

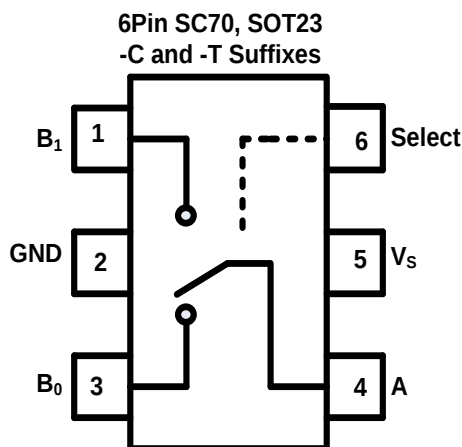
## Features

- Latch-Up Performance Exceeds 800 mA
- Supply Voltage: 1.65V to 5.5V
- Low ON-State Resistance: maximum 3Ω at  $V_s = 4.5V$
- Bandwidth: 300 MHz
- Fast switching times:  $t_{ON} = 40\text{ ns}$ ,  $t_{OFF} = 15\text{ ns}$
- Break-Before-Make Switching
- Operation Temperature Range:  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$

## Applications

- Industry control systems
- Battery-powered systems
- Audio Signal Routing
- Portable Instruments and Mobile Device

## Pin Configuration



## Description

TPW3157A is high performance Single Pole/Double Throw (SPDT) analog switches. The devices feature ultra low  $R_{ON}$  of 3Ω maximum at 4.5V  $V_{CC}$  and will operate over the wide  $V_{CC}$  range of 1.65V to 5.5V.

The TPW3157A features very low quiescent current even when the control voltage is lower than the  $V_{CC}$  supply. This feature services the portable applications very well allowing for the direct interface with processor general purpose I/Os.

## Function Table

| Input: Select Pin | Function          |
|-------------------|-------------------|
| Low               | B0 Connected to A |
| High              | B1 Connected to A |

## Pin Description

| Pin name | Pin No | Pin function       |
|----------|--------|--------------------|
| B1       | 1      | Switch Port 1      |
| GND      | 2      | Ground             |
| B0       | 3      | Switch Port 0      |
| A        | 4      | Common switch port |
| $V_{CC}$ | 5      | Power supply       |
| Select   | 6      | Select pin         |

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## Revision History

| Date      | Revision | Notes                   |
|-----------|----------|-------------------------|
| 2018/4/5  | Rev.Pre  | Pre-Release Version     |
| 2018/10/1 | Rev.0    | Initial Release Version |

## Order Information

| Order Number | Operating Temperature Range | Package     | Marking Information     | MSL | Transport Media, Quantity |
|--------------|-----------------------------|-------------|-------------------------|-----|---------------------------|
| TPW3157A-CR  | -40 to 125°C                | 6-Pin SC70  | 315YW <sup>Note 1</sup> | 3   | Tape and Reel, 3000       |
| TPW3157A-TR  | -40 to 125°C                | 6-Pin SOT23 | 315YW <sup>Note 1</sup> | 3   | Tape and Reel, 3000       |

Note 1: "YW" is the date code means manufacture year and week as following.

The calendar year and the workweek coding scheme is as follows:

| Year | Code | Year | Code | Workweek | Code | Workweek | Code | Workweek | Code | Workweek | Code | Workweek | Code |
|------|------|------|------|----------|------|----------|------|----------|------|----------|------|----------|------|
| 2010 | A    | 2023 | N    | 1        | 1    | 14       | E    | 27       | R    | 40       | e    | 53       | r    |
| 2011 | B    | 2024 | O    | 2        | 2    | 15       | F    | 28       | S    | 41       | f    |          |      |
| 2012 | C    | 2025 | P    | 3        | 3    | 16       | G    | 29       | T    | 42       | g    |          |      |
| 2013 | D    | 2026 | Q    | 4        | 4    | 17       | H    | 30       | U    | 43       | h    |          |      |
| 2014 | E    | 2027 | R    | 5        | 5    | 18       | I    | 31       | V    | 44       | i    |          |      |
| 2015 | F    | 2028 | S    | 6        | 6    | 19       | J    | 32       | W    | 45       | j    |          |      |
| 2016 | G    | 2029 | T    | 7        | 7    | 20       | K    | 33       | X    | 46       | k    |          |      |
| 2017 | H    | 2030 | U    | 8        | 8    | 21       | L    | 34       | Y    | 47       | l    |          |      |
| 2018 | I    | 2031 | V    | 9        | 9    | 22       | M    | 35       | Z    | 48       | m    |          |      |
| 2019 | J    | 2032 | W    | 10       | A    | 23       | N    | 36       | a    | 49       | n    |          |      |
| 2020 | K    | 2033 | X    | 11       | B    | 24       | O    | 37       | b    | 50       | o    |          |      |
| 2021 | L    | 2034 | Y    | 12       | C    | 25       | P    | 38       | c    | 51       | p    |          |      |
| 2022 | M    | 2035 | Z    | 13       | D    | 26       | Q    | 39       | d    | 52       | q    |          |      |

## Absolute Maximum Ratings <sup>Note 1</sup>

| Parameters                           | Rating                 |
|--------------------------------------|------------------------|
| Supply Voltage, $V_{CC}$             | -0.5V to 6V            |
| Select Input Voltage                 | -0.5V to 6V            |
| Select Input Diode Current           | -50mA                  |
| Switch I/O Port Voltage              | -0.5 to $V_{CC} + 0.5$ |
| Switch I/O Port diode current        | $\pm 50$ mA            |
| Switch Current                       | 120mA                  |
| Maximum Junction Temperature         | 150°C                  |
| Storage Temperature Range            | -65 to 150°C           |
| Lead Temperature (Soldering, 10 sec) | 260°C                  |

Note 1: Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. Exposure to any Absolute Maximum Rating condition for extended periods may affect device reliability and lifetime.

