# 5-V, 10-ns Comparators with Push-Pull Output

## Features

- Power Supply Voltage: 2.5 V to 5.5 V
- Low Supply Current: 650 µA per channel
- Propagation Delay: 10 ns
- Internal Hysteresis Ensures Clean Switching
- Offset Voltage: ±10 mV
- Input Bias Current: 30 pA Typical
- Input Common-Mode Range Extends 100 mV
- Push-Pull Output

## Applications

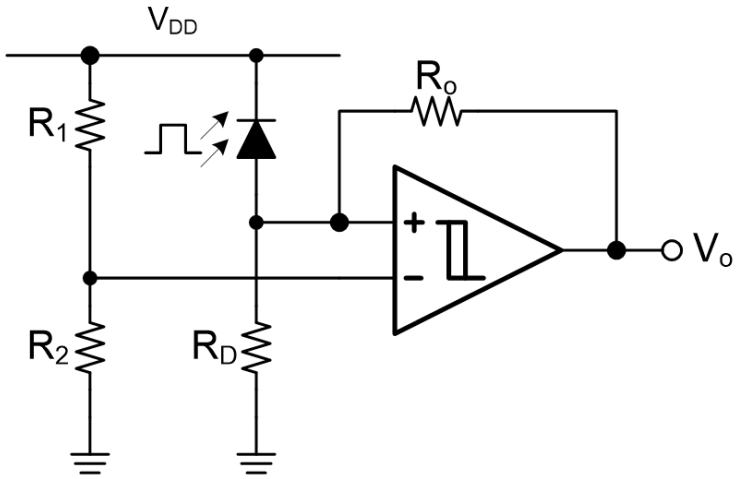
- Peak and Zero-crossing Detectors
- Threshold Detectors/Discriminators
- Sensing at the Ground or Supply Line
- Logic Level Shifting or Translation
- Power Supply

## Description

The devices are low-power, high-speed comparators with internal hysteresis. The common-mode input voltage range extends 100 mV beyond the power rail. The devices have 10-ns propagation delay which makes the devices suitable for high-speed applications. The internal input hysteresis eliminates output switching due to input noise voltage. The devices have push-pull output to support rail-to-rail output swing.

The devices are specified for the temperature range from −40°C to +125°C.

## Typical Application Circuit



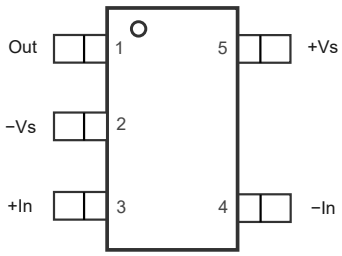
# Table of Contents

## Revision History

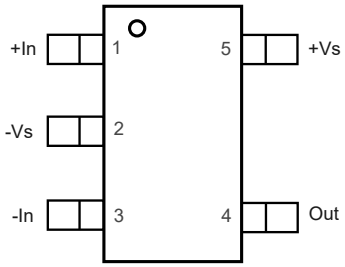
| Date | Revision | Notes |
|---|---|---|
| 2023-08-23 | Rev.A.0 | Initial version. |
| 2023-09-12 | Rev.A.1 | Added the minimum spec of ISC |

## Pin Configuration and Functions

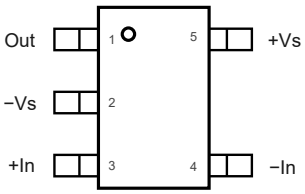
TPCMP271
SOT23-5 Package
Top View




TPCMP271U
SOT23-5 Package
Top View




TPCMP271
SOT353-5(SC70) Package
Top View




TPCMP271U
SOT353-5(SC70) Package
Top View

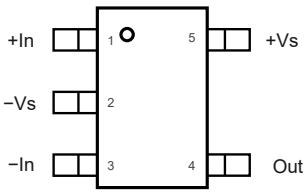
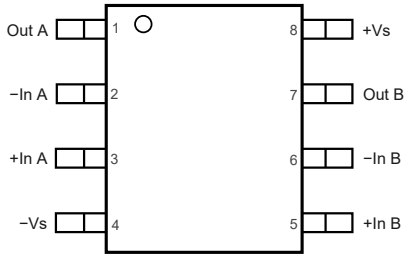



**Table 1. Pin Functions: TPCMP271, TPCMP271U**

| Pin No. | | Name | I/O | Description |
|---|---|---|---|---|
| TPCMP271 | TPCMP271U | | | |
| 1 | 4 | Out | O | Output |
| 2 | 2 | −$V_S$ | - | Negative power supply |
| 3 | 1 | +In | I | Noninverting input |
| 4 | 3 | −In | I | Inverting input |
| 5 | 5 | +$V_S$ | - | Positive power supply |

TPCMP272
SOP8 Package
Top View




TPCMP272
MSOP8 Package
Top View

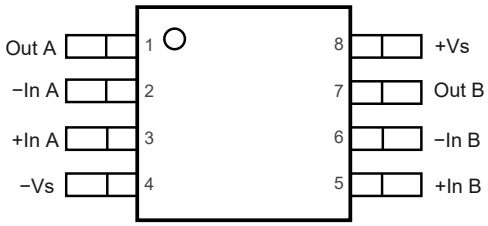



**Table 2. Pin Functions: TPCMP272**

| Pin No. | Name | I/O | Description |
|---|---|---|---|
| 1 | Out A | O | Output |
| 2 | −In A | I | Inverting input |
| 3 | +In A | I | Noninverting input |
| 4 | $-V_S$ | - | Negative power supply |
| 5 | +In B | I | Noninverting input |
| 6 | −In B | I | Inverting input |
| 7 | Out B | O | Output |
| 8 | $+V_S$ | | Positive power supply |

