**Test Circuits and Waveforms**

$V_O$ is the steady state output with the switch on. Feedthrough via switch capacitance may result in spikes at the leading and trailing edge of the output waveform.

### FIGURE 1A. MEASUREMENT POINTS

### FIGURE 1. SWITCHING TIMES

### FIGURE 1B. TEST CIRCUIT

Repeat test for Channels 2, 3 and 4.

For load conditions, see Specifications. $C_L$ includes fixture and stray capacitance.

$$V_O = V_S \left(1 + \frac{R_L}{r_{DS\,ON}}\right)$$

**NOTE:** Logic input waveform is inverted for switches that have the opposite logic sense.

### FIGURE 2A. MEASUREMENT POINTS

### FIGURE 2. CHARGE INJECTION

### FIGURE 2B. TEST CIRCUIT

$$Q = \Delta V_O \times C_L$$

### FIGURE 3. CROSSTALK TEST CIRCUIT

### FIGURE 4. OFF ISOLATION TEST CIRCUIT
Typical Performance Curves (Continued)

FIGURE 14. SOURCE/DRAIN CAPACITANCE vs ANALOG VOLTAGE

FIGURE 15. LEAKAGE CURRENTS vs ANALOG VOLTAGE

FIGURE 16. SWITCHING TIME vs INPUT VOLTAGE (DG444)

FIGURE 17. SWITCHING TIME vs INPUT VOLTAGE (DG445)

FIGURE 18. SWITCHING TIME vs POWER SUPPLY VOLTAGE (DG444)

FIGURE 19. SWITCHING TIME vs POWER SUPPLY VOLTAGE (DG445)