CMOS Digital Integrated Circuits Silicon Monolithic

# 74HC4053FT

## 1. Functional Description

- Triple 2-Channel Analog Multiplexer/Demultiplexer

## 2. General

The 74HC4053FT is high speed CMOS ANALOG MULTIPLEXER/DEMULTIPLEXER fabricated with silicon gate CMOS technology. They achieve the high speed operation similar to equivalent LSTTL while maintaining the CMOS low power dissipation.

The 74HC4053FT has a 2 channel × 3 configuration.

The digital signal to the control terminal turns "ON" the corresponding switch of each channel a large amplitude signal ($V_{CC}$ - $V_{EE}$) can then be switched by the small logical amplitude ($V_{CC}$ - GND) control signal.

For example, in the case of $V_{CC}$ = 5 V, GND = 0 V, $V_{EE}$ = -5 V, signals between -5 V and +5 V can be switched from the logical circuit with a single power supply of 5 V. As the ON-resistance of each switch is low, they can be connected to circuits with low input impedance.

All inputs are equipped with protection circuits against static discharge or transient excess voltage.

## 3. Features

(1) Wide operating temperature range: $T_{opr}$ = -40 to 125 °C

(2) Low power dissipation: $I_{CC}$ = 4.0 μA (max) ($V_{CC}$ = 6.0 V, $V_{EE}$ = GND, $T_a$ = 25 °C)

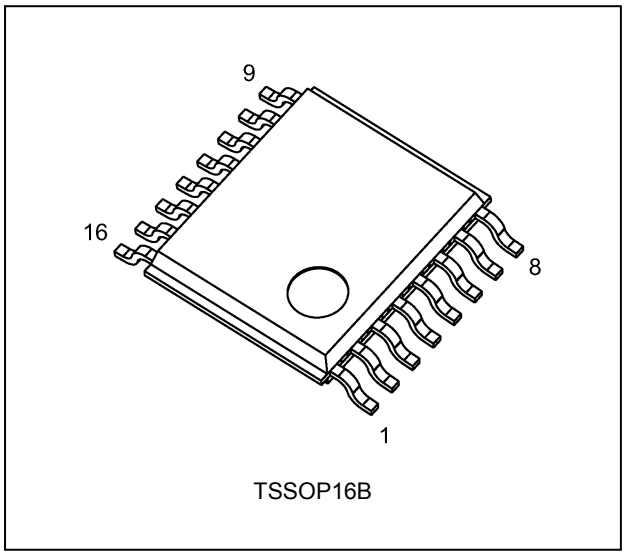
(3) High noise immunity: $V_{NIH}$ = $V_{NIL}$ = 28% $V_{CC}$ (min)

