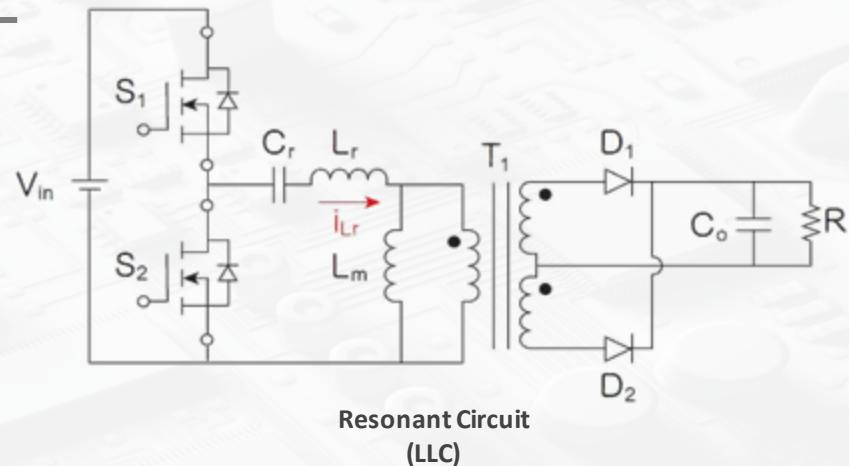


## FAQ #1

# What is LLC circuit doing?

LLC is a resonant circuit that achieves a stable output voltage by controlling the switching frequency (frequency regulation).

The LLC resonant converter provides good conversion efficiency and can successfully reduce the switching loss.



## FAQ #2

# Why 630V or even higher rated voltage MLCCs are needed for EV fast charging station?

When the LLC converter is for a power system with large electric power, it requires a characteristic of high withstand voltage (rated voltage).

EV fast charging station is applied with a larger voltage than ordinary electronic equipment. In order to shorten the charging time, the battery architecture voltage for charging station has reached 600V.

We may see more 800V architectures when the third-generation semiconductors are widely used, therefore, MLCCs with higher rated voltage are required.



## FAQ #3

### Why NPO ?

Good power efficiency, high precision, and high reliability!

Class I NPO, compared with Class II X5R/X6S/X7R, is a low loss MLCC with low ESR and high-quality Factor.

NPO also has good TCC (temperature coefficient of capacitance) and VCC (voltage coefficient of capacitance) characteristics which means the capacitance is stable with change of temperature and voltage during operation, this is very important in a resonant circuit.

Besides, NPO is a stronger material with higher material strength than Class II material, so NPO can sustain higher external mechanical stress like bending.

