## TinyLogic UHS Dual Buffer with Schmitt Trigger Inputs

## NC7WZ17

## Description

The NC7WZ17 is a dual buffer with Schmitt trigger inputs from onsemi's Ultra-High Speed (UHS) series of TinyLogic products. The device is fabricated with advanced CMOS technology to achieve ultra-high speed with high output drive, while maintaining low static power dissipation over a very broad $\mathrm{V}_{\mathrm{CC}}$ operating range. The device is specified to operate over the 1.65 V to $5.5 \mathrm{~V} \mathrm{~V}_{\mathrm{CC}}$ range. The inputs and outputs are high-impedance when $\mathrm{V}_{\mathrm{CC}}$ is 0 V . Inputs tolerate voltages up to 5.5 V , independent of $\mathrm{V}_{\mathrm{CC}}$ operating voltage. Schmitt trigger inputs achieve 1 V typical hysteresis between the positive- and negative-going input threshold voltage at 5 V .

## Features

- Ultra-High Speed: $\mathrm{t}_{\mathrm{PD}}=3.6 \mathrm{~ns}$ (Typical) into 50 pF at $5 \mathrm{~V} \mathrm{~V}_{\mathrm{CC}}$
- High Output Drive: $\pm 24 \mathrm{~mA}$ at $3 \mathrm{~V} \mathrm{~V}_{\mathrm{CC}}$
- Broad $\mathrm{V}_{\mathrm{CC}}$ Operating Range: 1.65 V to 5.5 V
- Matches Performance of LCX when Operated at 3.3 V VCC
- Power Down High-Impedance Inputs / Outputs
- Over-Voltage Tolerance Inputs Facilitate 5 V to 3 V Translation
- Proprietary Noise / EMI Reduction Circuitry
- Ultra-Small MicroPak ${ }^{\mathrm{TM}}$ Packages
- Space-Saving SC-88 Package
- These Devices are $\mathrm{Pb}-$ Free, Halogen Free/BFR Free and are RoHS Compliant


Figure 1. Logic Symbol


| A5, Z17 | $=$ Specific Device Code |
| :--- | :--- |
| KK | $=2$-Digit Lot Run Traceability Code |
| XY | $=2-$ Digit Date Code Format |
| Z | $=$ Assembly Plant Code |
| M | $=$ Date Code |
| - | Pb-Free Package |
|  | (Microdot may be in either location) |

ORDERING INFORMATION
See detailed ordering, marking and shipping information in the package dimensions section on page 6 of this data sheet.

## Pin Configurations



Figure 2. SC-88 (Top View)


NOTES:

1. AAA represents Product Code Top Mark (see ordering code).
2. Orientation of Top Mark determines Pin One location. Read the top product code mark left to right, Pin One is the lower left pin.

Figure 4. SC-88 Pin 1 Orientation

PIN DEFINITIONS

| Pin \# SC70 | Pin \# MicroPak | Name | Description |
| :---: | :---: | :---: | :--- |
| 1 | 1 | $\mathrm{~A}_{1}$ | Input |
| 2 | 2 | GND | Ground |
| 3 | 3 | $\mathrm{~A}_{2}$ | Input |
| 4 | 4 | $\mathrm{Y}_{2}$ | Output |
| 5 | 5 | $\mathrm{~V}_{\mathrm{CC}}$ | Supply Voltage |
| 6 | 6 | $\mathrm{Y}_{1}$ | Output |



Figure 3. MicroPak (Top Through View)

FUNCTION TABLE (Y = A)

| Inputs | Output |
| :---: | :---: |
| $\mathbf{A}$ | $\mathbf{Y}$ |
| L | L |
| H | H |