(4) Low ON-resistance: $R_{ON}$ = 50 Ω (typ.) at $V_{CC}$ - $V_{EE}$ = 9 V

(5) High degree of linearity: THD = 0.020 % (typ.) at $V_{CC}$ - $V_{EE}$ = 9 V

(6) Pin and function compatible with 4053B

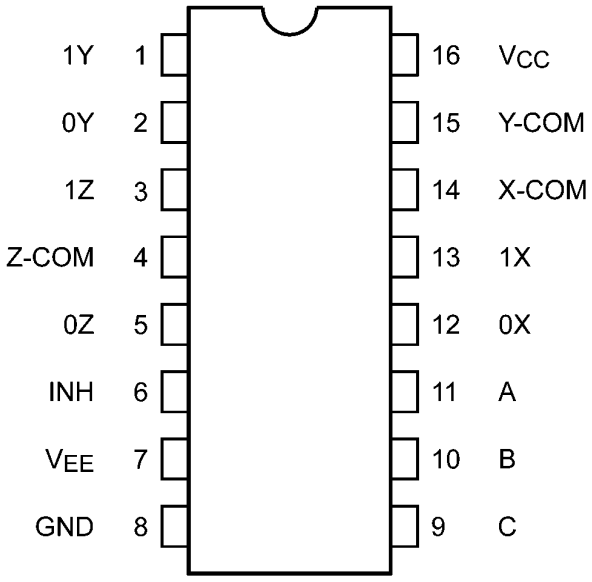
## 4. Packaging




TSSOP16B

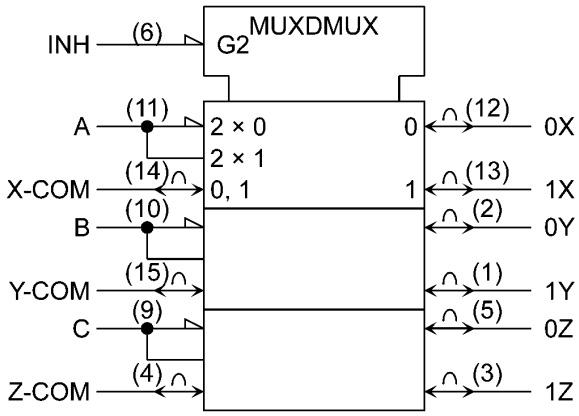
Start of commercial production
2020-07

## 5. Pin Assignment

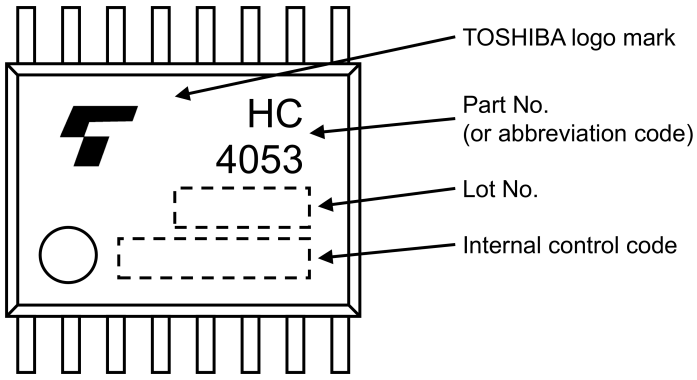



(top view)

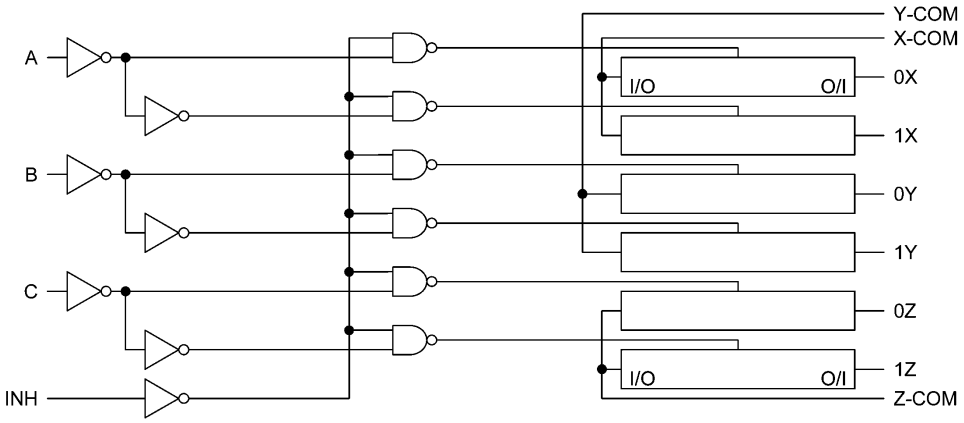
## 6. IEC Logic Symbol




## 7. Marking



## 8. System Diagram



## 9. Truth Table

| Input Inhibit | Input C | Input B | Input A | ON Channel |
|---|---|---|---|---|
| L | L | L | L | 0X, 0Y, 0Z |
| L | L | L | H | 1X, 0Y, 0Z |
| L | L | H | L | 0X, 1Y, 0Z |
| L | L | H | H | 1X, 1Y, 0Z |
| L | H | L | L | 0X, 0Y, 1Z |
| L | H | L | H | 1X, 0Y, 1Z |
| L | H | H | L | 0X, 1Y, 1Z |
| L | H | H | H | 1X, 1Y, 1Z |
| H | X | X | X | None |

X: Don't care

## 10. Absolute Maximum Ratings (Note)

| Characteristics | Symbol | Note | Rating | Unit |
|---|---|---|---|---|
| Supply voltage | $V_{CC}$ | | -0.5 to 7.0 | V |
| | $V_{EE}$ | | -7.0 to 0 | |
| | $V_{CC}$-$V_{EE}$ | | -0.5 to 13.0 | |
| Input voltage | $V_{IN}$ | | -0.5 to $V_{CC}$ + 0.5 | V |
| Switch I/O voltage | $V_{I/O}$ | | $V_{EE}$ - 0.5 to $V_{CC}$ + 0.5 | V |
| Input diode current | $I_{IK}$ | | ±20 | mA |
| I/O diode current | $I_{I/OK}$ | | ±20 | mA |
| Switch through current | $I_T$ | | ±25 | mA |
| $V_{CC}$/ground current | $I_{CC}$ | | ±50 | mA |
| Power dissipation | $P_D$ | (Note 1) | 180 | mW |
| Storage temperature | $T_{stg}$ | | -65 to 150 | °C |

Note: Exceeding any of the absolute maximum ratings, even briefly, lead to deterioration in IC performance or even destruction.
Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings and the operating ranges.
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook (“Handling Precautions”/“Derating Concept and Methods”) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Note 1: 180 mW in the range of $T_a$ = -40 to 85 °C. From $T_a$ = 85 to 125 °C a derating factor of -3.25 mW/°C shall be applied until 50 mW.