# Specifications

## Absolute Maximum Ratings (1)

| Parameter | | Min | Max | Unit |
|---|---|---|---|---|
| | Supply Voltage, $(+V_S) – (-V_S)$ | | 6.5 | V |
| | Input Voltage | $(-V_S) – 0.3$ | 6.5 | V |
| | Input Current: +IN, −IN (2) | −10 | +10 | mA |
| | Output Current: OUT | −10 | +10 | mA |
| | Output Short-Circuit Duration (3) | | Thermal protection | |
| $T_J$ | Maximum Junction Temperature | | 150 | °C |
| $T_A$ | Operating Temperature Range | −40 | 125 | °C |
| $T_{STG}$ | Storage Temperature Range | –65 | 150 | °C |
| $T_L$ | Lead Temperature (Soldering 10 sec) | | 260 | °C |

(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.
(2) The inputs are protected by ESD protection diodes to each power supply. If the input extends more than 500 mV beyond the negative power supply, the input current should be limited to less than 10 mA.
(3) A heat sink may be required to keep the junction temperature below the absolute maximum. This depends on the power supply voltage and how many comparator are shorted. Thermal resistance varies with the amount of PC board metal connected to the package. The specified values are for short traces connected to the leads.

## ESD, Electrostatic Discharge Protection

| Parameter | | Condition | Level | Unit |
|---|---|---|---|---|
| HBM | Human Body Model ESD | ANSI/ESDA/JEDEC JS-001 (1) | 4 | kV |
| CDM | Charged Device Model ESD | ANSI/ESDA/JEDEC JS-002 (2) | 1.5 | kV |

(1) JEDEC document JEP155 states that 500-V HBM allows safe manufacturing with a standard ESD control process.
(2) JEDEC document JEP157 states that 250-V CDM allows safe manufacturing with a standard ESD control process.

## Recommended Operating Conditions

| Parameter | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| $V_S$ | Supply Voltage, (+VS) – (−VS) | 2.5 | | 5.5 | V |

## Thermal Information

| Package Type | $\theta_{JA}$ | $\theta_{JC}$ | Unit |
|---|---|---|---|
| SOT23-5 | 250 | 81 | °C/W |

## Electrical Characteristics

All test conditions: $V_S$ = 5 V, $T_A$ = 25°C, unless otherwise noted.

| Parameter | | Conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| **Power Supply** | | | | | | | |
| $I_Q$ | Quiescent Current per Comparator | $V_{CM}$ = 0 V | | | 650 | | μA |
| | | $V_{CM}$ = 0 V, $T_A$ = −40°C to 125°C | | | | 800 | μA |
| PSRR | Power Supply Rejection Ratio | $V_S$ = 2.5 V to 5 V, $V_{CM}$ = 0 V | | 60 | 75 | | dB |
| | | $V_S$ = 2.5 V to 5 V, $V_{CM}$ = 0 V, $T_A$ = −40°C to 125°C | | 50 | | | dB |
| **Input Characteristics** | | | | | | | |
| $V_{OS}$ | Input Offset Voltage (1) | $V_{CM}$ = 0 V to 5 V | | −10 | 1 | 10 | mV |
| | | $V_{CM}$ = 0 V to 5 V, $T_A$ = −40°C to 125°C | | −15 | | 15 | mV |
| | Input Offset Voltage Drift (2) | $T_A$ = −40°C to 125°C | | | 2 | | μV/°C |
| $V_{HYST}$ | Input Hysteresis Voltage (1) | $V_{CM}$ = 0 V to 5 V | | | 7 | 10 | mV |
| | | $V_{CM}$ = 0 V to 5 V, $T_A$ = −40°C to 125°C | | | | 15 | mV |
| | Input Hysteresis Voltage Drift(2) | $T_A$ = −40°C to 125°C | | | 20 | | μV/°C |
| $I_B$ | Input Bias Current (2) | $V_{CM}$ = 2.5 V | | | 30 | | pA |
| | | $V_{CM}$ = 2.5 V, $T_A$ = −40°C to 125°C | | | 300 | 240000 | pA |
| $I_{OS}$ | Input Offset Current (2) | $V_{CM}$ = 2.5 V | | | 2 | | pA |
| | | $V_{CM}$ = 2.5 V, $T_A$ = −40°C to 125°C | | | 20 | 240000 | pA |
| $C_{IN}$ | Input Capacitance (4) | $T_A$ = 25°C | Differential | | 2 | | pF |
| | | | Common Mode | | 3 | | |
| $V_{CM}$ | Common-mode Input Voltage Range | $T_A$ = −40°C to 125°C | | $(-V_S)$ − 0.1 | | $(+V_S)$+ 0.1 | V |
| CMRR | Common Mode Rejection Ratio | $V_{CM}$ = 0 V to 5 V | | 49 | 70 | | dB |
| | | $V_{CM}$ = 0 V to 5 V, $T_A$ = −40°C to 125°C | | 46 | | | dB |
| **Output Characteristics** | | | | | | | |
| $I_{SC}$ | Output Short-Circuit Current | Sink or source current | | 70 | 120 | | mA |
| | | Sink or source current, $T_A$ = −40°C to 125°C | | 50 | | | mA |
| $V_{OH}$ | Output Voltage Swing from Positive Rail | $I_{OL}$ = 4 mA, $V_{ID}$ = −1 V | | | 55 | 80 | mV |
| | | $I_{OL}$ = 4 mA, $V_{ID}$ = −1 V, $T_A$ = −40°C to 125°C | | | | 100 | mV |
| | | $I_{OL}$ = 1 mA, $V_{ID}$ = −1 V | | | 15 | 26 | mV |
| | | $I_{OL}$ = 1 mA, $V_{ID}$ = −1 V, $T_A$ = −40°C to 125°C | | | | 35 | mV |
| $V_{OL}$ | Output Voltage Swing from Negative Rail | $I_{OL}$ = 4 mA, $V_{ID}$ = −1 V | | | 33 | 55 | mV |
| | | $I_{OL}$ = 4 mA, $V_{ID}$ = −1 V, $T_A$ = −40°C to 125°C | | | | 75 | mV |
| | | $I_{OL}$ = 1 mA, $V_{ID}$ = −1 V | | | 10 | 15 | mV |

