



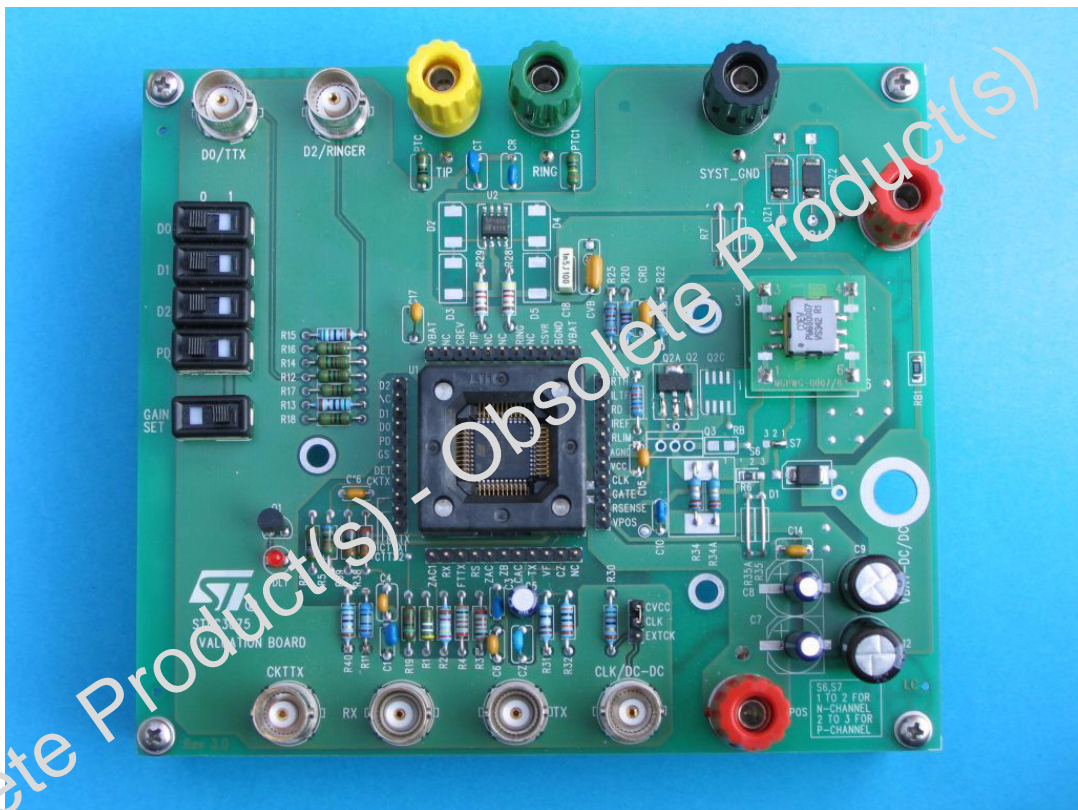
# UM0271 User manual

Evaluation board  
with STLC3075 SLIC for WLL

## Abstract

This document is a simple user manual of the STLC3075 evaluation board, it is not a description of the device functionalities.

This description is available in the STLC3075 data sheet and Application note (AN2132) documents.



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# 1 STLC3075 Evaluation board description

The board is provided of a set of external connectors that permits to test all the functionalities of the STLC3075 chip.