H = HIGH Logic Level
L = LOW Logic Level

ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter |  | Min | Max | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{V}_{\mathrm{CC}}$ | Supply Voltage |  | -0.5 | 6.5 | V |
| $\mathrm{V}_{\text {IN }}$ | DC Input Voltage |  | -0.5 | 6.5 | V |
| $\mathrm{V}_{\text {OUT }}$ | DC Output Voltage |  | -0.5 | 6.5 | V |
| $\mathrm{I}_{\mathrm{IK}}$ | DC Input Diode Current | $\mathrm{V}_{\text {IN }}<0 \mathrm{~V}$ | - | -50 | mA |
| $\mathrm{I}_{\mathrm{OK}}$ | DC Output Diode Current | $\mathrm{V}_{\text {OUT }}<0 \mathrm{~V}$ | - | -50 | mA |
| Iout | DC Output Current |  | - | $\pm 50$ | mA |
| $\mathrm{I}_{\text {CC }}$ or I $\mathrm{I}_{\text {GND }}$ | DC V CC or Ground Current |  | - | $\pm 100$ | mA |
| $\mathrm{T}_{\text {STG }}$ | Storage Temperature Range |  | -65 | +150 | ${ }^{\circ} \mathrm{C}$ |
| $\mathrm{T}_{J}$ | Junction Temperature Under Bias |  | - | +150 | ${ }^{\circ} \mathrm{C}$ |
| $\mathrm{T}_{\mathrm{L}}$ | Junction Lead Temperature (Soldering, 10 Seconds) |  | - | +260 | ${ }^{\circ} \mathrm{C}$ |
| $\mathrm{P}_{\mathrm{D}}$ | Power Dissipation in Still Air | SC-88 | - | 332 | mW |
|  |  | MicroPak-6 | - | 812 |  |
|  |  | MicroPak2 ${ }^{\text {TM }}$-6 | - | 812 |  |
| ESD | Human Body Model, JEDEC: JESD22-A114 |  | - | 4000 | V |
|  | Charge Device Model, JEDEC: JESD22-C101 |  | - | 2000 |  |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

RECOMMENDED OPERATING CONDITIONS

| Symbol | Parameter | Conditions | Min | Max | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{V}_{\mathrm{CC}}$ | Supply Voltage Operating |  | 1.65 | 5.50 | V |
|  | Supply Voltage Data Retention |  | 1.50 | 5.5 |  |
| $\mathrm{V}_{\text {IN }}$ | Input Voltage |  | 0 | 5.5 | V |
| $\mathrm{V}_{\text {OUT }}$ | Output Voltage |  | 0 | $\mathrm{V}_{\mathrm{Cc}}$ | V |
| $\mathrm{T}_{\mathrm{A}}$ | Operating Temperature |  | -40 | +85 | ${ }^{\circ} \mathrm{C}$ |
| $\theta_{\text {JA }}$ | Thermal Resistance | SC-88 | - | 377 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
|  |  | MicroPak-6 | - | 154 |  |
|  |  | MicroPak2-6 | - | 154 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |

Functional operation above the stresses listed in the Recommended Operating Ranges is not implied. Extended exposure to stresses beyond the Recommended Operating Ranges limits may affect device reliability.
3. Unused inputs must be held HIGH or LOW. They may not float.

## DC ELECTICAL CHARACTERISTICS

| Symbol | Parameter | $\mathrm{V}_{\mathrm{cc}}(\mathrm{V})$ | Conditions | $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ |  |  | $\mathrm{T}_{\mathrm{A}}=-40$ to $85^{\circ} \mathrm{C}$ |  | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Min | Typ | Max | Min | Max |  |
| $\mathrm{V}_{\mathrm{P}}$ | Positive Threshold Voltage | 1.65 |  | - | 1.00 | 1.40 | - | 1.40 | V |
|  |  | 1.80 |  | - | 1.07 | 1.50 | - | 1.50 |  |
|  |  | 2.30 |  | - | 1.38 | 1.80 | - | 1.80 |  |
|  |  | 3.00 |  | - | 1.74 | 2.20 | - | 2.20 |  |
|  |  | 4.50 |  | - | 2.43 | 3.10 | - | 3.10 |  |
|  |  | 5.50 |  | - | 2.88 | 3.60 | - | 3.60 |  |