## ESD and Latch Up Rating

| Symbol | Parameter                | Condition              | Minimum Level | Unit |
|--------|--------------------------|------------------------|---------------|------|
| HBM    | Human Body Model ESD     | ANSI/ESDA/JEDEC JS-001 | 4             | Kv   |
| CDM    | Charged Device Model ESD | ANSI/ESDA/JEDEC JS-002 | 2             | Kv   |
| LU     | Latch Up                 | JESD 78, 25°C          | 800           | mA   |
|        |                          | JESD 78, 125°C         | 800           | mA   |

## Thermal Information

| Package Type | $\theta_{JA}$ | $\theta_{JC}$ | Unit |
|--------------|---------------|---------------|------|
| 6-Pin SC70   | 400           |               | °C/W |
| 6-Pin SOT    | 250           | 81            | °C/W |

## Recommended Operating Conditions <sup>Note 1</sup>

Over operating temperature range

| Parameters                          | Min  | Max      | Unit |
|-------------------------------------|------|----------|------|
| Supply Voltage, $V_{CC}$            | 1.65 | 5.5      | V    |
| Select Input Voltage                | 0    | $V_{CC}$ | V    |
| Input Transition Rise and Fall Rate |      | 100      | ns/V |
| Switch I/O Port Voltage             | 0V   | $V_{CC}$ | V    |
| Operating Temperature Range         | -40  | 125      | °C   |

Note 1: Select input must be held HIGH or LOW and it must not float.

## Electrical Characteristics

$V_{CC} = 4.5$  to  $5.5V$ , unless otherwise noted.

| Symbol                           | Parameter                            | Conditions                                                         | $V_{CC}$<br>(V) | 25°C     | -40°C to<br>85°C | -40°C to<br>125°C | Limit | Unit     |
|----------------------------------|--------------------------------------|--------------------------------------------------------------------|-----------------|----------|------------------|-------------------|-------|----------|
| <b>Power Supply</b>              |                                      |                                                                    |                 |          |                  |                   |       |          |
| $I_{CC}$                         | Quiescent Supply Current             | $V_{IN} = 0V$ or $V_{CC}$                                          | 5.5             | 0.3      | 0.5              | 1.5               | Max   | $\mu A$  |
| <b>Digital Input</b>             |                                      |                                                                    |                 |          |                  |                   |       |          |
| $V_{IH}$                         | Input Voltage High                   |                                                                    |                 |          | 2.4              | 2.4               | Min   | V        |
| $V_{IL}$                         | Input Voltage Low                    |                                                                    |                 |          | 0.8              | 0.8               | Max   | V        |
| $I_{IN}$                         | Control Input Leakage                | $V_{IN} = 0V$ or $V_{CC}$                                          | 5.5             |          | $\pm 1$          | $\pm 1$           | Max   | $\mu A$  |
| <b>Analog Switch</b>             |                                      |                                                                    |                 |          |                  |                   |       |          |
| $R_{ON}$                         |                                      | $I_{OUT} = 100mA$ , B0 or B1 = 3.5V                                | 4.5             | 1.5      |                  |                   | Typ   | $\Omega$ |
| $R_{ON}$                         |                                      | $I_{OUT} = 100mA$ , B0 or B1 = 3.5V                                | 4.5             | 2        | 3                | 3                 | Max   | $\Omega$ |
| $\Delta R_{ON}$                  | Maximum ON resistance                | $I_{OUT} = 100mA$ , B0 or B1 = 3.5V                                | 4.5             | 0.3      | 0.4              | 0.4               | Max   | $\Omega$ |
| $R_{FLAT(ON)}$                   | On Resistance Flatness               | $I_{OUT} = 100mA$ , B0 or B1 = 0V, 1V, 2V                          | 4.5             | 0.5      | 0.6              | 0.6               | Max   | $\Omega$ |
| $I_{NO(OFF)}$ ,<br>$I_{NC(OFF)}$ | Switch OFF Leakage Current on B0, B1 | A = 1V, 4.5V,<br>B0 or B1 = 4.5V, 1V                               | 5.5             | $\pm 10$ | $\pm 50$         | $\pm 100$         | Max   | nA       |
| $I_{A(OFF)}$                     | Switch OFF Leakage Current on A      | A = 1V, 4.5V,<br>B0 or B1 = 4.5V, 1V                               | 5.5             | $\pm 20$ | $\pm 100$        | $\pm 200$         | Max   | nA       |
| $I_{A(ON)}$                      | Switch ON Leakage Current on A       | A = 1V, 4.5V,<br>B0 or B1 = 1V, 4.5V or Floating                   | 5.5             | $\pm 20$ | $\pm 100$        | $\pm 200$         | Max   | nA       |
| <b>Dynamic Characteristics</b>   |                                      |                                                                    |                 |          |                  |                   |       |          |
| $t_{PHL}$ ,<br>$t_{PLH}$         | Switch IN to OUT time                | B0 or B1 = 3V, $R_L = 50\Omega$ , $C_L = 35pF$ ,<br>Figure 3       | 4.5             | 5        |                  |                   | Max   | ns       |
| $t_{PZH}$ ,<br>$t_{PZL}$         | Switch turn-on time                  | B0 or B1 = 3V, $R_L = 50\Omega$ , $C_L = 35pF$ ,<br>Figure 3       | 4.5             | 40       | 50               | 50                | Max   | ns       |
| $t_{PHZ}$ ,<br>$t_{PLZ}$         | Switch turn-off time                 | B0 or B1 = 3V, $R_L = 50\Omega$ , $C_L = 35pF$ ,<br>Figure 3       | 4.5             | 20       | 25               | 25                | Max   | ns       |
| $t_B$                            | Break before make time               | B0 or B1 = 3V, $R_L = 50\Omega$ , $C_L = 35pF$ ,<br>Figure 4       | 4.5             | 20       | 40               | 40                | Typ   | ns       |
| Q                                | Charge Injection                     | $C_L = 1.0nF$ , $V_{GEN} = 0V$ , $R_{GEN} = 0\Omega$ ,<br>Figure 5 | 5               | 20       |                  |                   | Typ   | pC       |
|                                  | OFF-Isolation                        | $f = 1MHz$ , $R_L = 50\Omega$ , Figure 6                           | 5               | -65      |                  |                   | Typ   | dB       |
|                                  | Crosstalk                            | $f = 1MHz$ , $R_L = 50\Omega$ , Figure 7                           | 5               | -65      |                  |                   | Typ   | dB       |
| BW                               | Bandwidth                            | $R_L = 50\Omega$                                                   | 5               | 100      |                  |                   | Typ   | MHz      |
| THD                              | Total Harmonic Distortion            | $R_L = 600\Omega$ , $V_{IN} = 0.5V_{PP}$ , $f = 20kHz$ to 20kHz    | 5               | 0.008    |                  |                   | Typ   | %        |
| <b>Capacitance</b>               |                                      |                                                                    |                 |          |                  |                   |       |          |
| $C_{IN}$                         | Select Input capacitance             |                                                                    | 5               | 5        |                  |                   | Typ   | pF       |
| $C_{OFF}$                        | B-Port Off capacitance               |                                                                    | 5               | 12       |                  |                   | Typ   | pF       |
| $C_{ON}$                         | ON Capacitance                       |                                                                    | 5               | 40       |                  |                   | Typ   | pF       |