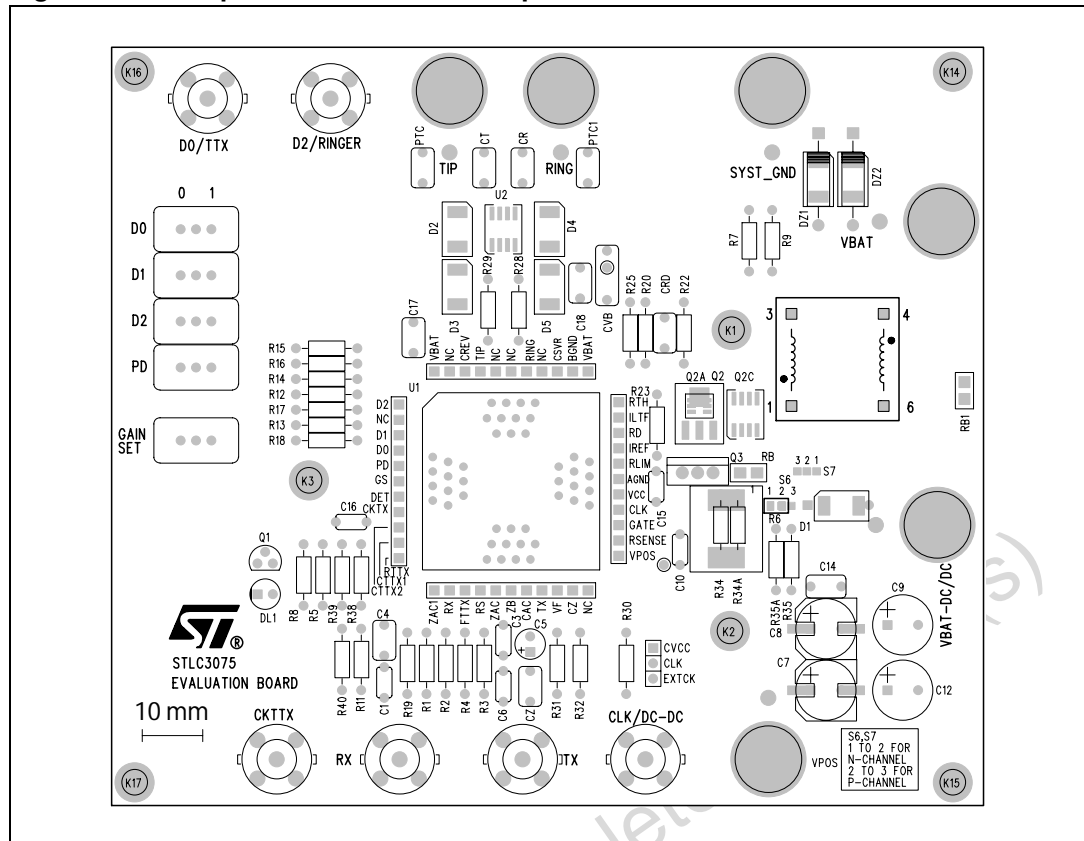
In *Figure 1* is shown the placement of the external connectors and components inside the board.

Following the description of these connectors.

- VPOS is the positive supplier voltage provided to the SLIC.
- SYST-GND is the ground of the board.
- VBAT and VBAT/DC-DC are two outputs and they must be connected together by means a short circuit. They allow to monitor the VBAT behavior.
- TIP and RING are the 2W local loop port.
- RX and TX are the 4W port (TX output, RX input)
- D0/TTX is a control bit (used for ringing and TTX injection)
- D2/RINGER is used to generate the ringing signal: it is a square wave input (from 20Hz to 50Hz)
- CKTTX is the metering pulse clock input (12 or 16 KHz square wave).
- CLK/DC-DC is the 125KHz clock input for the DC-DC converter.  
External CLK will arrive on the CLK pin connecting by the bridge EXTCK point with CLK. Using this type of connection (EXTCK with CLK) and no external CLK signal (125KHz) is present, the DC-DC converter goes in turn-off condition. Instead connecting the CLK with CVCC, it will be possible to operate in autoscillation mode (the board is usually set in this configuration).

Switches D0, D1, D2, PD, GAIN SET are used to select the operating mode of the device.

Figure 1. Component and connectors placement of STLC3075 evaluation board.



### 1.1 Transition between Ringing and Active mode

The board haven't got the possibility to switch automatically from Ringing to Active mode (automatic Ring Trip detection) but it is necessary to move manually in the correct position the D0 and D1 switches and remove the input square wave applied to D2/RINGER connector.

### 1.2 Fly-Back or Buck-Boost configuration

The board has the possibility, by proper modification, to choose the device configuration: Fly-Back or Buck-Boost.

When the STLC3075 have to work in Fly-back configuration, it is necessary to modify some connection:

- connect capacitor C10 (120pF) and 1 Kohm resistor (R6) at point 1 and 2 of S6
- short circuit, by a wire, R35 resistor
- connect the R34 resistor (0.22ohm)
- connect, by a drop of tin, point 1 and 2 of S7
- connect the proper N-channel mos type STN4NF03L

When the STLC3075 have to work in Buck-Boost configuration, it is necessary to modify:

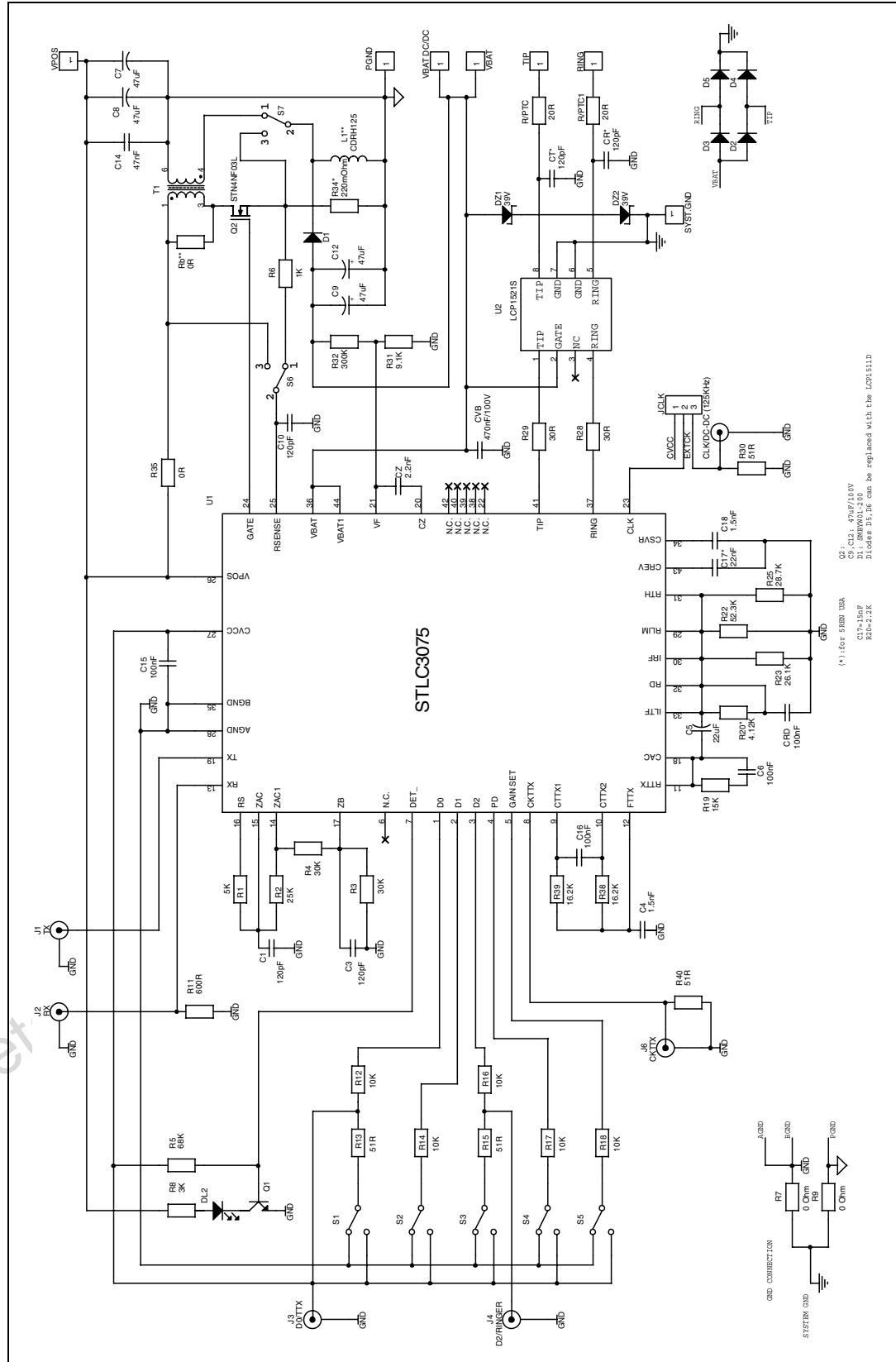
- remove capacitor C10 (120pF) and 1 Kohm resistor (R6) on S6
- short circuit, by a drop of tin, RB resistor
- connect the R35,R35A resistor (2x.0.22ohm)
- connect the proper inductor (L1) SUMIDA, CDRH125 on the R34,R34A position
- connect by a drop of tin, point 2 and 3 of S6 and S7
- connect the proper P-channel mos type IRF9510/20

The board can be set in Fly-back or Buck-Boost configuration with two external transformer modules or with the proper coil (see AN2132).

On the board, PTC resistors are not provided.

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Figure 2. Schematic of STLC3075 evaluation board



## 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
18-Jul-2006	1	Initial release.

Obsolete Product(s) - Obsolete Product(s)

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