

General Description

This device is a 2-bit non-inverting level translator which uses two separate configurable power-supply rails. The A port tracks the V_{CCA} pin supply voltage. The V_{CCA} pin accepts any supply voltage between 1.4V and 3.6V. The B port tracks the V_{CCB} pin supply voltage. The V_{CCB} pin accepts any supply voltage between 1.65V and 5.5V. Two input supply pins allow for low voltage bidirectional translation between any of the 1.5V, 1.8V, 2.5V, 3.3V, and 5V voltage nodes.

When the output-enable (OE) input is low, all outputs are placed in the high-impedance (Hi-Z) state.

To put the device in the Hi-Z state during power-up or power-down periods, tie OE to GND through a pulldown resistor. The current-sourcing capability of the driver determines the minimum value of the resistor.

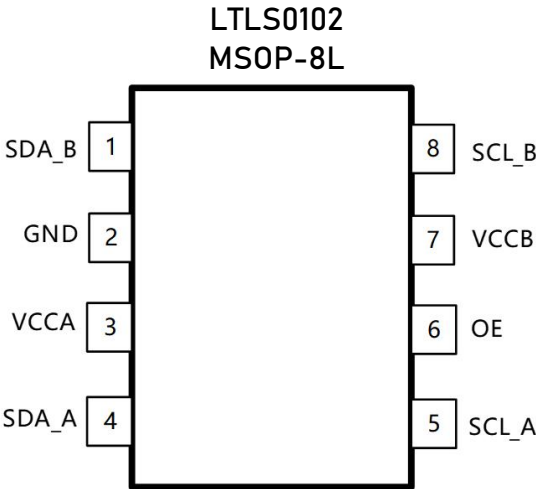
Features

- No direction-control signal needed
- Maximum data rates:
 - 110Mbps (push pull)
 - 1.2Mbps (open drain)
- 1.4V to 3.6V on A port and 1.65V to 5.5V on B port ($V_{CCA} \leq V_{CCB}$)
- No Power-Supply Sequencing required - either V_{CCA} or V_{CCB} can be ramped first
- ESD protection (A port):
 - 2000V Human Body Model
- ESD protection (B-port):
 - ± 8 kV Contact Discharge
 - ± 6 kV Air Discharge

Applications

- Handsets
- Smartphones
- Tablets
- Desktop PCs

Pin Description (Top View)



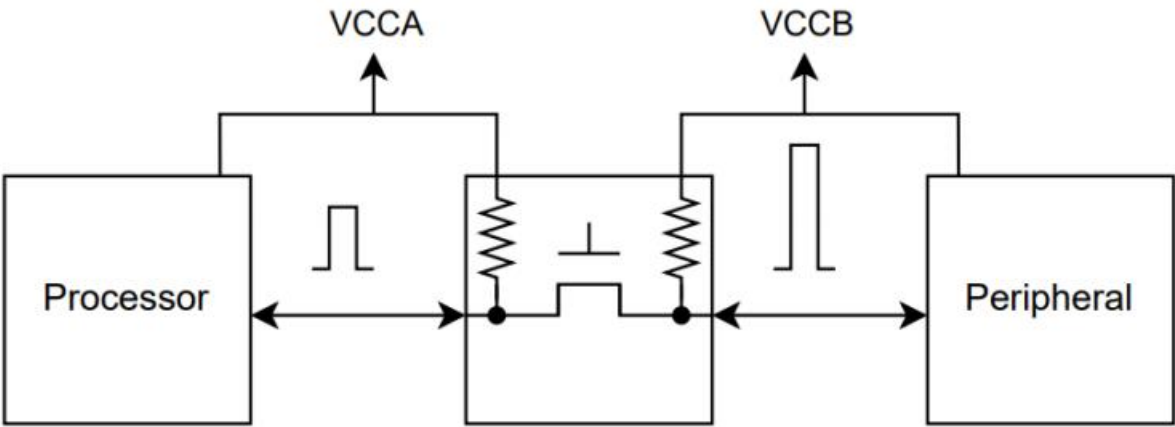
Pin Function

Symbol	Package Pin	Function
SDA_B	1	Input/output B. Referenced to V_{CCB}
GND	2	Ground
VCCA	3	A-port supply voltage. $1.4\text{ V} \leq V_{CCA} \leq 3.6\text{ V}$ and $V_{CCA} \leq V_{CCB}$
SDA_A	4	Input/output A. Referenced to V_{CCA}
SCL_A	5	Input/output A. Referenced to V_{CCA}
OE	6	Output enable (active High). Pull OE low to place all outputs in 3-state mode. Referenced to VCCA.
VCCB	7	B-port supply voltage. $1.65\text{ V} \leq V_{CCB} \leq 5.5\text{ V}$
SCL_B	8	Input/output B. Referenced to V_{CCB}