**Low Voltage 5Ω SPDT Analog Switch**
**V<sub>CC</sub> = 2.7 to 3.6V, unless otherwise noted.**

| Symbol                                         | Parameter                            | Conditions                                                                      | V <sub>CC</sub><br>(V) | 25°C | -40°C to<br>85°C | -40°C to<br>125°C | Limit | Unit |
|------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------|------------------------|------|------------------|-------------------|-------|------|
| <b>Power Supply</b>                            |                                      |                                                                                 |                        |      |                  |                   |       |      |
| I <sub>CC</sub>                                | Quiescent Supply Current             | V <sub>IN</sub> = 0V or V <sub>CC</sub>                                         | 3.6                    | 0.3  | 0.5              | 1.5               | Max   | μA   |
| <b>Digital Input</b>                           |                                      |                                                                                 |                        |      |                  |                   |       |      |
| V <sub>IH</sub>                                | Input Voltage High                   |                                                                                 |                        |      | 1.65             | 1.65              | Min   | V    |
| V <sub>IL</sub>                                | Input Voltage Low                    |                                                                                 |                        |      | 0.6              | 0.6               | Max   | V    |
| I <sub>IN</sub>                                | Control Input Leakage                | V <sub>IN</sub> = 0V or V <sub>CC</sub>                                         | 3.6                    |      | ±1               | ±1                | Max   | μA   |
| <b>Analog Switch</b>                           |                                      |                                                                                 |                        |      |                  |                   |       |      |
| R <sub>ON</sub>                                |                                      | I <sub>OUT</sub> = 100mA, B0 or B1 = 1.5V                                       | 2.7                    | 3    |                  |                   | Typ   | Ω    |
| R <sub>ON</sub>                                |                                      | I <sub>OUT</sub> = 100mA, B0 or B1 = 1.5V                                       | 2.7                    | 5    | 8                | 8                 | Max   | Ω    |
| ΔR <sub>ON</sub>                               | Maximum ON resistance                | I <sub>OUT</sub> = 100mA, B0 or B1 = 1.5V                                       | 2.7                    | 0.5  | 0.6              | 0.6               | Max   | Ω    |
| R <sub>FLAT(ON)</sub>                          | On Resistance Flatness               | I <sub>OUT</sub> = 100mA, B0 or B1 = 0V, 0.75V, 1.5V                            | 2.7                    | 1.5  | 2                | 2                 | Max   | Ω    |
| I <sub>NO(OFF)</sub> ,<br>I <sub>NC(OFF)</sub> | Switch OFF Leakage Current on B0, B1 | A = 1V, 4.5V, B0 or B1 = 4.5V, 1V                                               | 3.6                    | ±10  | ±50              | ±100              | Max   | nA   |
| I <sub>A(OFF)</sub>                            | Switch OFF Leakage Current on A      | A = 1V, 4.5V, B0 or B1 = 4.5V, 1V                                               | 3.6                    | ±20  | ±100             | ±200              | Max   | nA   |
| I <sub>A(ON)</sub>                             | Switch ON Leakage Current on A       | A = 1V, 4.5V, B0 or B1 = 1V, 4.5V or Floating                                   | 3.6                    | ±20  | ±100             | ±200              | Max   | nA   |
| <b>Dynamic Characteristics</b>                 |                                      |                                                                                 |                        |      |                  |                   |       |      |
| t <sub>PHL</sub> ,<br>t <sub>PLH</sub>         | Switch IN to OUT time                | B0 or B1 = 1.5V, R <sub>L</sub> = 50Ω, C <sub>L</sub> = 35pF, Figure 3          | 2.7                    | 10   |                  |                   | Typ   | ns   |
| t <sub>PZH</sub> ,<br>t <sub>PZL</sub>         | Switch turn-on time                  | B0 or B1 = 1.5V, R <sub>L</sub> = 50Ω, C <sub>L</sub> = 35pF, Figure 3          | 2.7                    | 70   | 80               | 80                | Max   | ns   |
| t <sub>PHZ</sub> ,<br>t <sub>PLZ</sub>         | Switch turn-off time                 | B0 or B1 = 1.5V, R <sub>L</sub> = 50Ω, C <sub>L</sub> = 35pF, Figure 3          | 2.7                    | 25   | 40               | 40                | Max   | ns   |
| t <sub>B</sub>                                 | Break before make time               | B0 or B1 = 1.5V, R <sub>L</sub> = 50Ω, C <sub>L</sub> = 35pF, Figure 4          | 2.7                    | 20   |                  |                   | Typ   | ns   |
| Q                                              | Charge Injection                     | C <sub>L</sub> = 1.0nF, V <sub>GEN</sub> = 0V, R <sub>GEN</sub> = 0Ω, Figure 5  | 3                      | 20   |                  |                   | Typ   | pC   |
|                                                | OFF-Isolation                        | f = 1MHz, R <sub>L</sub> = 50Ω, Figure 6                                        | 3                      | -65  |                  |                   | Typ   | dB   |
|                                                | Crosstalk                            | f = 1MHz, R <sub>L</sub> = 50Ω, Figure 7                                        | 3                      | -65  |                  |                   | Typ   | dB   |
| BW                                             | Bandwidth                            | R <sub>L</sub> = 50Ω                                                            | 3                      | 100  |                  |                   | Typ   | MHz  |
| THD                                            | Total Harmonic Distortion            | R <sub>L</sub> = 600Ω, V <sub>IN</sub> = 0.5V <sub>PP</sub> , f = 20Hz to 20kHz | 3                      | 0.01 |                  |                   | Typ   | %    |

