

# HL5502

## Wireless RX TX Coil Switch

### Overview

The HL5502 is a high-voltage protection wireless coil switch to protect the system against positive and negative COIL pin voltage up to  $\pm 40V$ . The device includes a low switch ON resistance of  $90m\Omega$  (typ) and have two internal MOSFETs connected in series that two power pins, COIL and AC, are completely isolated when it is disabled.

The HL5502 employs floating gate drive architecture to pass DC or AC up to 1MHz from either of COIL or AC pins. The device is controlled through ENn pin and EN\_POL pin. When ENn pin is driven low and EN\_POL is tied to GND, the internal power FETs are enabled if either of VIN or VCC is higher than its under-voltage lockout threshold.

The HL5502 is available in 16-pin WLCSP package.

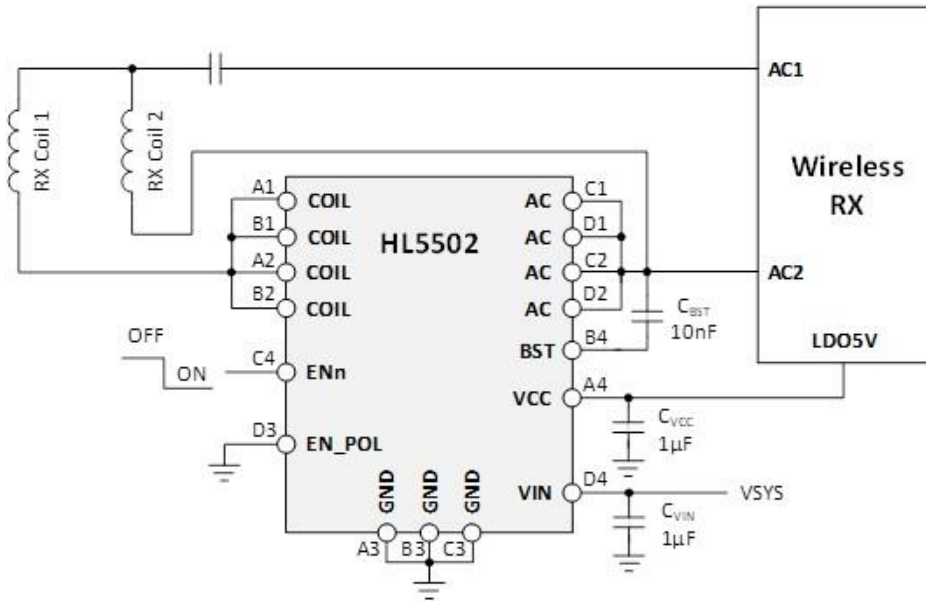
### Features

- High voltage protection wireless coil switch against positive and negative voltage
  - COIL pin AMR voltage:  $\pm 40V$
  - AC pin AMR voltage:  $+40V$
- Wide operating voltage up to  $+30V$
- Fast floating gate drive at ON state
  - Passing from DC to AC 1MHz
- Low switch ON resistance:  $90m\Omega$
- Automatic power selection for internal circuitry
  - VCC: 2.4-5.5V
  - VIN: 2.4-5.5V
- Low VIN quiescent current
  - SW OFF current: 16uA
  - SW ON current: 10uA
- EN\_POL\_ENn polarity selection pin
- Enable control through ENn pin
- 1.66mm x 1.66mm x 0.55mm 16 pin WLCSP package

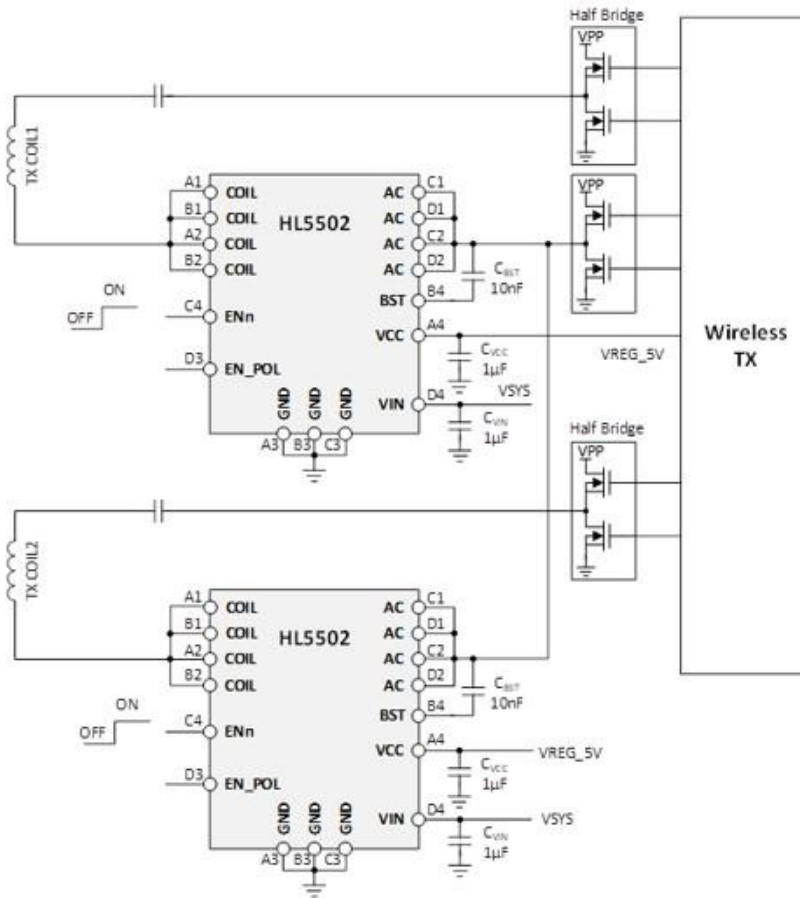
### Applications

- Smartphones
- Laptops
- Tablets
- Mobile IoT Devices

**Simplified Application Diagram**



**Figure 1. HL5502 RX Coil Switch Application Diagram**



**Figure 2. HL5502 TX Coil Switch Application Diagram**

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## Ordering Information

<b>Part Number</b>	<b>Package</b>	<b>Packing Method</b>
HL5502WL01	16-pin WLCSP, 1.66mm x 1.66mm x 0.55mm	Tape & Reel (Refer to T&R Info)

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