## 11. Operating Ranges (Note)

| Characteristics | Symbol | Rating | Unit |
|---|---|---|---|
| Supply voltage | $V_{CC}$ | 2.0 to 6.0 | V |
| | $V_{EE}$ | -6.0 to 0 | |
| | $V_{CC}$-$V_{EE}$ | 2.0 to 12.0 | |
| Input voltage | $V_{IN}$ | 0 to $V_{CC}$ | V |
| Switch I/O voltage | $V_{I/O}$ | $V_{EE}$ to $V_{CC}$ | V |
| Operating temperature | $T_{opr}$ | -40 to 125 | °C |
| Input rise and fall times | $t_r$,$t_f$ | 0 to 50 | μs |

Note: The operating ranges must be maintained to ensure the normal operation of the device.
Unused inputs must be tied to either $V_{CC}$ or GND.

## 12. Electrical Characteristics

### 12.1. DC Characteristics (Unless otherwise specified, $T_a$ = 25 °C)

| Characteristics | Symbol | Test Condition | $V_{EE}$ (V) | $V_{CC}$ (V) | Min | Typ. | Max | Unit |
|---|---|---|---|---|---|---|---|---|
| High-level input voltage | $V_{IH}$ | — | | 2.0 | 1.50 | — | — | V |
| | | | | 4.5 | 3.15 | — | — | |
| | | | | 6.0 | 4.20 | — | — | |
| Low-level input voltage | $V_{IL}$ | — | | 2.0 | — | — | 0.50 | V |
| | | | | 4.5 | — | — | 1.35 | |
| | | | | 6.0 | — | — | 1.80 | |
| ON-resistance | $R_{ON}$ | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ to $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 4.5 | — | 85 | 180 | Ω |
| | | | -4.5 | 4.5 | — | 55 | 120 | |
| | | | -6.0 | 6.0 | — | 50 | 100 | |
| | | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ or $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 2.0 | — | 150 | — | |
| | | | GND | 4.5 | — | 70 | 150 | |
| | | | -4.5 | 4.5 | — | 50 | 100 | |
| | | | -6.0 | 6.0 | — | 45 | 80 | |
| Difference of ON-resistance between switches | $\Delta R_{ON}$ | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ to $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 4.5 | — | 10 | 30 | Ω |
| | | | -4.5 | 4.5 | — | 5 | 12 | |
| | | | -6.0 | 6.0 | — | 5 | 10 | |
| Input/Output leakage current (Switch OFF) | $I_{OFF}$ | $V_{OS}$ = $V_{CC}$ or GND<br>$V_{IS}$ = GND or $V_{CC}$<br>$V_{IN}$ = $V_{IH}$ or $V_{IL}$ | GND | 6.0 | — | — | ±0.06 | μA |
| | | | -6.0 | 6.0 | — | — | ±0.1 | |
| Input/Output leakage current (Switch ON) | $I_{I/O}$ | $V_{OS}$ = $V_{CC}$ or GND<br>$V_{IN}$ = $V_{IH}$ or $V_{IL}$ | GND | 6.0 | — | — | ±0.06 | μA |
| | | | -6.0 | 6.0 | — | — | ±0.1 | |
| Control input leakage current | $I_{IN}$ | $V_{IN}$ = $V_{CC}$ or GND | GND | 6.0 | — | — | ±0.1 | μA |
| Quiescent supply current | $I_{CC}$ | $V_{IN}$ = $V_{CC}$ or GND | GND | 6.0 | — | — | 4.0 | μA |
| | | | -6.0 | 6.0 | — | — | 8.0 | |