| Parameter | | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| | | $I_{OL}$ = 1 mA, $V_{ID}$ = −1 V, $T_A$ = −40°C to 125°C | | | 25 | mV |
| **Switching Characteristics, $T_A$ = −40°C to 125°C (3)** | | | | | | |
| $T_{PLH}$ | Propagation delay time, low-to high | $\Delta V_{IN}$ = 1 V, $V_{CM}$ = 0 V, 100mV overdrive(2) | | 10 | 16 | ns |
| | | $\Delta V_{IN}$ = 1 V, $V_{CM}$ = 0 V, 20mV overdrive(2) | | 12 | 25 | ns |
| $T_{PHL}$ | Propagation delay time, high-to low | $\Delta V_{IN}$ = 1 V, $V_{CM}$ = 0 V, 100mV overdrive(2) | | 10 | 16 | ns |
| | | $\Delta V_{IN}$ = 1 V, $V_{CM}$ = 0 V, 20mV overdrive(2) | | 13 | 25 | ns |
| $T_R$ | Rise time | (2) (5) | | 0.9 | | ns |
| $T_F$ | Fall time | (2) (5) | | 0.9 | | ns |
| $T_{SKEW}$ | \| TPLH – TPHL \| | (2) | | 1 | | ns |
| $f_{Max}$ | Maximum toggle frequency | 100-mV overdrive (4) | | 50 | | MHz |

(1) The input offset voltage is the average of the input-referred trip points. The input hysteresis is the difference between the input-referred trip points.
(2) Provided by bench test and design simulation.
(3) Delay time is measured from mid-point of input to mid-point of output.
(4) Provided by design simulation.
(5) Measured between 10% of $V_S$ and 90% of $V_S$.

## Electrical Characteristics (continued)

All test conditions: $V_S$ = 2.5 V, $T_A$ = 25°C, unless otherwise noted.

| Parameter | | Conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| **Power Supply** | | | | | | | |
| $I_Q$ | Quiescent Current per Comparator | $V_{CM}$ = 0 V | | | 650 | | µA |
| | | $V_{CM}$ = 0 V, $T_A$= −40°C to 125°C | | | | 800 | µA |
| **Input Characteristics** | | | | | | | |
| $V_{OS}$ | Input Offset Voltage (1) | $V_{CM}$ = 0 V to 2.5 V | | −10 | 1 | 10 | mV |
| | | $V_{CM}$ = 0 V to 2.5 V, $T_A$= −40°C to 125°C | | −15 | | 15 | mV |
| | Input Offset Voltage Drift (2) | $T_A$= −40°C to 125°C | | | 2 | | µV/°C |
| $V_{HYST}$ | Input Hysteresis Voltage (1) | $V_{CM}$ = 0 V to 2.5 V | | | 7 | 10 | mV |
| | | $V_{CM}$ = 0 V to 2.5 V, $T_A$= −40°C to 125°C | | | | 15 | mV |
| | Input Hysteresis Voltage Drift (2) | $T_A$= −40°C to 125°C | | | 20 | | µV/°C |
| $I_B$ | Input Bias Current (2) | $V_{CM}$ = 1.25 V | | | 30 | | pA |
| | | $V_{CM}$ = 1.25 V, $T_A$= −40°C to 125°C | | | 300 | 240000 | pA |
| $I_{OS}$ | Input Offset Current (2) | $V_{CM}$ = 1.25 V | | | 2 | | pA |
| | | $V_{CM}$ = 1.25 V, $T_A$= −40°C to 125°C | | | 20 | 240000 | pA |
| $C_{IN}$ | Input Capacitance (4) | $T_A$ = 25°C | Differential | | 2 | | pF |
| | | | Common Mode | | 3 | | |
| $V_{CM}$ | Common-mode Input Voltage Range | $T_A$ = −40°C to 125°C | | ($-V_S$) − 0.1 | | ($+V_S$)+ 0.1 | V |
| CMRR | Common Mode Rejection Ratio | $V_{CM}$ = 0 V to 2.5 V | | 49 | 63 | | dB |
| | | $V_{CM}$ = 0 V to 2.5 V, $T_A$ = −40°C to 125°C | | 46 | | | dB |
| **Output Characteristics** | | | | | | | |
| $I_{SC}$ | Output Short-Circuit Current (2) | Sink or source current | | 26 | 34 | | mA |
| | | Sink or source current, $T_A$ = −40°C to 125°C | | 20 | | | mA |
| $V_{OH}$ | Output Voltage Swing from Positive Rail | $I_{OL}$ = 4 mA, $V_{ID}$ = −1 V | | | 90 | 135 | mV |
| | | $I_{OL}$ = 4 mA, $V_{ID}$ = −1 V, $T_A$= −40°C to 125°C | | | | 170 | mV |
| | | $I_{OL}$ = 1 mA, $V_{ID}$ = −1 V | | | 22 | 35 | mV |
| | | $I_{OL}$ = 1 mA, $V_{ID}$ = −1 V, $T_A$= −40°C to 125°C | | | | 45 | mV |
| $V_{OL}$ | Output Voltage Swing from Negative Rail | $I_{OL}$ = 4 mA, $V_{ID}$ = −1 V | | | 51 | 85 | mV |
| | | $I_{OL}$ = 4 mA, $V_{ID}$ = −1 V, $T_A$= −40°C to 125°C | | | | 115 | mV |
| | | $I_{OL}$ = 1 mA, $V_{ID}$ = −1 V | | | 13 | 25 | mV |
| | | $I_{OL}$ = 1 mA, $V_{ID}$ = −1 V, $T_A$= −40°C to 125°C | | | | 35 | mV |
| **Switching Characteristics, $T_A$ = −40°C to 125°C (3)** | | | | | | | |

