



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

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Technical Specifications for Probe Card

Specifications to Match or exceed :

1. List of at least 5 international semiconductor industrial customers
2. Wire harness from probe card to C20 (AMP Micro Coax Plug) socket;
3. Connector is C21 (Micro coaxial AMP Socket) from probe card side to C01 (Tri axial 3-Lug Plug)
4. Temperature of chip testing: -65°C to $+300^{\circ}\text{C}$

Connector / Cable performance

5. Series Resistance @ 25°C : less than 1 Ohms per Meter
6. Conductor-to-Conductor Leakage @ 25°C : less than 1 fA/V @ 1 Sec
7. Center-to-Guard Isolation @ 25°C : $> 10 \text{ T Ohm @ 1 Sec}$
8. Maximum Voltage Per Cable: 600V
9. Max Current Per Cable: 1.7A
10. Ambient Temperature Range: -27° to $+105^{\circ}\text{C}$
11. Provide drawings of adapters to attach to Suss PM6 and Suss PM8 probe stations

Form Factor

12. Length: 152 mm +/- 10mm
13. Width: 114 mm +/- 10mm

Probe card specs

14.Nominal Overdrive: 25 to 75um (1 to 3 mils)

15.Temperature Range: -65°C to +300°C

16.Highest Voltage Per Channel: 200V

17.Highest Current Per Channel: 250mA

20 pin Probe card

18.Probe Pad Materials and thickness: Al

19.Pad Size(mm): 0.075 x 0.075mm

20.X axis Spacing: 0.125mm X axis: 10 columns

21.Y Axis Spacing: 0.1550 Y Axis: 2 rows

22.*MTP: 4.7mm (185 mils) *MTP = bottom of Mounting surface To Probe tip measurement"

23.The probe card must be ceramic-based to enable temperature range of operation Confirmed

24.Probe Type: 10milØ WRe

25.Probe Tip R: 18±4µm

26.Probe Count: 20

27.Connector Type: C20- AMP Co axicon Plug

28.Connector Count: 20 + GND

29.Integrated cable harness: Coaxial

30.Cable Harness Length: 35cm

31.Harness cable Count: 20 + GND

32.Back shell Type: C20 (AMP Plug)

33.Back shell Count: 1

32 pin Probe card

34.Probe Pad Materials and thickness: Al

35.Pad Size(mm): 0.075 x 0.075mm

36.X axis spacing: 0.1200mm X axis: 16 columns

37.Y Axis spacing: 0.1700 Y Axis: 2 rows

38.*MTP: 4.7mm (185mils) *MTP = bottom of Mounting surface To Probe tip measurement”

39.The probe card must be ceramic based to enable temperature range of operation

40.Probe Type: 10milØ WRe

41.Probe Tip R: 18±4µm

42.Probe Count: 32

43.Connector Type: C20- AMP Co axicon Plug

44.Connector Count: 32 + 2 GND

45.Pigtail Type: Coaxial

46.Cable Harness Length: 35cm

47.Harness cable Count: 32 + 2 GND

48.Back shell Type: C20 (AMP Plug)

49.Back shell Count: 2

Connector 1: Essentially this should be sufficient for 20-pin probe card. It should also be sufficient for 32-pin probe card along with connector 2.

50.Switch Matrix-Side Connector: C01 (Tri axial 3-Lug Plug)

51.Connector Count: 25

52.Cable Type: W01 (Ultra Low-Leakage Tri axial)

53.Cable Length: 300.0cm (3.0Meters)

54.Cable Count: 25

55.Probe card-Side Connector: C21 (Micro coaxial AMP Socket)

56.Connector Count: 25 + Ground Pin (Channel 26)

57.Back shell Type: C21 (AMP Socket)

58.Back shell Count: 1

Connector 2: should work with 32-pin probe card (along with connector 1)

59.Switch Matrix-Side Connector: C01 (Tri axial 3-Lug Plug)

60.Connector Count: 11

61.Cable Type: W01 (Ultra Low-Leakage Tri axial)

62.Cable Length: 3.0 Meters

63.Cable Count: 11

64.Probe card-Side Connector: C21 (Micro-coaxial AMP Socket)

65.Connector Count: 11 + GND

66.Back shell Type: C21 (AMP Socket)

67.Back shell Count: 1

Connector / Cable performance

68.Series Resistance @ 25°C: less than 1ohms per meter

69.Conductor-to-Conductor Leakage @ 25°C: less than 1fA/V @ 1 sec

70.Center-to-Guard Isolation @ 25°C: > 10 T Ohm @ 1 Sec

71.Maximum Voltage Per Cable: 600V

72.Max Current Per Cable: 1.7A

73.Ambient Temperature Range: -27° to +105°C