## 12.2. DC Characteristics (Unless otherwise specified, $T_a$ = -40 to 85 °C)

| Characteristics | Symbol | Test Condition | $V_{EE}$ (V) | $V_{CC}$ (V) | Min | Max | Unit |
|---|---|---|---|---|---|---|---|
| High-level input voltage | $V_{IH}$ | — | | 2.0 | 1.50 | — | V |
| | | | | 4.5 | 3.15 | — | |
| | | | | 6.0 | 4.20 | — | |
| Low-level input voltage | $V_{IL}$ | — | | 2.0 | — | 0.50 | V |
| | | | | 4.5 | — | 1.35 | |
| | | | | 6.0 | — | 1.80 | |
| ON-resistance | $R_{ON}$ | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ to $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 4.5 | — | 225 | Ω |
| | | | -4.5 | 4.5 | — | 150 | |
| | | | -6.0 | 6.0 | — | 125 | |
| | | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ or $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 2.0 | — | — | |
| | | | GND | 4.5 | — | 190 | |
| | | | -4.5 | 4.5 | — | 125 | |
| | | | -6.0 | 6.0 | — | 100 | |
| Difference of ON-resistance between switches | $\Delta R_{ON}$ | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ to $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 4.5 | — | 35 | Ω |
| | | | -4.5 | 4.5 | — | 15 | |
| | | | -6.0 | 6.0 | — | 12 | |
| Input/Output leakage current (Switch OFF) | $I_{OFF}$ | $V_{OS}$ = $V_{CC}$ or GND<br>$V_{IS}$ = GND or $V_{CC}$<br>$V_{IN}$ = $V_{IH}$ or $V_{IL}$ | GND | 6.0 | — | ±0.6 | μA |
| | | | -6.0 | 6.0 | — | ±1.0 | |
| Input/Output leakage current (Switch ON) | $I_{I/O}$ | $V_{OS}$ = $V_{CC}$ or GND<br>$V_{IN}$ = $V_{IH}$ or $V_{IL}$ | GND | 6.0 | — | ±0.6 | μA |
| | | | -6.0 | 6.0 | — | ±1.0 | |
| Control input leakage current | $I_{IN}$ | $V_{IN}$ = $V_{CC}$ or GND | GND | 6.0 | — | ±1.0 | μA |
| Quiescent supply current | $I_{CC}$ | $V_{IN}$ = $V_{CC}$ or GND | GND | 6.0 | — | 40.0 | μA |
| | | | -6.0 | 6.0 | — | 80.0 | |

## 12.3. DC Characteristics (Unless otherwise specified, $T_a$ = -40 to 125 °C)

| Characteristics | Symbol | Test Condition | $V_{EE}$ (V) | $V_{CC}$ (V) | Min | Max | Unit |
|---|---|---|---|---|---|---|---|
| High-level input voltage | $V_{IH}$ | — | | 2.0 | 1.50 | — | V |
| | | | | 4.5 | 3.15 | — | |
| | | | | 6.0 | 4.20 | — | |
| Low-level input voltage | $V_{IL}$ | — | | 2.0 | — | 0.5 | V |
| | | | | 4.5 | — | 1.35 | |
| | | | | 6.0 | — | 1.8 | |
| ON-resistance | $R_{ON}$ | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ to $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 4.5 | — | 255 | Ω |
| | | | -4.5 | 4.5 | — | 170 | |
| | | | -6.0 | 6.0 | — | 145 | |
| | | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ or $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 2.0 | — | — | Ω |
| | | | GND | 4.5 | — | 220 | |
| | | | -4.5 | 4.5 | — | 145 | |
| | | | -6.0 | 6.0 | — | 115 | |
| Difference of ON-resistance between switches | $\Delta R_{ON}$ | $V_{IN}$ = $V_{IH}$ or $V_{IL}$<br>$V_{I/O}$ = $V_{CC}$ to $V_{EE}$<br>$I_{I/O} \leq$ 2 mA | GND | 4.5 | — | 35 | Ω |
| | | | -4.5 | 4.5 | — | 15 | |
| | | | -6.0 | 6.0 | — | 12 | |
| Input/Output leakage current (Switch OFF) | $I_{OFF}$ | $V_{OS}$ = $V_{CC}$ or GND<br>$V_{IS}$ = GND or $V_{CC}$<br>$V_{IN}$ = $V_{IH}$ or $V_{IL}$ | GND | 6.0 | — | ±3.0 | μA |
| | | | -6.0 | 6.0 | — | ±5.0 | |
| Input/Output leakage current (Switch ON) | $I_{I/O}$ | $V_{OS}$ = $V_{CC}$ or GND<br>$V_{IN}$ = $V_{IH}$ or $V_{IL}$ | GND | 6.0 | — | ±3.0 | μA |
| | | | -6.0 | 6.0 | — | ±5.0 | |
| Control input leakage current | $I_{IN}$ | $V_{IN}$ = $V_{CC}$ or GND | GND | 6.0 | — | ±1.0 | μA |
| Quiescent supply current | $I_{CC}$ | $V_{IN}$ = $V_{CC}$ or GND | GND | 6.0 | — | 80.0 | μA |
| | | | -6.0 | 6.0 | — | 160.0 | |

