10-18 SPECIFICATIONS

Specifications for the HP 44711A, HP 44712A and HP 44713A are given in Table 10-8. Specifications are the performance standards or limits against which the FET multiplexers are tested.

WARNING

The installation of the HP 44711A, HP 44712A, or HP 44713A reduces the maximum allowable backplane voltages to 42 V peak.

Table 10-8 HP 44711A, HP 47712A, and HP 44713A Specifications

24-Channel High-Speed FET MUX/TC Specifications

INPUT CHARACTERISTICS:

Maximum Signal Voltage, HIGH to LOW:

± 10.24V peak between any two input terminals

Input Voltage Protection Limit:

Channel Inputs: ± 12 volts peak maximum
Backplane (tree switches open): ± 42 peak max

CHANNEL SPECIFICATIONS:

Bias Currents: (channel at 0 volts with respect to chassis)
Bias currents are sourced by the accessory from High and Low input terminals to chassis.

Into Transducer or Backplane:

	Channel Closed (0-28°C/0-55°C)	Channel Open (0-28°C/0-55°C)
HIGH or LOW	5 nA / 45 nA	2 nA / 11 nA

Into Backplane:

	Channel Open Tree Switch Closed[1] (0-28°C/0-55°C)	Maximum Differential Offset Voltage[2] (0-28°C/0-55°C)
HIGH or LOW	2 nA / 11 nA	20 uV / 230 uV

[1] All channels open, tree switch closed.
[2] Differential offset voltage between High and Low with a source resistance < 1 kohm.

Maximum Signal Current: ± 1 mA per channel

Closed Channel ON Resistance:

High or Low: ≈ 3.0 kΩ

Isolation (High to Low, High or Low to chassis):

Channel ON or OFF: $10^7\Omega$
Power OFF: Vin <= 10V 1 kΩ
Vin > 10V 200 Ω

OPERATING CHARACTERISTICS:

Maximum Switching Rate:

Using HP-44702 Voltmeter Accessory:
100,000 readings/second

Synchronization: Break-Before-Make in scan operation

AC PERFORMANCE:

Frequency Response relative to 1 kHz:
(50Ω source, 1 MΩ termination)

50 kHz: -0.6 dB
200 kHz: -3.0 dB

Capacitance with Channel On:

High to Low: 200 pF
High or Low to Chassis: 200 pF

Crosstalk, channel to channel:
(50Ω source, 1 MΩ termination)

10 kHz: -50 dB
100 kHz: -35 dB