**V<sub>CC</sub> = 1.65 to 1.95V, unless otherwise noted.**

| Symbol                                         | Parameter                               | Conditions                                                                         | V <sub>CC</sub><br>(V) | 25°C | -40°C to<br>85°C | -40°C to<br>125°C | Limit | Unit |
|------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------|------------------------|------|------------------|-------------------|-------|------|
| <b>Power Supply</b>                            |                                         |                                                                                    |                        |      |                  |                   |       |      |
| I <sub>CC</sub>                                | Quiescent Supply Current                | V <sub>IN</sub> = 0V or V <sub>CC</sub>                                            | 1.95                   | 0.3  | 0.5              | 1.5               | Max   | μA   |
| <b>Digital Input</b>                           |                                         |                                                                                    |                        |      |                  |                   |       |      |
| V <sub>IH</sub>                                | Input Voltage High                      |                                                                                    |                        |      | 1.4              | 1.4               | Min   | V    |
| V <sub>IL</sub>                                | Input Voltage Low                       |                                                                                    |                        |      | 0.4              | 0.4               | Max   | V    |
| I <sub>IN</sub>                                | Control Input Leakage                   | V <sub>IN</sub> = 0V or V <sub>CC</sub>                                            | 1.95                   |      | ±1               | ±1                | Max   | μA   |
| <b>Analog Switch</b>                           |                                         |                                                                                    |                        |      |                  |                   |       |      |
| R <sub>ON</sub>                                |                                         | I <sub>OUT</sub> = 10mA, B0 or B1 = 0.9V                                           | 1.65                   | 15   |                  |                   | Typ   | Ω    |
| R <sub>ON</sub>                                |                                         | I <sub>OUT</sub> = 10mA, B0 or B1 = 0.9V                                           | 1.65                   | 20   | 25               | 25                | Max   | Ω    |
| ΔR <sub>ON</sub>                               | Maximum ON resistance                   | I <sub>OUT</sub> = 10mA, B0 or B1 = 0.9V                                           | 1.65                   | 3    | 5                | 5                 | Max   | Ω    |
| I <sub>NO(OFF)</sub> ,<br>I <sub>NC(OFF)</sub> | Switch OFF Leakage<br>Current on B0, B1 | A = 0V, 1.95V,<br>B0 or B1 = 1.95V, 0V                                             | 1.95                   | ±10  | ±50              | ±100              | Max   | nA   |
| I <sub>A(OFF)</sub>                            | Switch OFF Leakage<br>Current on A      | A = 0V, 1.95V,<br>B0 or B1 = 1.95V, 0V                                             | 1.95                   | ±20  | ±100             | ±200              | Max   | nA   |
| I <sub>A(ON)</sub>                             | Switch ON Leakage Current<br>on A       | A = 0V, 1.95V,<br>B0 or B1 = 0V, 1.95V or Floating                                 | 1.95                   | ±20  | ±100             | ±200              | Max   | nA   |
| <b>Dynamic Characteristics</b>                 |                                         |                                                                                    |                        |      |                  |                   |       |      |
| t <sub>PHL</sub> , t <sub>PLH</sub>            | Switch IN to OUT time                   | B0 or B1 = 1.0V, R <sub>L</sub> = 50Ω, C <sub>L</sub> =<br>35pF, Figure 3          | 1.65                   | 10   |                  |                   | Typ   | ns   |
| t <sub>PZH</sub> , t <sub>PZL</sub>            | Switch turn-on time                     | B0 or B1 = 1.0V, R <sub>L</sub> = 50Ω, C <sub>L</sub> =<br>35pF, Figure 3          | 1.65                   | 80   | 90               | 90                | Max   | ns   |
| t <sub>PHZ</sub> , t <sub>PLZ</sub>            | Switch turn-off time                    | B0 or B1 = 1.0V, R <sub>L</sub> = 50Ω, C <sub>L</sub> =<br>35pF, Figure 3          | 1.65                   | 50   | 70               | 70                | Max   | ns   |
| t <sub>B</sub>                                 | Break before make time                  | B0 or B1 = 1.0V, R <sub>L</sub> = 50Ω, C <sub>L</sub> =<br>35pF, Figure 4          | 1.65                   | 20   |                  |                   | Max   | ns   |
| Q                                              | Charge Injection                        | C <sub>L</sub> = 1.0nF, V <sub>GEN</sub> = 0V, R <sub>GEN</sub> = 0Ω,<br>Figure 5  | 1.8                    | 20   |                  |                   | Typ   | pC   |
|                                                | OFF-Isolation                           | f = 1MHz, R <sub>L</sub> = 50Ω, Figure 6                                           | 1.8                    | -65  |                  |                   | Typ   | dB   |
|                                                | Crosstalk                               | f = 1MHz, R <sub>L</sub> = 50Ω, Figure 7                                           | 1.8                    | -65  |                  |                   | Typ   | dB   |
| BW                                             | Bandwidth                               | R <sub>L</sub> = 50Ω                                                               | 1.8                    | 100  |                  |                   | Typ   | MHz  |
| THD                                            | Total Harmonic Distortion               | R <sub>L</sub> = 600Ω, V <sub>IN</sub> = 0.5V <sub>PP</sub> , f = 20Hz to<br>20kHz | 1.8                    | 0.01 |                  |                   | Typ   | %    |