## 12.4. AC Characteristics
(Unless otherwise specified, $C_L$ = 50 pF, $T_a$ = 25 °C, Input: $t_r = t_f$ = 6 ns)

| Characteristics | Symbol | Note | Test Condition | $V_{EE}$ (V) | $V_{CC}$ (V) | Min | Typ. | Max | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Phase difference between input to output | $\varphi_{I/O}$ | | — | GND | 2.0 | — | 25 | 60 | ns |
| | | | | GND | 4.5 | — | 6 | 12 | |
| | | | | GND | 6.0 | — | 5 | 10 | |
| | | | | -4.5 | 4.5 | — | 4 | — | |
| Output enable time | $t_{PZL}$, $t_{PZH}$ | | $R_L$ = 1 kΩ See 13. AC Test Circuit, Figure 1 | GND | 2.0 | — | 50 | 225 | ns |
| | | | | GND | 4.5 | — | 14 | 45 | |
| | | | | GND | 6.0 | — | 12 | 38 | |
| | | | | -4.5 | 4.5 | — | 14 | — | |
| Output disable time | $t_{PLZ}$, $t_{PHZ}$ | | $R_L$ = 1 kΩ See 13. AC Test Circuit, Figure 1 | GND | 2.0 | — | 95 | 225 | ns |
| | | | | GND | 4.5 | — | 30 | 45 | |
| | | | | GND | 6.0 | — | 26 | 38 | |
| | | | | -4.5 | 4.5 | — | 26 | — | |
| Control input capacitance | $C_{IN}$ | | — | — | — | — | 5 | 10 | pF |
| Common terminal capacitance | $C_{IS}$ | | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 11 | 20 | pF |
| Switch terminal capacitance | $C_{OS}$ | | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 7 | 15 | pF |
| Feedthrough capacitance | $C_{IOS}$ | | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 0.75 | 2 | pF |
| Power dissipation capacitance | $C_{PD}$ | (Note 1) | See 13. AC Test Circuit, Figure 2 | GND | 5.0 | — | 10 | — | pF |

Note 1: $C_{PD}$ is defined as the value of the internal equivalent capacitance which is calculated from the operating current consumption without load. Average operating current can be obtained by the equation.

$I_{CC(opr)} = C_{PD} \times V_{CC} \times f_{IN} + I_{CC}$

## 12.5. AC Characteristics
(Unless otherwise specified, $C_L$ = 50 pF, $T_a$ = -40 to 85 °C, Input: $t_r = t_f$ = 6 ns)

| Characteristics | Symbol | Test Condition | $V_{EE}$ (V) | $V_{CC}$ (V) | Min | Max | Unit |
|---|---|---|---|---|---|---|---|
| Phase difference between input to output | $\varphi_{I/O}$ | — | GND | 2.0 | — | 75 | ns |
| | | | GND | 4.5 | — | 15 | |
| | | | GND | 6.0 | — | 13 | |
| | | | -4.5 | 4.5 | — | — | |
| Output enable time | $t_{PZL}$,$t_{PZH}$ | $R_L$ = 1 kΩ See 13. AC Test Circuit, Figure 1 | GND | 2.0 | — | 280 | ns |
| | | | GND | 4.5 | — | 56 | |
| | | | GND | 6.0 | — | 48 | |
| | | | -4.5 | 4.5 | — | — | |
| Output disable time | $t_{PLZ}$,$t_{PHZ}$ | $R_L$ = 1 kΩ See 13. AC Test Circuit, Figure 1 | GND | 2.0 | — | 280 | ns |
| | | | GND | 4.5 | — | 56 | |
| | | | GND | 6.0 | — | 48 | |
| | | | -4.5 | 4.5 | — | — | |
| Control input capacitance | $C_{IN}$ | — | — | — | — | 10 | pF |
| Common terminal capacitance | $C_{IS}$ | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 20 | pF |
| Switch terminal capacitance | $C_{OS}$ | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 15 | pF |
| Feedthrough capacitance | $C_{IOS}$ | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 2 | pF |

## 12.6. AC Characteristics
### (Unless otherwise specified, $C_L$ = 50 pF, $T_a$ = -40 to 125 °C, Input: $t_r = t_f$ = 6 ns)