Ordering Information

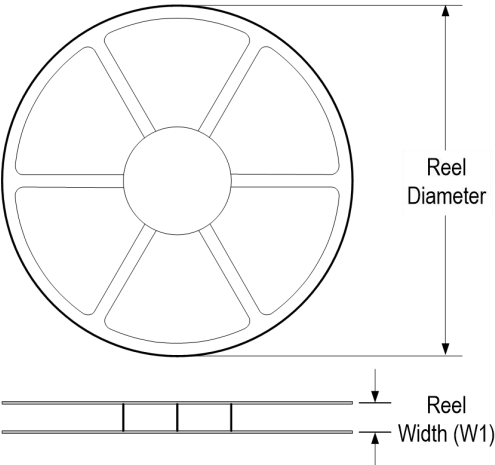
Package Type	Part Number	Quantity	Mark Code
MSOP-8L	LTLS0102YV8/R6	Tape and Reel, 3 000	S102

Typical Application Circuit

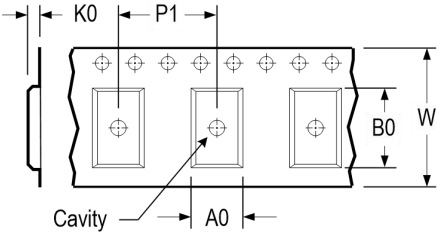


Tape and Reel Information

REEL DIMENSIONS

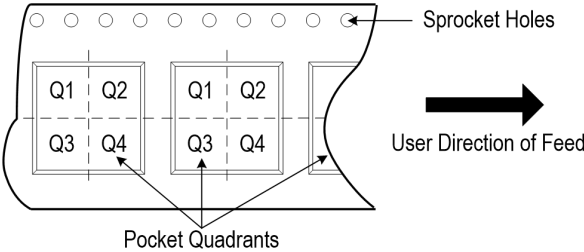


TAPE DIMENSIONS



A0	Dimension designed to accommodate the component width
B0	Dimension designed to accommodate the component length
K0	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE

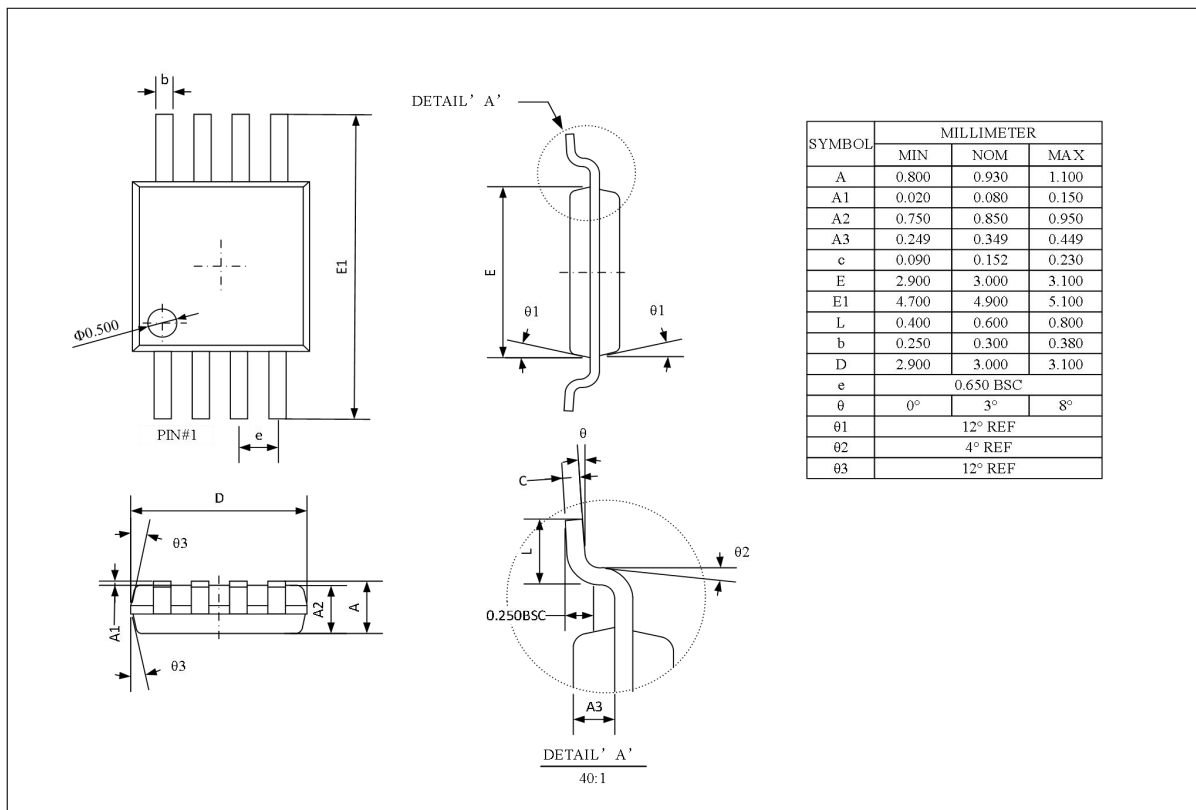


* All dimensions are nominal

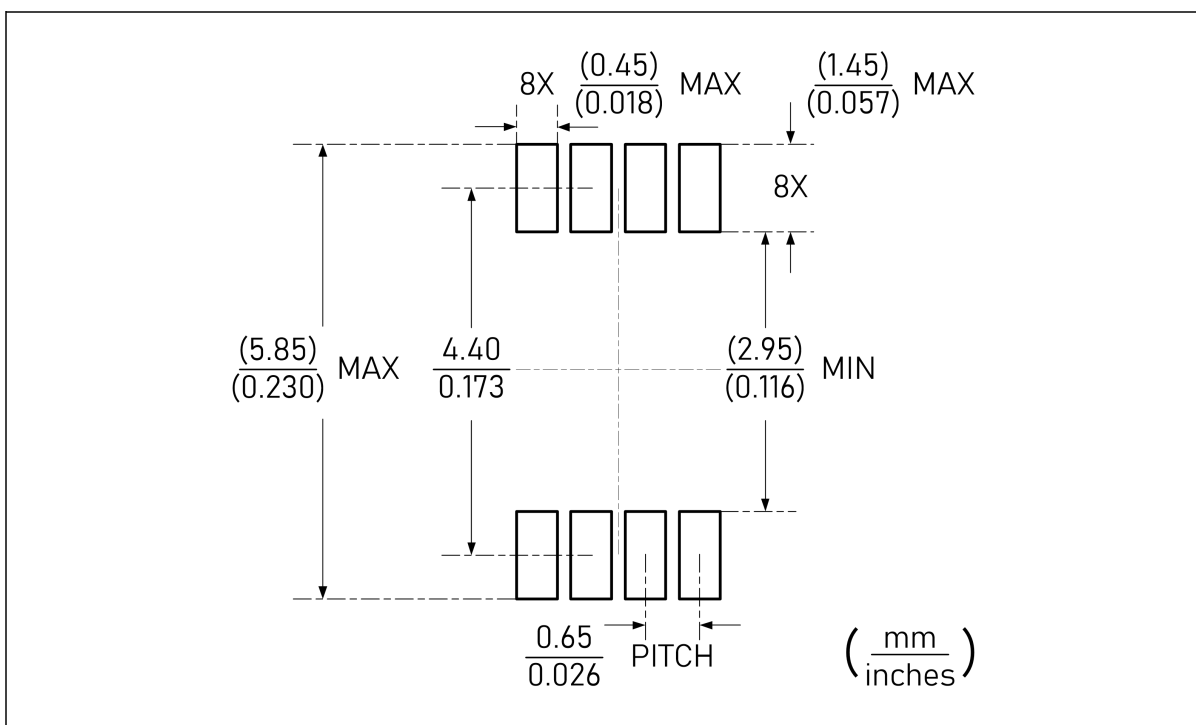
Device	Package Type	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin 1 Quadrant
LTLS0102YV8/R6	MSOP	8	3 000	330	12.5	5.0	3.5	2.0	8.0	12.0	Q1

Package Dimension

DIMENSIONS, MSOP-8L



RECOMMENDED SOLDERING FOOTPRINT, MSOP-8L



Important Notice

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