DC ELECTICAL CHARACTERISTICS (continued)

| Symbol | Parameter | $\mathrm{V}_{\mathrm{cc}}(\mathrm{V})$ | Conditions | $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ |  |  | $\mathrm{T}_{\mathrm{A}}=-40$ to $85^{\circ} \mathrm{C}$ |  | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Min | Typ | Max | Min | Max |  |
| $\mathrm{V}_{\mathrm{N}}$ | Negative Threshold Voltage | 1.65 |  | 0.20 | 0.50 | - | 0.20 | - | V |
|  |  | 1.80 |  | 0.25 | 0.56 | - | 0.25 | - |  |
|  |  | 2.30 |  | 0.40 | 0.75 | - | 0.40 | - |  |
|  |  | 3.00 |  | 0.60 | 0.98 | - | 0.60 | - |  |
|  |  | 4.50 |  | 1.00 | 1.42 | - | 1.00 | - |  |
|  |  | 5.50 |  | 1.20 | 1.68 | - | 1.20 | - |  |
| $\mathrm{V}_{\mathrm{H}}$ | Hysteresis Voltage | 1.65 |  | 0.10 | 0.48 | 0.90 | 0.10 | 0.90 | V |
|  |  | 1.80 |  | 0.15 | 0.51 | 1.00 | 0.15 | 1.00 |  |
|  |  | 2.30 |  | 0.25 | 0.62 | 1.10 | 0.25 | 1.10 |  |
|  |  | 3.00 |  | 0.40 | 0.76 | 1.20 | 0.40 | 1.20 |  |
|  |  | 4.50 |  | 0.60 | 1.01 | 1.50 | 0.60 | 1.50 |  |
|  |  | 5.50 |  | 0.70 | 1.20 | 1.70 | 0.70 | 1.70 |  |
| $\mathrm{V}_{\mathrm{OH}}$ | HIGH Level Output Voltage | 1.65 | $\begin{aligned} & \mathrm{V}_{\mathrm{IN}}=\mathrm{V}_{\mathrm{P}} \text { or } \mathrm{V}_{\mathrm{N}}, \\ & \mathrm{I}_{\mathrm{OH}}=-100 \mu \mathrm{~A} \end{aligned}$ | 1.55 | 1.65 | - | 1.55 | - | V |
|  |  | 1.80 |  | 1.70 | 1.80 | - | 1.70 | - |  |
|  |  | 2.30 |  | 2.20 | 2.30 | - | 2.20 | - |  |
|  |  | 3.00 |  | 2.90 | 3.00 | - | 2.90 | - |  |
|  |  | 4.50 |  | 4.40 | 4.50 | - | 4.40 | - |  |
|  |  | 1.65 | $\mathrm{IOH}=-4 \mathrm{~mA}$ | 1.29 | 1.52 | - | 1.29 | - |  |
|  |  | 2.30 | $\mathrm{IOH}=-8 \mathrm{~mA}$ | 1.90 | 2.14 | - | 1.90 | - |  |
|  |  | 3.00 | $\mathrm{I}_{\mathrm{OH}}=-16 \mathrm{~mA}$ | 2.40 | 2.75 | - | 2.40 | - |  |
|  |  | 3.00 | $\mathrm{IOH}=-24 \mathrm{~mA}$ | 2.30 | 2.62 | - | 2.30 | - |  |
|  |  | 4.50 | $\mathrm{IOH}^{\prime}=-32 \mathrm{~mA}$ | 3.80 | 4.13 | - | 3.80 | - |  |
| $\mathrm{V}_{\mathrm{OL}}$ | LOW Level Output Voltage | 1.65 | $\begin{aligned} & \mathrm{V}_{\mathrm{IN}}=\mathrm{V}_{\mathrm{P}} \text { or } \mathrm{V}_{\mathrm{N}}, \\ & \mathrm{I}_{\mathrm{OL}}=100 \mu \mathrm{~A} \end{aligned}$ | - | 0.00 | 0.10 | - | 0.10 | V |
|  |  | 1.80 |  | - | 0.00 | 0.10 | - | 0.10 |  |
|  |  | 2.30 |  | - | 0.00 | 0.10 | - | 0.10 |  |
|  |  | 3.00 |  | - | 0.00 | 0.10 | - | 0.10 |  |
|  |  | 4.50 |  | - | 0.00 | 0.10 | - | 0.10 |  |
|  |  | 1.65 | $\mathrm{I}_{\mathrm{OL}}=4 \mathrm{~mA}$ | - | 0.08 | 0.24 | - | 0.24 |  |
|  |  | 2.30 | $\mathrm{I}_{\mathrm{OL}}=8 \mathrm{~mA}$ | - | 0.10 | 0.30 | - | 0.30 |  |
|  |  | 3.00 | $\mathrm{I}_{\mathrm{OL}}=16 \mathrm{~mA}$ | - | 0.16 | 0.40 | - | 0.40 |  |
|  |  | 3.00 | $\mathrm{l}_{\mathrm{OL}}=24 \mathrm{~mA}$ | - | 0.24 | 0.55 | - | 0.55 |  |
|  |  | 4.50 | $\mathrm{I}_{\mathrm{OL}}=32 \mathrm{~mA}$ | - | 0.25 | 0.550 | - | 0.55 |  |
| $\mathrm{I}_{\mathrm{IN}}$ | Input Leakage Current | 1.65 to 5.5 | $\mathrm{V}_{\mathrm{IN}}=5.5 \mathrm{~V}$, GND | - | - | $\pm 0.1$ | - | $\pm 1.0$ | $\mu \mathrm{A}$ |
| IOFF | Power Off Leakage Current | 0 | $\mathrm{V}_{\text {IN }}$ or $\mathrm{V}_{\text {OUT }}=5.5 \mathrm{~V}$ | - | - | 1 | - | 10 | $\mu \mathrm{A}$ |
| $I_{\text {CC }}$ | Quiescent Supply Current | 1.65 to 5.50 | $\mathrm{V}_{\mathrm{IN}}=5.5 \mathrm{~V}$, GND | - | - | 1 | - | 10 | $\mu \mathrm{A}$ |