| Parameter | | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $T_{PLH}$ | Propagation delay time, low-to high | $\Delta V_{IN}$ = 1 V, $V_{CM}$ = 0 V, 100mV overdrive (4) | | 8.2 | 14 | ns |
| | | $\Delta V_{IN}$ = 1 V, $V_{CM}$ = 0 V, 20mV overdrive (4) | | 15 | 24 | ns |
| $T_{PHL}$ | Propagation delay time, high-to low | $\Delta V_{IN}$ = 1 V, $V_{CM}$ = 0 V, 100mV overdrive (4) | | 9 | 15 | ns |
| | | $\Delta V_{IN}$ = 1 V, $V_{CM}$ = 0 V, 20mV overdrive (4) | | 16 | 25 | ns |
| $T_R$ | Rise time | (2) (5) | | 1.8 | | ns |
| $T_F$ | Fall time | (2) (5) | | 1.55 | | ns |
| $T_{SKEW}$ | \| TPLH – TPHL \| | (2) | | 1 | | ns |
| $f_{Max}$ | Maximum toggle frequency | 100mV overdrive (4) | | 50 | | MHz |

(1) The input offset voltage is the average of the input-referred trip points. The input hysteresis is the difference between the input-referred trip points.
(2) Provided by bench test and design simulation.
(3) Delay time is measured from mid-point of input to mid-point of output.
(4) Provided by design simulation.
(5) Measured between 10% of $V_S$ and 90% of $V_S$.

## Typical Performance Characteristics

All test conditions: $V_S$ = 5 V, $V_{CM}$ = 0 V, $V_{overdrive}$ = 100 mV, $R_L$ = Open, unless otherwise noted.

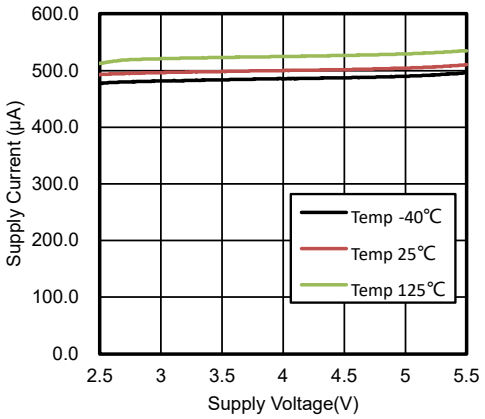



**Figure 1. Supply Current vs. Supply Voltage, Output High**

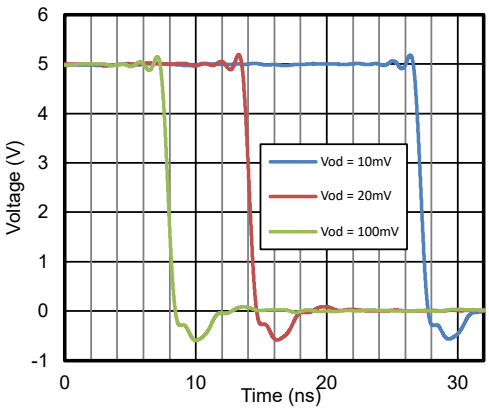



**Figure 2. Propagation Delay, High to Low**

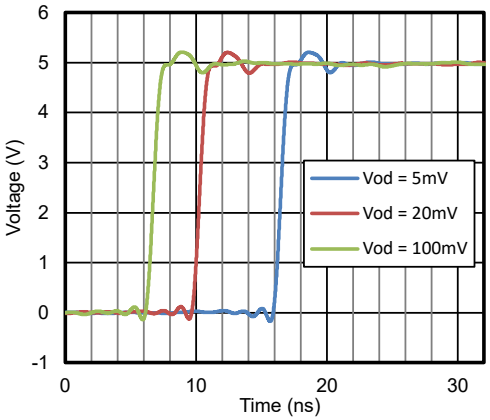



**Figure 3. Propagation Delay, Low to High**

# Application and Implementation

> Note
>
> Information in the following application sections is not part of the 3PEAK's component specification and 3PEAK does not warrant its accuracy or completeness. 3PEAK's customers are responsible for determining suitability of components for their purposes. Customers should validate and test their design implementation to confirm system functionality.

## Application Information

#### Power Supply Layout and Bypass

The power supply pin of the TPCMP27x family is supposed to have a local bypass capacitor (i.e., 0.01 μF to 0.1 μF) within 2 mm for good high-frequency performance. It can also use a bulk capacitor (i.e., 1 μF or larger) within 100 mm to provide large, slow currents. This bulk capacitor can be shared with other analog parts.

Good ground layout improves performance by decreasing the amount of stray capacitance and noise at the comparator's inputs and outputs. To decrease stray capacitance, minimize PCB lengths and resistor leads, and place external components as close to the comparator pins as possible.