**T<sub>A</sub> = 0°C to 50°C, unless otherwise noted.**

| Symbol                                         | Parameter                               | Conditions                                       | V <sub>CC</sub><br>(V) | Spec | Limit | Unit |
|------------------------------------------------|-----------------------------------------|--------------------------------------------------|------------------------|------|-------|------|
| I <sub>NO(OFF)</sub> ,<br>I <sub>NC(OFF)</sub> | Switch OFF Leakage<br>Current on B0, B1 | A = 1V, 4.5V,<br>B0 or B1 = 4.5V, 1V             | 3.6                    | ±10  | Max   | nA   |
| I <sub>A(OFF)</sub>                            | Switch OFF Leakage<br>Current on A      | A = 1V, 4.5V,<br>B0 or B1 = 4.5V, 1V             | 3.6                    | ±20  | Max   | nA   |
| I <sub>A(ON)</sub>                             | Switch ON Leakage Current<br>on A       | A = 1V, 4.5V,<br>B0 or B1 = 1V, 4.5V or Floating | 3.6                    | ±20  | Max   | nA   |
| I <sub>NO(OFF)</sub> ,<br>I <sub>NC(OFF)</sub> | Switch OFF Leakage<br>Current on B0, B1 | A = 1V, 4.5V,<br>B0 or B1 = 4.5V, 1V             | 5.5                    | ±10  | Max   | nA   |
| I <sub>A(OFF)</sub>                            | Switch OFF Leakage<br>Current on A      | A = 1V, 4.5V,<br>B0 or B1 = 4.5V, 1V             | 5.5                    | ±20  | Max   | nA   |
| I <sub>A(ON)</sub>                             | Switch ON Leakage Current<br>on A       | A = 1V, 4.5V,<br>B0 or B1 = 1V, 4.5V or Floating | 5.5                    | ±20  | Max   | nA   |

## Typical Performance Characteristics

$V_{CC} = 5V$ , unless otherwise specified.