AC ELECTRICAL CHARACTERISTICS

| Symbol | Parameter | $\mathrm{V}_{\mathrm{cc}}(\mathrm{V})$ | Conditions | $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ |  |  | $\mathrm{T}_{\text {A }}=-40$ to $85^{\circ} \mathrm{C}$ |  | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Min | Typ | Max | Min | Max |  |
| $\mathrm{t}_{\text {PLH }}$, tPHL | Propagation Delay <br> (Figure 5, 6) | 1.65 | $\begin{aligned} & C_{L}=15 \mathrm{pF}, \\ & R_{L}=1 \mathrm{M} \Omega \end{aligned}$ | - | 8.3 | 14.3 | - | 15.8 | ns |
|  |  | 1.80 |  | - | 6.9 | 11.9 | - | 13.1 |  |
|  |  | $2.50 \pm 0.20$ |  | - | 4.8 | 8.2 | - | 9.0 |  |
|  |  | $3.30 \pm 0.30$ |  | - | 3.7 | 5.6 | - | 6.2 |  |
|  |  | $5.00 \pm 0.50$ |  | - | 3.0 | 4.7 | - | 5.2 |  |
|  |  | $3.30 \pm 0.30$ | $\begin{aligned} & \mathrm{C}_{\mathrm{L}}=50 \mathrm{pF}, \\ & \mathrm{R}_{\mathrm{L}}=500 \Omega \end{aligned}$ | - | 4.3 | 6.6 | - | 7.3 |  |
|  |  | $5.00 \pm 0.50$ |  | - | 3.6 | 5.6 | - | 6.2 |  |
| $\mathrm{C}_{\text {IN }}$ | Input Capacitance | 0 |  | - | 2.5 | - | - | - | pF |
| $\mathrm{C}_{\text {PD }}$ | Power Dissipation Capacitance (Note 4) (Figure 7) | 3.30 |  | - | 10.0 | - | - | - | pF |
|  |  | 5.00 |  | - | 12.0 | - | - | - |  |

4. $\mathrm{C}_{P D}$ is defined as the value of the internal equivalent capacitance which is derived from dynamic operating current consumption (ICCD) at no output loading and operating at $50 \%$ duty cycle. $C_{P D}$ is related to $I_{C C D}$ dynamic operating current by the expression: $I_{C C D}=\left(C_{P D}\right)\left(V_{C C}\right)\left(f_{I N}\right)+\left(I_{C C s t a t i c}\right)$.