#### Operation Outside of the Common Input Voltage Range

The following is a list of input voltage situation and their outcomes:

1. When both −IN and +IN are within the common-mode range:
   a. If the voltage at the −IN pin is higher than the voltage at the +IN pin and the offset voltage, the output is low and the output MOSFET is sinking current.
   b. If the voltage at the −IN pin is lower than the voltage at the +IN pin and the offset voltage, the ouput is high and output MOSFET is sourcing current.
2. When the voltage at the −IN pin is higher than the common-mode voltage range and the voltage at the +IN pin is within the common-mode voltage range, the output is low and the output MOSFET is sinking current.
3. When the voltage at the +IN pin is higher than the common-mode voltage range and the voltage at the −IN pin is within the common-mode voltage range, the output is high impedance.
4. When the voltage at the −IN and +IN pins are both higher than the common-mode voltage range, the output is in an uncertain state.

## Typical Application

**IR Receiver**

The device is an ideal candidate to be used as an infrared receiver shown in Figure 4. The infrared photo diode creates a current relative to the amount of infrared light present. The current creates a voltage across RD. When this voltage level crosses the voltage applied by the voltage divider to the inverting input, the output transitions. Optional Ro provides additional hysteresis for noise immunity.

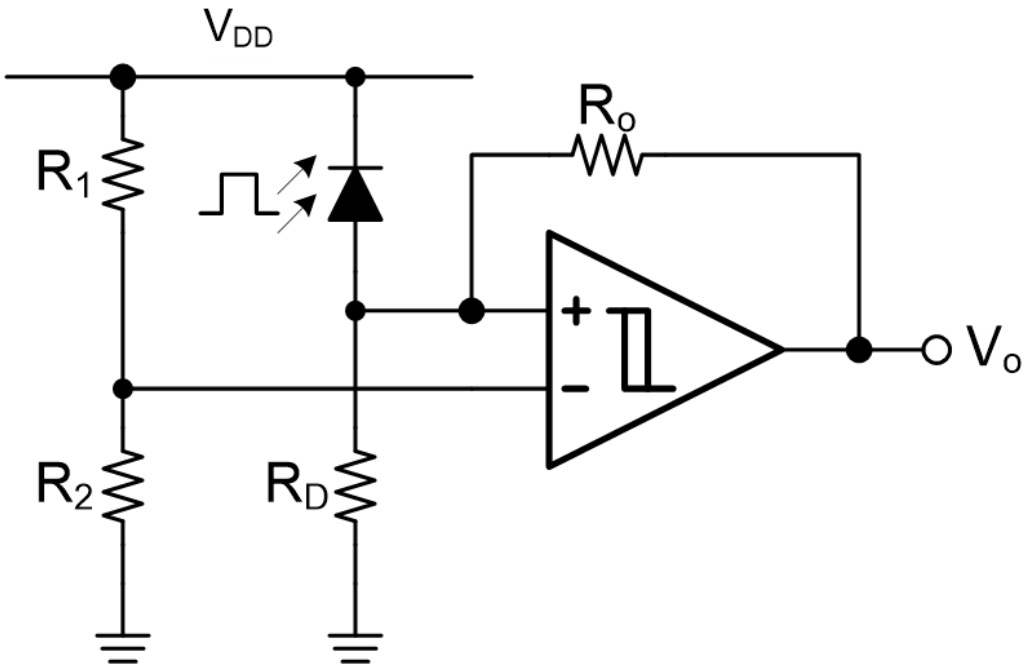
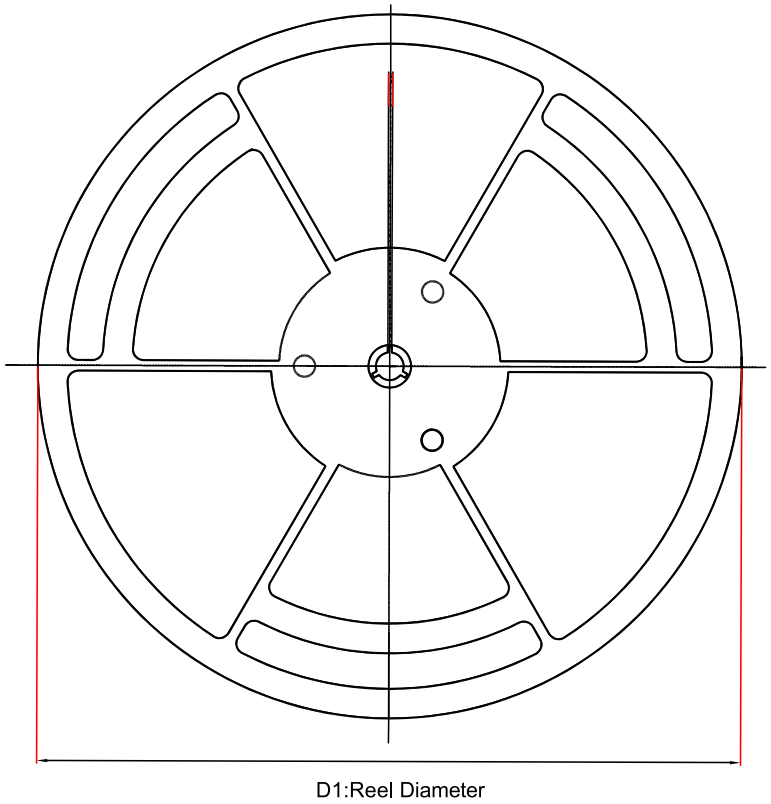
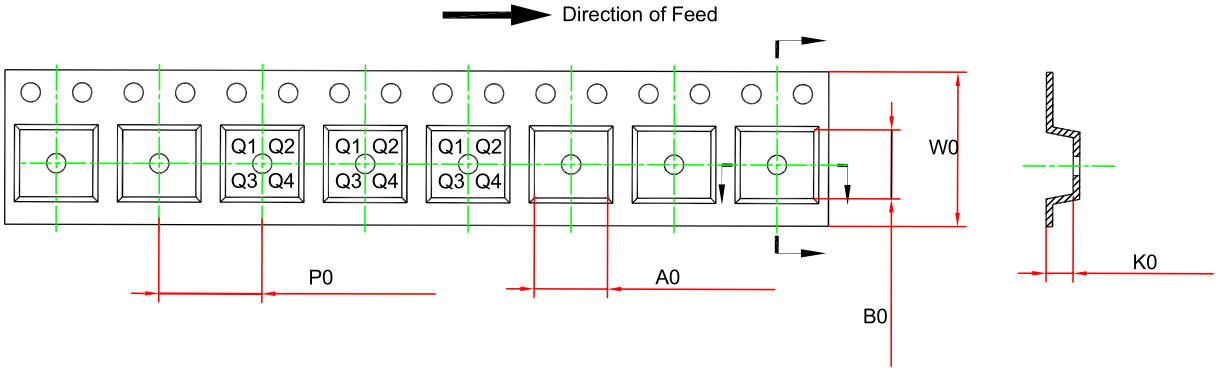