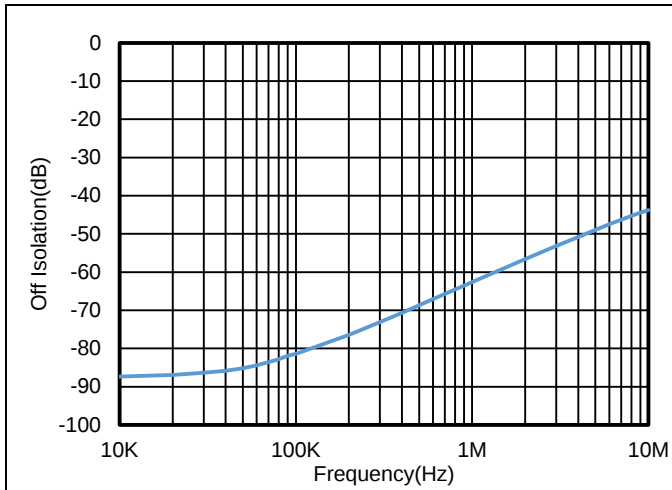


Figure 1. Off-Isolation,  $V_{CC} = 4.5V$

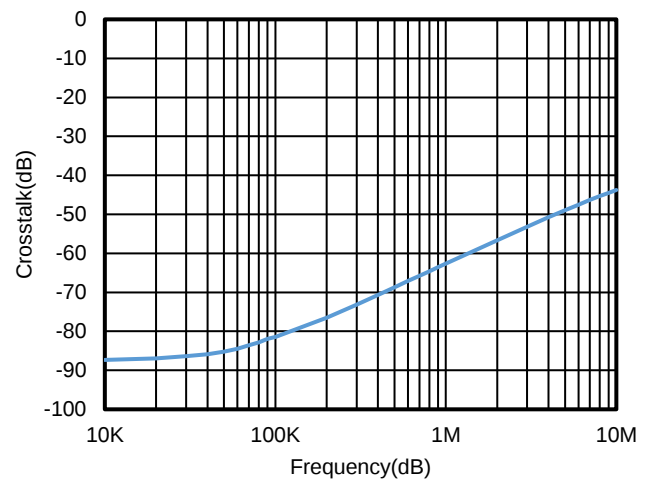


Figure 2. Crosstalk,  $V_{CC} = 4.5V$

## Test Circuit and Waveforms

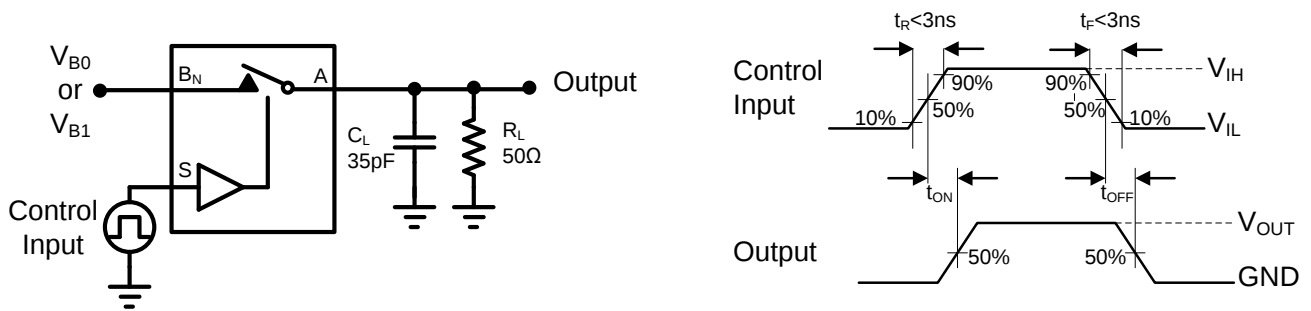


Figure 3 AC Test Circuit and Test Waveforms