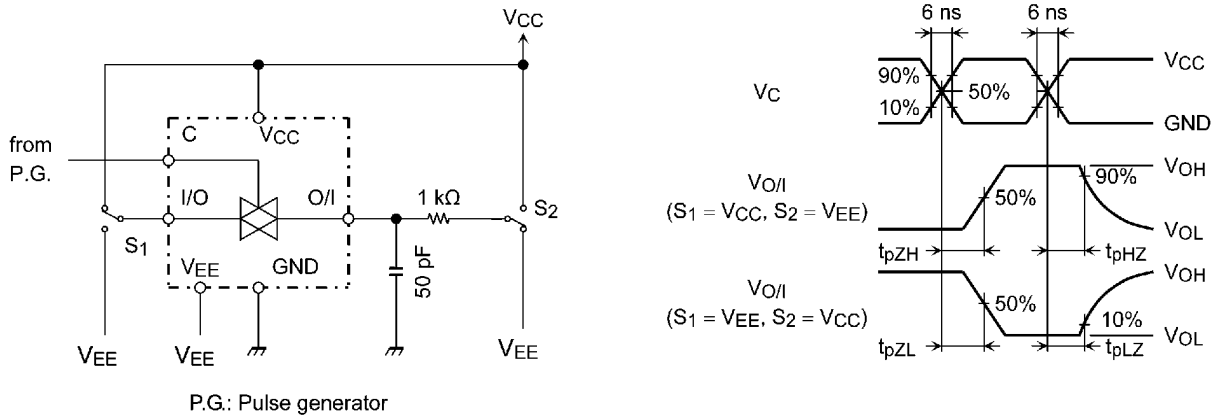
| Characteristics | Symbol | Test Condition | $V_{EE}$ (V) | $V_{CC}$ (V) | Min | Max | Unit |
|---|---|---|---|---|---|---|---|
| Phase difference between input to output | $\varphi_{I/O}$ | — | GND | 2.0 | — | 85 | ns |
| | | | GND | 4.5 | — | 17 | |
| | | | GND | 6.0 | — | 15 | |
| | | | -4.5 | 4.5 | — | — | |
| Output enable time | $t_{PZL}$,$t_{PZH}$ | $R_L$ = 1 kΩ<br>See 13. AC Test Circuit, Figure 1 | GND | 2.0 | — | 320 | ns |
| | | | GND | 4.5 | — | 64 | |
| | | | GND | 6.0 | — | 55 | |
| | | | -4.5 | 4.5 | — | — | |
| Output disable time | $t_{PLZ}$,$t_{PHZ}$ | $R_L$ = 1 kΩ<br>See 13. AC Test Circuit, Figure 1 | GND | 2.0 | — | 320 | ns |
| | | | GND | 4.5 | — | 64 | |
| | | | GND | 6.0 | — | 55 | |
| | | | -4.5 | 4.5 | — | — | |
| Control input capacitance | $C_{IN}$ | — | — | — | — | 10 | pF |
| Common terminal capacitance | $C_{IS}$ | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 20 | pF |
| Switch terminal capacitance | $C_{OS}$ | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 15 | pF |
| Feedthrough capacitance | $C_{IOS}$ | See 13. AC Test Circuit, Figure 2 | -5.0 | 5.0 | — | 2 | pF |

## 12.7. Analog Switch Characteristics ($T_a$ = 25 °C) (Note)

| Characteristics | Symbol | Test Condition | | Note | $V_{EE}$ (V) | $V_{CC}$ (V) | Typ. | Unit |
|---|---|---|---|---|---|---|---|---|
| Sine Wave Distortion | THD | $R_L$ = 10 kΩ, $C_L$ = 50 pF<br>$f_{IN}$ = 1 kHz | $V_{IN}$ = 4.0 $V_{p-p}$ | | -2.25 | 2.25 | 0.025 | % |
| | | | $V_{IN}$ = 8.0 $V_{p-p}$ | | -4.5 | 4.5 | 0.020 | |
| | | | $V_{IN}$ = 11.0 $V_{p-p}$ | | -6.0 | 6.0 | 0.018 | |
| Maximum frequency response | $f_{MAX(I/O)}$ | Adjust $f_{IN}$ voltage to obtain 0 dBm at $V_{OS}$<br>Increase $f_{IN}$ frequency until dB meter reads -3 dB<br>$R_L$ = 50 Ω, $C_L$ = 10 pF<br>$f_{IN}$ = 1 MHz, sine wave<br>See 13. AC Test Circuit, Figure 3 | | (Note 1) | -2.25 | 2.25 | 120 | MHz |
| | | | | (Note 2) | -2.25 | 2.25 | 95 | |
| | | | | (Note 1) | -4.5 | 4.5 | 190 | |
| | | | | (Note 2) | -4.5 | 4.5 | 150 | |
| | | | | (Note 1) | -6.0 | 6.0 | 200 | |
| | | | | (Note 2) | -6.0 | 6.0 | 190 | |
| Feed through attenuation (switch OFF) | FTH | $V_{IN}$ is centered at ($V_{CC}$ - $V_{EE}$)/2<br>Adjust input for 0 dBm.<br>$R_L$ = 600 Ω, $C_L$ = 50 pF,<br>$f_{IN}$ = 1 MHz, sine wave<br>See 13. AC Test Circuit, Figure 4 | | | -2.25 | 2.25 | -50 | dB |
| | | | | | -4.5 | 4.5 | -50 | |
| | | | | | -6.0 | 6.0 | -50 | |
| Crosstalk (control input to signal output) | $X_{talk}$ | $R_L$ = 600 Ω, $C_L$ = 50 pF,<br>$f_{IN}$ = 1 MHz,<br>square wave ($t_r = t_f$ = 6 ns)<br>See 13. AC Test Circuit, Figure 5 | | | -2.25 | 2.25 | 60 | mV |
| | | | | | -4.5 | 4.5 | 140 | |
| | | | | | -6.0 | 6.0 | 200 | |
| Crosstalk (between any switches) | $X_{talk}$ | Adjust $V_{IN}$ to obtain 0 dBm at input.<br>$R_L$ = 600 Ω, $C_L$ = 50 pF,<br>$f_{IN}$ = 1 MHz, sine wave<br>See 13. AC Test Circuit, Figure 6 | | | -2.25 | 2.25 | -50 | dB |
| | | | | | -4.5 | 4.5 | -50 | |
| | | | | | -6.0 | 6.0 | -50 | |