**Figure 4. Typical Application Circuit**

## Tape and Reel Information



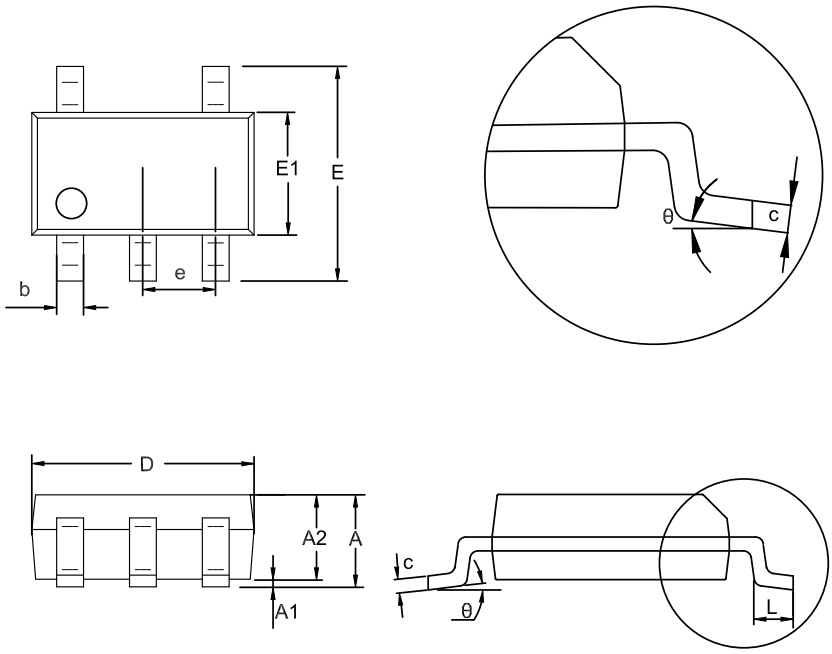




| Order Number | Package | D1 (mm) | W1 (mm) | A0 (mm) | B0 (mm) | K0 (mm) | P0 (mm) | W0 (mm) | Pin1 Quadrant |
|---|---|---|---|---|---|---|---|---|---|
| TPCMP271-S5TR | SOT23-5 | 179 | 12 | 3.3 | 3.25 | 1.4 | 4 | 8 | Q3 |
| TPCMP271U-S5TR | SOT23-5 | 179 | 12 | 3.3 | 3.25 | 1.4 | 4 | 8 | Q3 |
| TPCMP271-SC5R | SOT353(SC70-5) | 178 | 12.1 | 2.4 | 2.5 | 1.2 | 4 | 8 | Q3 |
| TPCMP271U-SC5R | SOT353(SC70-5) | 178 | 12.1 | 2.4 | 2.5 | 1.2 | 4 | 8 | Q3 |
| TPCMP272-SO1R | SOP8 | 330 | 17.6 | 6.5 | 5.4 | 2 | 8 | 12 | Q1 |
| TPCMP272-VS1R | MSOP8 | 330 | 17.6 | 5.2 | 3.3 | 1.5 | 8 | 12 | Q1 |

## Package Outline Dimensions

### SOT23-5

Package Outline Dimensions S5T(SOT23-5-A)