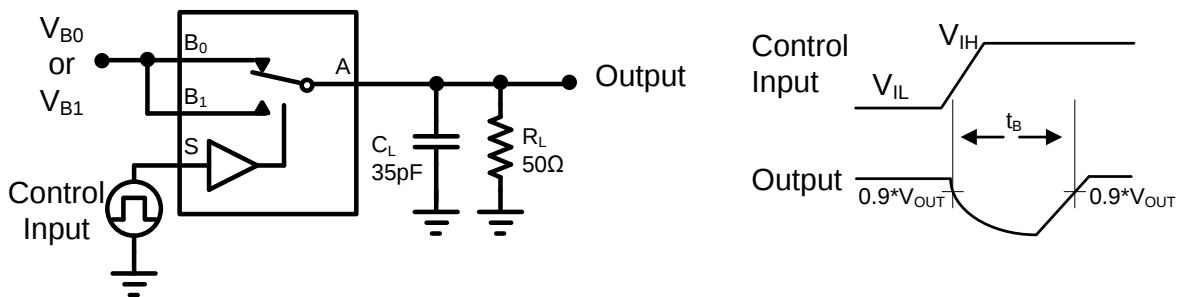


Figure 4 Switch Break Time

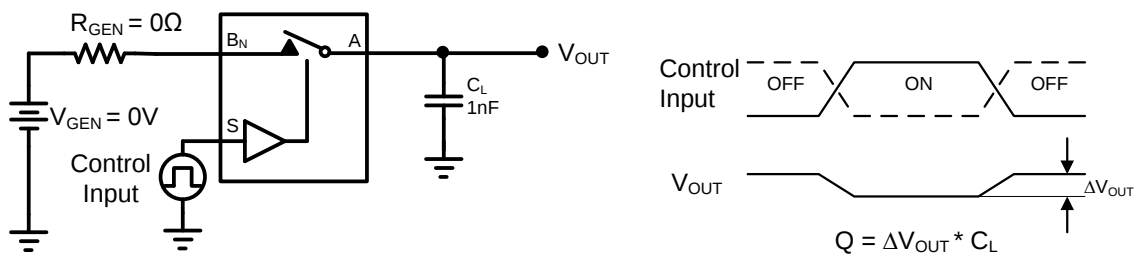


Figure 5 Charge Injection

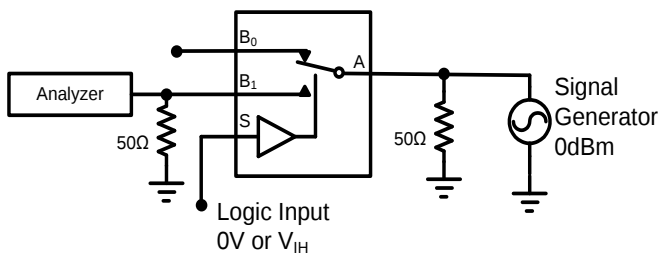


Figure 6 Off Isolation

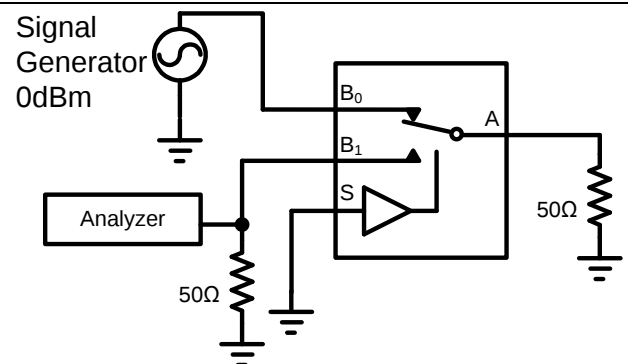
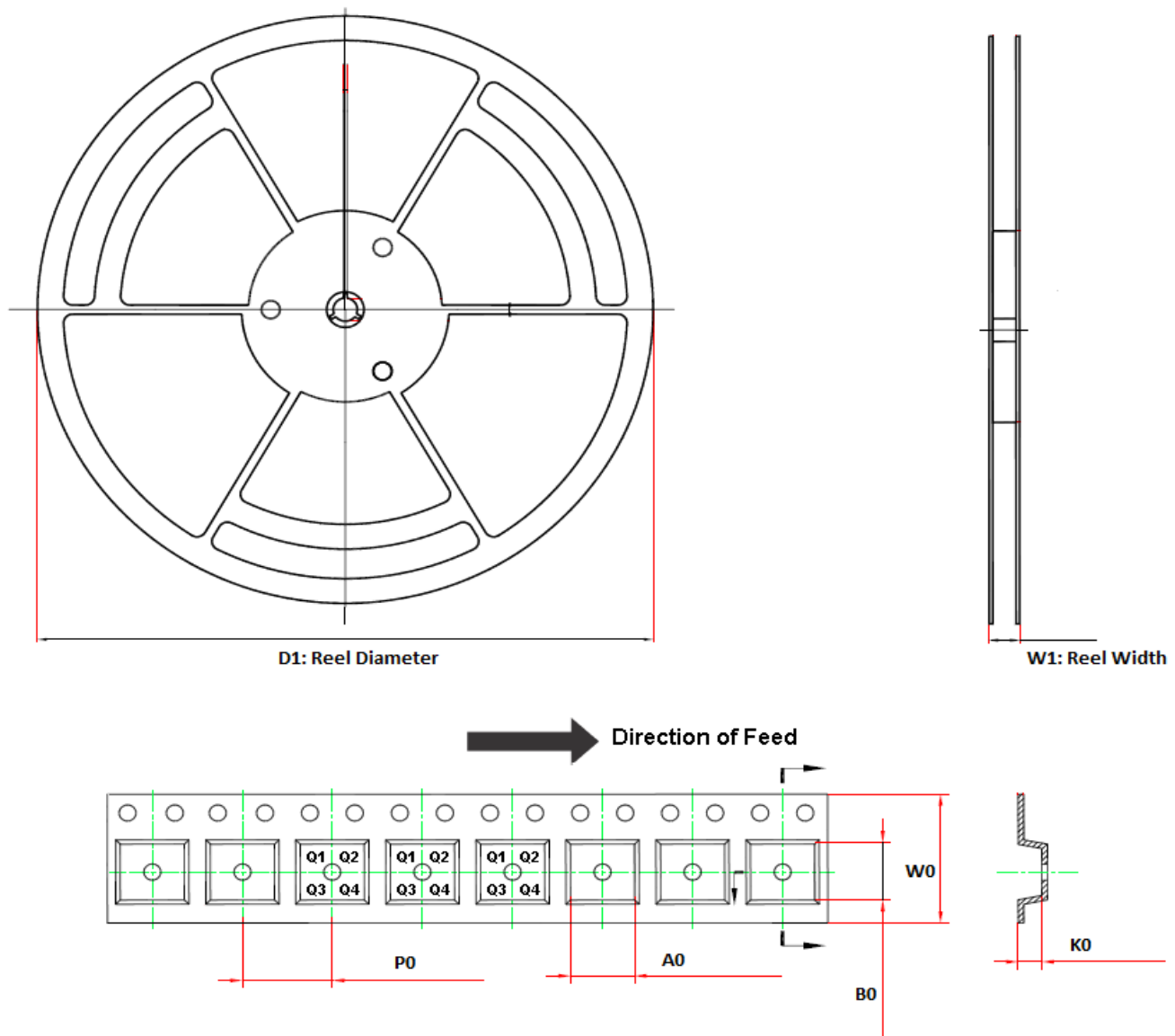