Note: These characteristics are determined by design of devices.
Note 1: Input COMMON terminal, and measured at SWITCH terminal.
Note 2: Input SWITCH terminal, and measured at COMMON terminal.

## 13. AC Test Circuit




P.G.: Pulse generator

**Figure 1 $t_{PLZ}$, $t_{PHZ}$, $t_{PZL}$, $t_{PZH}$**

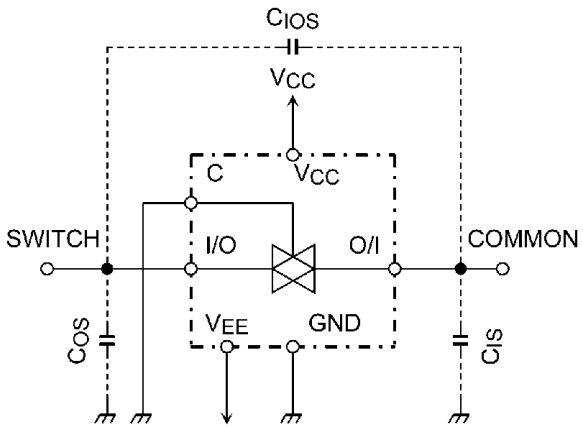



**Figure 2 $C_{IOS}$, $C_{IS}$, $C_{OS}$**

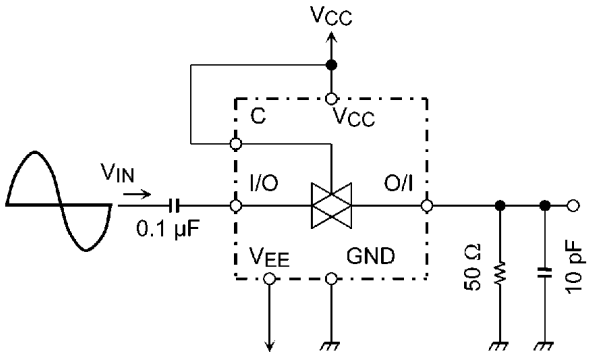



**Figure 3 Frequency Response**

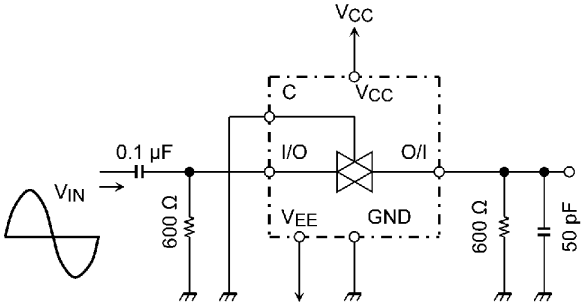
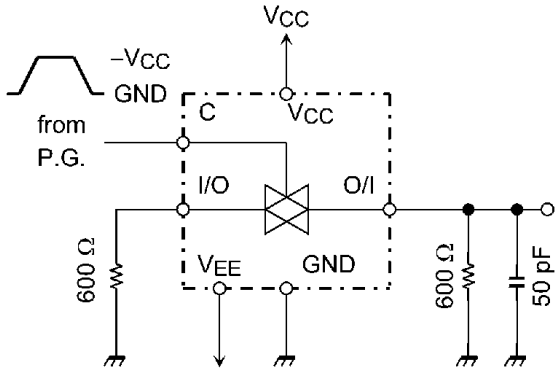