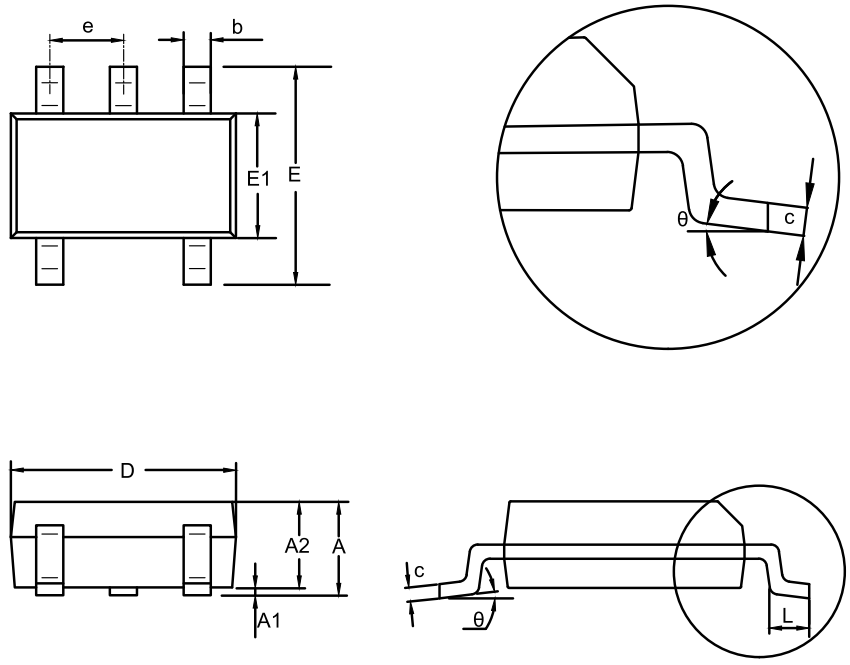

| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | MIN | MAX | MIN | MAX |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.150 | 0.000 | 0.006 |
| A2 | 1.000 | 1.200 | 0.039 | 0.047 |
| b | 0.280 | 0.500 | 0.011 | 0.020 |
| c | 0.100 | 0.230 | 0.004 | 0.009 |
| D | 2.820 | 3.020 | 0.111 | 0.119 |
| E | 2.600 | 3.000 | 0.102 | 0.118 |
| E1 | 1.500 | 1.720 | 0.059 | 0.068 |
| e | 0.950 BSC | | 0.037 BSC | |
| L | 0.300 | 0.600 | 0.012 | 0.024 |
| θ | 0 | 8° | 0 | 8° |

NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

**SOT353-5**

## Package Outline Dimensions SC5(SOT353-5-A)



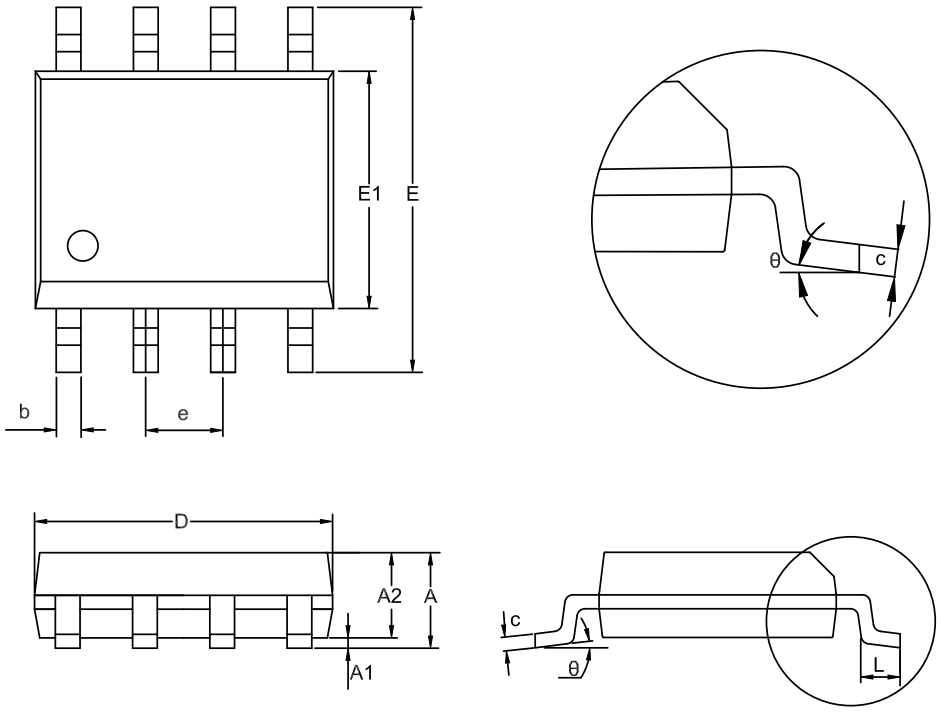

| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | MIN | MAX | MIN | MAX |
| A | 0.850 | 1.100 | 0.033 | 0.043 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.800 | 1.000 | 0.031 | 0.039 |
| b | 0.150 | 0.350 | 0.006 | 0.014 |
| c | 0.110 | 0.230 | 0.004 | 0.009 |
| D | 2.000 | 2.200 | 0.079 | 0.087 |
| E | 2.150 | 2.450 | 0.085 | 0.096 |
| E1 | 1.150 | 1.350 | 0.045 | 0.053 |
| e | 0.650 BSC | | 0.026 BSC | |
| L | 0.260 | 0.460 | 0.010 | 0.018 |
| θ | 0 | 8° | 0 | 8° |

NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

## SOP8

Package Outline Dimensions SO1(SOP-8-A)