NOTE:
5. $\mathrm{C}_{\mathrm{L}}$ includes load and stray capacitance; Input $P R R=1.0 \mathrm{MHz}, \mathrm{t}_{\mathrm{w}}=500 \mathrm{~ns}$

Figure 5. AC Test Circuit


NOTE:
6. Input = AC Waveform; $\mathrm{t}_{\mathrm{r}}=\mathrm{t}_{\mathrm{f}}=1.8 \mathrm{~ns}$;
$P R R=10 \mathrm{MHz}$; Duty Cycle $=50 \%$.
Figure 7. IccD Test Circuit

DEVICE ORDERING INFORMATION

| Device | Top Mark | Packages | Shipping $^{\dagger}$ |
| :--- | :---: | :---: | :---: |
| NC7WZ17P6X | Z17 | 6-Lead SC70, EIAJ SC-88, 1.25 mm Wide | $3000 /$ Tape \& Reel |
| NC7WZ17P6X-L22347 | Z17 | 6-Lead SC70, EIAJ SC-88, 1.25 mm Wide | $3000 /$ Tape \& Reel |
| NC7WZ17L6X | A5 | 6-Lead MicroPak, 1.00 mm Wide | $5000 /$ Tape \& Reel |
| NC7WZ17L6X-L22175 | A5 | 6-Lead MicroPak, 1.00 mm Wide | $5000 /$ Tape \& Reel |
| NC7WZ17FHX | A5 | 6-Lead, MicroPak2, $1 \times 1 \mathrm{~mm}$ Body, .35 mm Pitch | $5000 /$ Tape \& Reel |
| NC7WZ17FHX-L22175 | A5 | 6-Lead, MicroPak2, $1 \times 1 \mathrm{~mm}$ Body, .35 mm Pitch | $5000 /$ Tape \& Reel |

$\dagger$ For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.


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| DESCRIPTION: | SIP6 1.45X1.0 | PAGE 1 OF 1 |

## SC-88 (SC-70 6 Lead), 1.25x2 <br> CASE 419AD <br> ISSUE A

1


TOP VIEW

| SYMBOL | MIN | NOM | MAX |
| :---: | :---: | :---: | :---: |
| A | 0.80 |  | 1.10 |
| A1 | 0.00 |  | 0.10 |
| A2 | 0.80 |  | 1.00 |
| b | 0.15 |  | 0.30 |
| c | 0.10 |  | 0.18 |
| D | 1.80 | 2.00 | 2.20 |
| E | 1.80 | 2.10 | 2.40 |
| E1 | 1.15 | 1.25 | 1.35 |
| e | 0.65 BSC |  |  |
| L | 0.26 | 0.36 | 0.46 |
| L1 | 0.42 REF |  |  |
| L2 | 0.15 BSC |  |  |
| $\theta$ | $0^{\circ}$ |  |  |
| $\theta 1$ | $4^{\circ}$ |  | $8^{\circ}$ |



END VIEW

## Notes:

(1) All dimensions are in millimeters. Angles in degrees.
(2) Complies with JEDEC MO-203.

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| DESCRIPTION: | SC-88 (SC-70 6 LEAD), 1.25X2 | PAGE 1 OF 1 |



RECOMMENDED SOLDERING FOOTPRINT*

*For additional information on our Pb -Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.


NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994 2. CONTROLLING DIMENSION: MILLIMETERS.
2. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.20 PER END.
3. DIMENSIONS D AND E1 AT THE OUTERMOST EXTREMES OF DIMENSIONS D AND E1 AT THE OUT
THE PLASTIC BODY AND DATUM H.
THE PLAST AND B ARE DETERMINED AT DATUM H.
4. DATUMS A AND B ARE DETERMINED AT DATUM H.
5. DIMENSIONS b AND c APPLY TO THE FLAT SECTION OF THE DIMENSIONS b AND c APPLY TO THE FLAT SEC
LEAD BETWEEN 0.08 AND 0.15 FROM THE TIP.
6. DIMENSION b DOES NOT INCLUDE DAMBAR PROTRUSION. ALLOWABLE DAMBAR PROTRUSION SHALL BE 0.08 TOTAL IN EXCESS OF DIMENSION b AT MAXIMUM MATERIAL CONDITION. THE DAMBAR CANNOT BE LOCATED ON THE LOWER RADIUS OF THE FOOT.

| DIM | MILLIMETERS |  |  | INCHES |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MIN | NOM | MAX | MIN | NOM | MAX |
| A | --- | --- | 1.10 | --- | --- | 0.043 |
| A1 | 0.00 | -- | 0.10 | 0.000 | --- | 0.004 |
| A2 | 0.70 | 0.90 | 1.00 | 0.027 | 0.035 | 0.039 |
| b | 0.15 | 0.20 | 0.25 | 0.006 | 0.008 | 0.010 |
| C | 0.08 | 0.15 | 0.22 | 0.003 | 0.006 | 0.009 |
| D | 1.80 | 2.00 | 2.20 | 0.070 | 0.078 | 0.086 |
| E | 2.00 | 2.10 | 2.20 | 0.078 | 0.082 | 0.086 |
| E1 | 1.15 | 1.25 | 1.35 | 0.045 | 0.049 | 0.053 |
| e | 0.65 BSC |  |  | 0.026 BSC |  |  |
| L | 0.26 | 0.36 | 0.46 | 0.010 | 0.014 | 0.018 |
| L2 | 0.15 BSC |  |  | 0.006 BSC |  |  |
| aaa | 0.15 |  |  | 0.006 |  |  |
| bbb | 0.30 |  |  | 0.012 |  |  |
| ccc | 0.10 |  |  | 0.004 |  |  |
| ddd | 0.10 |  |  | 0.004 |  |  |
|  | GENERIC |  |  |  |  |  |
|  | MARKING DIAGRAM* |  |  |  |  |  |



XXX = Specific Device Code
M = Date Code*

- = Pb-Free Package
(Note: Microdot may be in either location)
*Date Code orientation and/or position may vary depending upon manufacturing location.
*This information is generic. Please refer to device data sheet for actual part marking. $\mathrm{Pb}-F r e e$ indicator, " G " or microdot " r ", may or may not be present. Some products may not follow the Generic Marking.


## STYLES ON PAGE 2

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| DESCRIPTION: | SC-88/SC70-6/SOT-363 | PAGE 1 OF 2 |

[^0] rights of others.

## SC-88/SC70-6/SOT-363

CASE 419B-02
ISSUE Y
STYLE 1:
PIN 1. EMITTER 2
2. BASE 2
3. COLLECTOR 1
4. EMITTER 1
5. BASE 1
6. COLLECTOR 2

STYLE 7:
PIN 1. SOURCE 2
2. DRAIN 2
3. GATE 1
4. SOURCE 1
5. DRAIN 1
6. GATE 2

STYLE 13:
PIN 1. ANODE
2. N/C
3. COLLECTOR
4. EMITTER
5. BASE
6. CATHODE

STYLE 19:
PIN 1. IOUT
2. GND
3. GND
4. V CC
5. V EN
6. V REF
STYLE 25:
PIN 1. BASE 1
2. CATHODE
3. COLECTOR 2
4. BASE 2
5. EMITTER
6. COLLECTOR 1
STYLE 2:

CANCELLED
STYLE 8:
CANCELLED

STYLE 14:
PIN 1. VREF
2. GND
3. GND
4. IOUT
5. VEN
6. VCC

STYLE 20:
PIN 1. COLLECTOR
2. COLLECTOR
3. BASE
4. EMITTER
5. COLLECTOR
6. COLLECTOR
STYLE 26:
PIN 1. SOURCE 1
2. GATE 1
3. DRAAN 2
4. SOURCE 2
5. GATE 2
6. DRAIN 1

