SPECIFICATIONS

Description

The A6501 is a 10X, dc-to-1GHz buffer amplifier designed for placement on a probe card or test fixture. The amplifier allows for custom configurations with low input capacitance, high input impedance, and drives a 50-Ω load.

Electrical Characteristics

Attenuation: 10X ± 1% at dc. (External amplifier load = 50Ω ± 0.5%.

Input Capacitance: < 2.5 pF.

Input Impedance (Amplifier): 1 MΩ ±1%. See Figure C.

Low-Frequency Compensation: Fixed, flat ± 3%.

Propagation Delay: 2.1 ns ± 150 ps (input to end of 10-1/4 inch PELTOLA™ cable), 1.2 ns ± 150 ps (Input to end of 3-3/4 inch Peltola cable).

System Bandwidth (-3 dB): DC to 1GHz. (Instrument risetime ≤100 ps.) See Figure A.

System Risetime: 350 ps. (Instrument risetime ≤ 100 ps.) See Figure B.

Amplifier Aberrations: ± 8%, 12% p-p 1st 10 ns; ± 2%, 3% p-p after. (Instrument risetime ≥ 100 ps.)

Output Zero: ± 3 mV (from ± 1% power supplies).

DC Thermal Drift: 100 µV/° C.

Input Linear Dynamic Range: -10 V to +10 V with 1.2% typical linearity.

Maximum Nondestructive Input Voltage: ± 26.5 V (dc + peak ac). See Figure D for voltage derating curve.

Power Requirements: +15 V: 18-25 mA max. –15 V: 18-25 mA max. + 5 V: 15-20 mA max. –5 V: 13-20 mA max.

Environmental Characteristics

Temperature Range (Operating): 0 C to + 50 C (+32 F to +122 F).

Temperature Range (Nonoperating): -55 C to +75 C (-67 F to +167 F).

Humidity: Five cycles (120 hr) at 90% relative humidity, at +30 C to +60 C. Per Tek Standard 062-2847-00, Class 5.

Physical Characteristics

Net Weight (Includes accessories, excludes packaging.):182 g (6.4 oz).

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