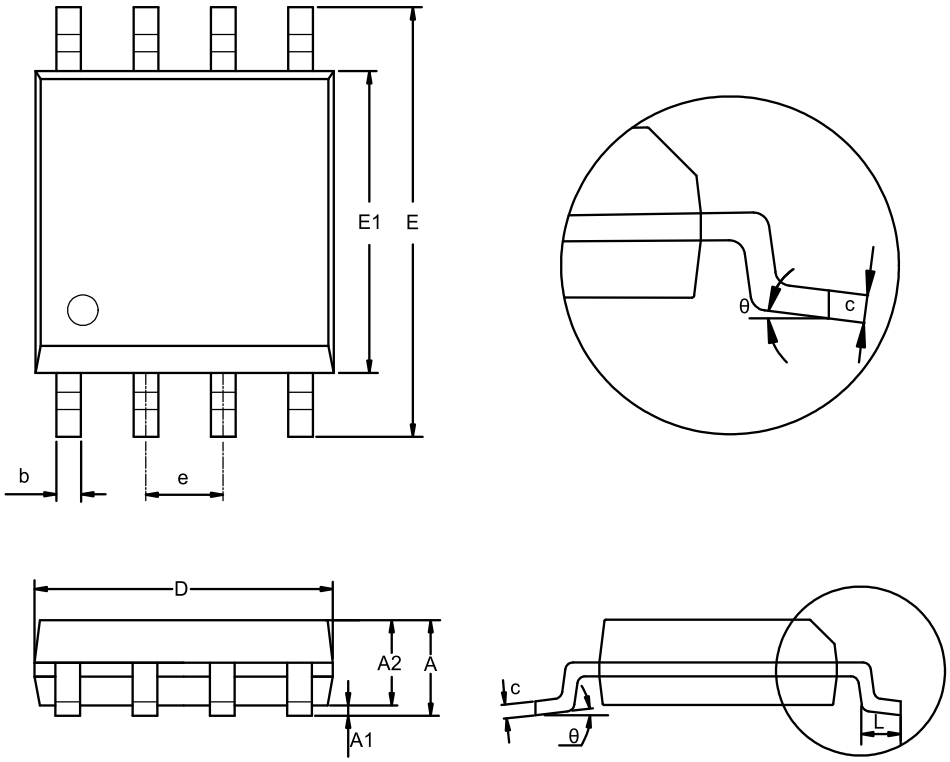

| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | MIN | MAX | MIN | MAX |
| A | 1.350 | 1.750 | 0.053 | 0.069 |
| A1 | 0.050 | 0.250 | 0.002 | 0.010 |
| A2 | 1.250 | 1.550 | 0.049 | 0.061 |
| b | 0.330 | 0.510 | 0.013 | 0.020 |
| c | 0.170 | 0.250 | 0.007 | 0.010 |
| D | 4.700 | 5.100 | 0.185 | 0.201 |
| E | 5.800 | 6.200 | 0.228 | 0.244 |
| E1 | 3.800 | 4.000 | 0.150 | 0.157 |
| e | 1.270 BSC | | 0.050 BSC | |
| L | 0.400 | 1.000 | 0.016 | 0.039 |
| θ | 0 | 8° | 0 | 8° |

NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

**MSOP8**

## Package Outline Dimensions VS1(MSOP-8-A)




| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | MIN | MAX | MIN | MAX |
| A | 0.800 | 1.100 | 0.031 | 0.043 |
| A1 | 0.020 | 0.150 | 0.001 | 0.006 |
| A2 | 0.750 | 0.950 | 0.030 | 0.037 |
| b | 0.250 | 0.380 | 0.010 | 0.015 |
| c | 0.090 | 0.230 | 0.004 | 0.009 |
| D | 2.900 | 3.100 | 0.114 | 0.122 |
| E | 4.700 | 5.100 | 0.185 | 0.201 |
| E1 | 2.900 | 3.100 | 0.114 | 0.122 |
| e | 0.650 BSC | | 0.026 BSC | |
| L | 0.400 | 0.800 | 0.016 | 0.031 |
| θ | 0 | 8° | 0 | 8° |

NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

## Order Information

| Order Number | Operating Temperature Range | Package | Marking Information | MSL | Transport Media, Quantity | Eco Plan |
|---|---|---|---|---|---|---|
| TPCMP271-S5TR | −40 to 125°C | SOT23-5 | A17 | 2 | Tape and Reel,3000 | Green |
| TPCMP271U-S5TR(3) | −40 to 125°C | SOT23-5 | A18 | 2 | Tape and Reel,3000 | Green |
| TPCMP271-SC5R(3) | −40 to 125°C | SOT353(SC70-5) | A17 | 2 | Tape and Reel,3000 | Green |
| TPCMP271U-SC5R(3) | −40 to 125°C | SOT353(SC70-5) | A18 | 2 | Tape and Reel,3000 | Green |
| TPCMP272-SO1R(3) | −40 to 125°C | SOP8 | CM272 | 2 | Tape and Reel,4000 | Green |
| TPCMP272-VS1R | −40 to 125°C | MSOP8 | CM272 | 2 | Tape and Reel,3000 | Green |

(1) The sample will be ready in 1 month.
(2) The sample will be ready in 2 months after manufacture starts.
(3) For future products, contact the 3PEAK factory for more information and samples.

**Green**: 3PEAK defines "Green" to mean RoHS compatible and free of halogen substances.

# IMPORTANT NOTICE AND DISCLAIMER



**Trademarks.** Any of the 思瑞浦 or 3PEAK trade names, trademarks, graphic marks, and domain names contained in this document /material are the property of 3PEAK. You may NOT reproduce, modify, publish, transmit or distribute any Trademark without the prior written consent of 3PEAK.

**Performance Information.** Performance tests or performance range contained in this document/material are either results of design simulation or actual tests conducted under designated testing environment. Any variation in testing environment or simulation environment, including but not limited to testing method, testing process or testing temperature, may affect actual performance of the product.

**Disclaimer.** 3PEAK provides technical and reliability data (including data sheets), design resources (including reference designs), application or other design recommendations, networking tools, security information and other resources "As Is". 3PEAK makes no warranty as to the absence of defects, and makes no warranties of any kind, express or implied, including without limitation, implied warranties as to merchantability, fitness for a particular purpose or non-infringement of any third-party's intellectual property rights. Unless otherwise specified in writing, products supplied by 3PEAK are not designed to be used in any life-threatening scenarios, including critical medical applications, automotive safety-critical systems, aviation, aerospace, or any situations where failure could result in bodily harm, loss of life, or significant property damage. 3PEAK disclaims all liability for any such unauthorized use.