| STYLE 3 : CANCELLED | STYLE 4: <br> PIN 1. CATHODE <br> 2. CATHODE <br> 3. COLLECTOR <br> 4. EMITTER <br> 5. BASE <br> 6. ANODE | STYLE 5: <br> PIN 1. ANODE <br> 2. ANODE <br> 3. COLLECTOR <br> 4. EMITTER <br> 5. BASE <br> 6. CATHODE | STYLE 6 : <br> PIN 1. ANODE 2 <br> 2. $\mathrm{N} / \mathrm{C}$ <br> 3. CATHODE 1 <br> 4. ANODE 1 <br> 5. N/C <br> 6. CATHODE 2 |
| :---: | :---: | :---: | :---: |
| STYLE 9: | STYLE 10: | STYLE 11: | STYLE 12: |
| PIN 1. EMITTER 2 | PIN 1. SOURCE 2 | PIN 1. CATHODE 2 | PIN 1. ANODE 2 |
| 2. EMITTER 1 | 2. SOURCE 1 | 2. CATHODE 2 | 2. ANODE 2 |
| 3. COLLECTOR 1 | 3. GATE 1 | 3. ANODE 1 | 3. CATHODE 1 |
| 4. BASE 1 | 4. DRAIN 1 | 4. CATHODE 1 | 4. ANODE 1 |
| 5. BASE 2 | 5. DRAIN 2 | 5. CATHODE 1 | 5. ANODE 1 |
| 6. COLLECTOR 2 | 6. GATE 2 | 6. ANODE 2 | 6. CATHODE 2 |
| STYLE 15: | STYLE 16: | STYLE 17: | STYLE 18: |
| PIN 1. ANODE 1 | PIN 1. BASE 1 | PIN 1. BASE 1 | PIN 1. VIN1 |
| 2. ANODE 2 | 2. EMITTER 2 | 2. EMITTER 1 | 2. VCC |
| 3. ANODE 3 | 3. COLLECTOR 2 | 3. COLLECTOR 2 | 3. VOUT2 |
| 4. CATHODE 3 | 4. BASE 2 | 4. BASE 2 | 4. VIN2 |
| 5. CATHODE 2 | 5. EMITTER 1 | 5. EMITTER 2 | 5. GND |
| 6. CATHODE 1 | 6. COLLECTOR 1 | 6. COLLECTOR 1 | 6. VOUT1 |
| STYLE 21: | STYLE 22: | STYLE 23: | STYLE 24: |
| PIN 1. ANODE 1 | PIN 1. D1 (i) | PIN 1. Vn | PIN 1. CATHODE |
| 2. $\mathrm{N} / \mathrm{C}$ | 2. GND | 2. CH 1 | 2. ANODE |
| 3. ANODE 2 | 3. D2 (i) | 3. Vp | 3. CATHODE |
| 4. CATHODE 2 | 4. D2 (c) | 4. N/C | 4. CATHODE |
| 5. N/C | 5. VBUS | 5. CH 2 | 5. CATHODE |
| 6. CATHODE 1 | 6. D1 (c) | 6. N/C | 6. CATHODE |
| STYLE 27: | STYLE 28: | STYLE 29: | STYLE 30: |
| PIN 1. BASE 2 | PIN 1. DRAIN | PIN 1. ANODE | PIN 1. SOURCE 1 |
| 2. BASE 1 | 2. DRAIN | 2. ANODE | 2. DRAIN 2 |
| 3. COLLECTOR 1 | 3. GATE | 3. COLLECTOR | 3. DRAIN 2 |
| 4. EMITTER 1 | 4. SOURCE | 4. EMITTER | 4. SOURCE 2 |
| 5. EMITTER 2 | 5. DRAIN | 5. BASE/ANODE | 5. GATE 1 |
| 6. COLLECTOR 2 | 6. DRAIN | 6. CATHODE | 6. DRAIN 1 |

Note: Please refer to datasheet for style callout. If style type is not called out in the datasheet refer to the device datasheet pinout or pin assignment.

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| DESCRIPTION: | SC-88/SC70-6/SOT-363 | PAGE 2 OF 2 |

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| DESCRIPTION: | UDFN6 1.0X1.0, 0.35P | PAGE 1 OF 1 |

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