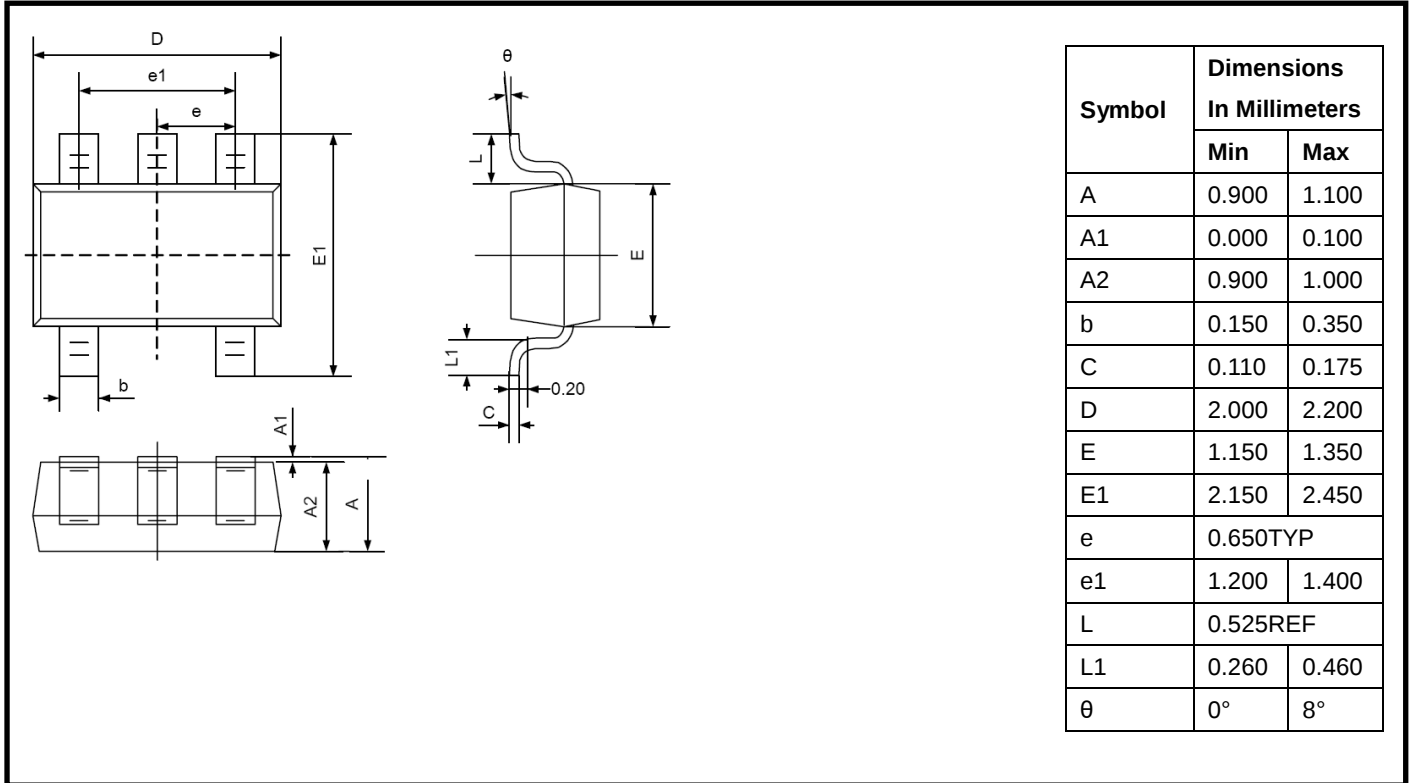
Figure 7 Crosstalk

## Tape and Reel Information

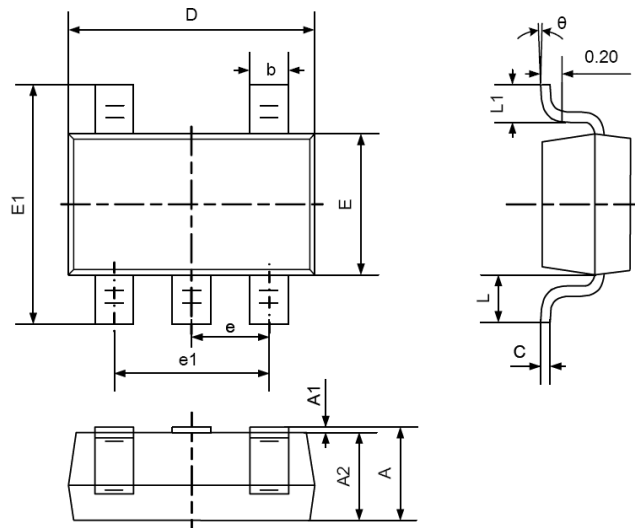


| Order Number | Package     | D1    | W1     | A0       | B0       | K0       | P0      | W0      | Pin1<br>Quadrant |
|--------------|-------------|-------|--------|----------|----------|----------|---------|---------|------------------|
| TPW3157A-CR  | 6-Pin SC70  | 178±1 | 12.3±1 | 2.4±0.1  | 2.5±0.1  | 1.2±0.1  | 4.0±0.1 | 8.0±0.1 | Q3               |
| TPW3157A-TR  | 6-Pin SOT23 | 178±1 | 12.3±1 | 3.23±0.1 | 3.17±0.1 | 1.37±0.1 | 4.0±0.1 | 8.0±0.1 | Q3               |

## Package Outline Dimensions

**SC70-5/6**


## SOT23-5/6



| Symbol | Dimensions<br>In Millimeters |       |
|--------|------------------------------|-------|
|        | Min                          | Max   |
| A      | 1.050                        | 1.250 |
| A1     | 0.000                        | 0.100 |
| A2     | 1.000                        | 1.150 |
| b      | 0.300                        | 0.500 |
| C      | 0.100                        | 0.200 |
| D      | 2.820                        | 3.020 |
| E      | 1.500                        | 1.700 |
| E1     | 2.600                        | 3.000 |
| e      | 0.950TYP                     |       |
| e1     | 1.800                        | 2.000 |
| L      | 0.600REF                     |       |
| L1     | 0.300                        | 0.600 |
| θ      | 0°                           | 8°    |

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