

EV Chargers

Efficient fast EV charging solutions

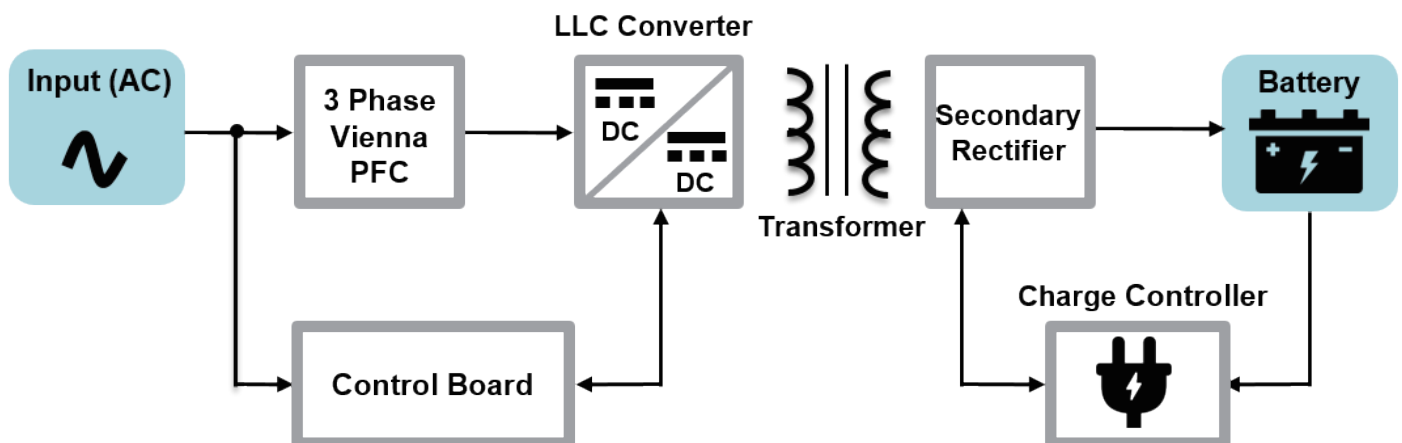


As the continued growth of electric vehicles (EVs) adoption, the demand for enhanced semiconductor solutions for charging stations increases too. DC charging systems are an attractive choice since they offer much faster charging speed than a standard AC EV charger which many EV drivers possess. Below are the prerequisites for a DC charging design to be successful:

- Shorten the charging time by enhancing output power
- Improve power density to reduce the charging system size
- Increase energy efficiency via reduced switching and conduction losses

PANJIT offers a wide range product portfolio of SiC diodes, super junction MOSFETs, FRED and IGBTs, to provide a comprehensive system solution for high-efficiency, high power density EV charging.

➤ EV Charger System Block



➤ Recommended Products

Product Category	Product Family	Product ID	Key Specification	Package
AC-DC 3 phase PFC stage				
High Voltage MOSFET	Super Junction MOSFET	PJMH040N65E2*	650V / R _{DS(ON)} = 40mΩ	TO-247AD-3LD
	Super Junction MOSFET-Fast Recovery	PJMH042N65FR2*	650V / R _{DS(ON)} = 42mΩ	
FRED	Low Trr	PSDH30120S1	1200V / 30A, Trr = 135ns	TO-247AD-2LD
		PSDH60120S1	1200V / 60A, Trr = 170ns	
SiC Diode	Low Qc	PCDH20120CCG1	1200V / 20A, Dual Die	TO-247AD-3LD
		PCDH30120CCG1	1200V / 30A, Dual Die	
		PCDH40120CCG1	1200V / 40A, Dual Die	
IGBT	High Speed Field Stop Trench	PTGH6065S1*	650V / 60A	TO-247AD-3LD
		PTGH7565S1*	650V / 75A	
		PTGM10065S1*	650V / 100A	TO-247-PLUS
DC-DC Unidirectional				
High Voltage MOSFET	Super Junction MOSFET	PJMK042N65FR2*	650V / 42mΩ	TO-247AD-4LD TO-LL
		PJMN042N65FR2*		
FRED	Low Trr	PSDH3060S1	600V / 30A, Trr = 45ns	TO-247AD-2LD
		PSDH6060S1	600V / 60A, Trr = 55ns	
SiC Diode	Low Qc	PCDH20120CCG1	650V / 20A, Dual Die	TO-247AD-3LD
		PCDH30120CCG1	650V / 30A, Dual Die	
		PCDH40120CCG1	650V / 40A, Dual Die	

* Under development