gf (min)	EIA-364-37 Speed rate of 25mm/min.
Vibration	No discontinuities longer than 1 microsecond.	EIA- 364-28 Subject mated connectors to 5.35 Gs rms between 50~200Hz. 15 minutes in each of 3 mutually perpendicular planes.
Mechanical Shock	No discontinuities longer than 1 microsecond.	EIA-364-27 Subject mated connector to 50G's Half-sine shock pulse of 11ms duration , 3 shocks in each direction ,18 total shocks.
ENVIRONMENTAL		
Humidity-Cycling Test	See Note.	EIA- 364-31 Subject mated connectors to 25~65°C with 90~95% R.H for 96 hours.
Salt Spray	See Note.	EIA- 364-26 Mated connectors to %5 salt spray at 35°C for 48 hours.

Figure 1 (cont.)

ENVIRONMENTAL		
Thermal Shock	See Note.	EIA- 364-32 Mated connectors to 10 cycles between -55°C ~85°C.
Temperature Life	See Note.	EIA- 364-17 Mated connectors to 105°C for 250 hours.
Temperature Rise vs Current	30°C maximum temperature rise at specified current	EIA-364-70 Applied specified current to circuit, measure the temperature rise.
Solderability	95% coverage	EIA-364-52 Immersion connectors to 245°C solder pool for 5 seconds.
Resistance to Wave Soldering Heat	No physical damage shall occur.	Solder Temp.: 265±5°C, 10±0.5 sec. Tyco spec. 109-202, Condition B

Figure 1 (end)

NOTE: Shall meet visual requirements, show no physical damages, and meet requirements of additional test as specified in the product qualification.

3.5. PRODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE

Test or Examination	Test Group						
	A	B	C	D	E	F	G
	Test Sequence (a)						
Visual Inspection	1	1	1	1	1	1	1, 7
Contact Resistance	2, 5, 8, 11, 14	2, 5, 8			4		4
Shell Resistance	3, 6, 9, 12, 15	3, 6, 9			5		5
Insulation Resistance				2, 6			
Dielectric Withstanding Voltage				3, 7			
Current Rating					3		3
Contact Retention					7		8
Vibration		4					
Mechanical Shock		7					
Durability	4		4				
Mating Force			2, 5, 8				
Unmating Force			3, 6, 9				
Solderability					6		
Humidity-Temp. Cycling	13			5			
Thermal Shock	7			4			
Salt Spray					2		2
Temperature Life	10		7				
Signal Impedance						2	
Signal Crosstalk						3	
Rise Time Degradation						4	
Resistance to Wave Soldering Heat							6

Figure 2

NOTE: (a) Numbers indicate sequence in which tests are performed.