**Figure 4 Feedthrough Attenuation**




P.G.: Pulse generator

**Figure 5 Cross Talk (control input to output signal)**

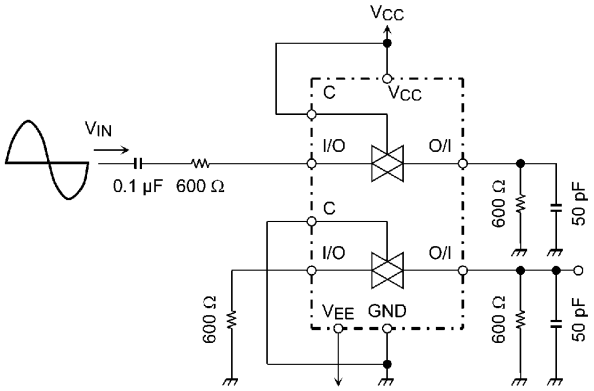
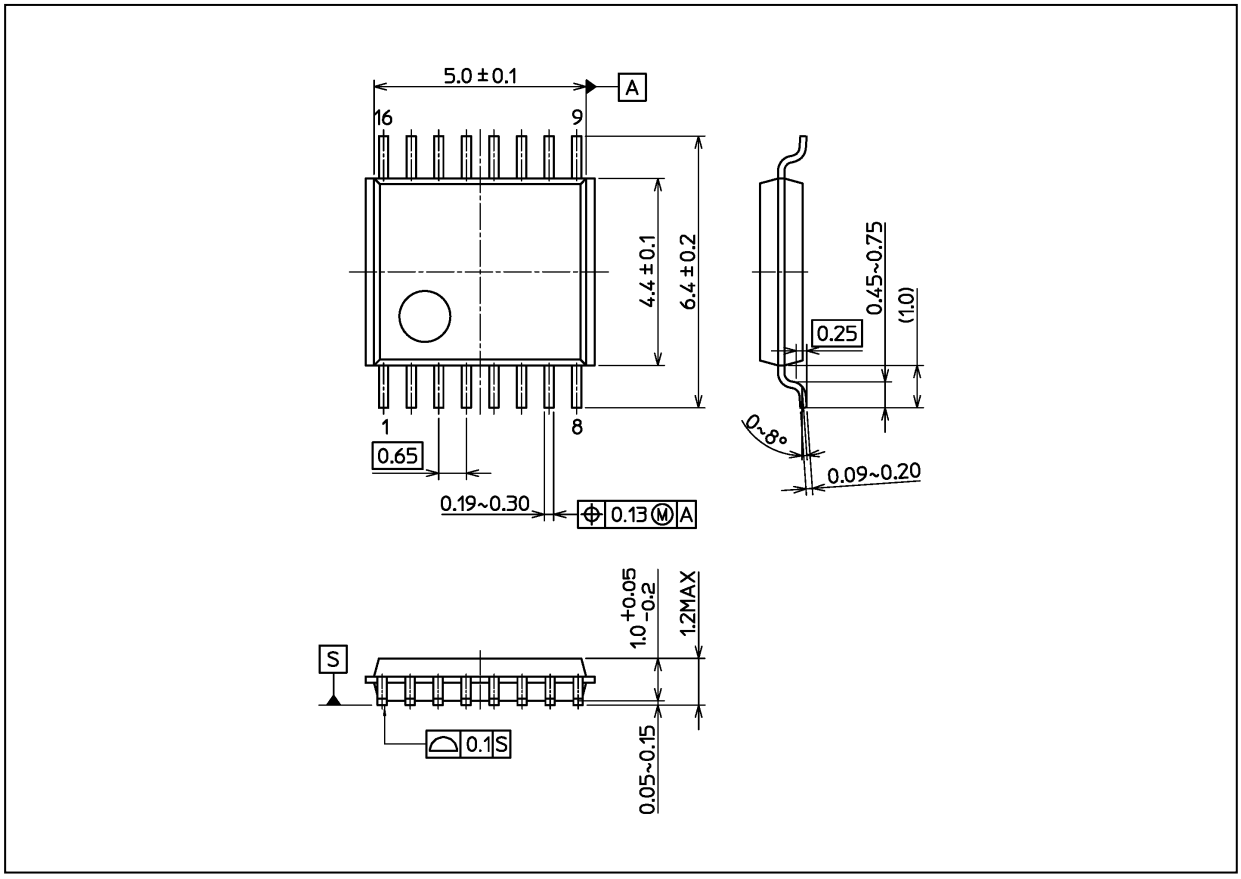



**Figure 6 Cross Talk (between any two switches)**

## Package Dimensions

Unit: mm




Weight: 0.055 g (typ.)

| Package Name(s) |
| --- |
| Nickname: TSSOP16B |

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