

TRANSFORMER DESIGN | EXAMPLE - PQC1954 (U.S. PAT. 7,460,002)

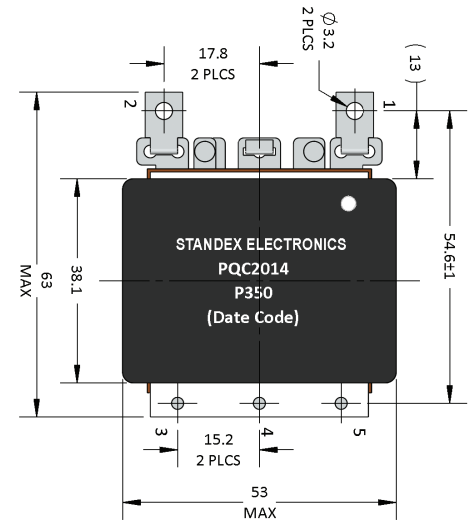
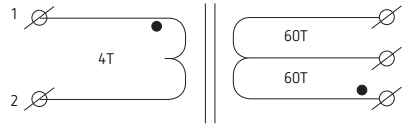
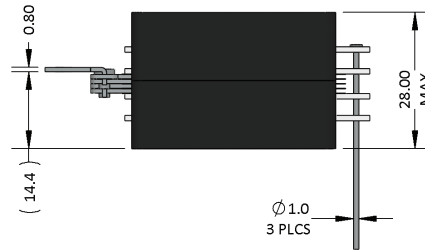
ELECTRICAL SPECIFICATIONS	Full Bridge ZVS	Temp. Rise Hot Spot Baseplate, Max.	+21°C
Input Voltage	350-750VDC	Minimum Isolation Voltage	
Output Power (Output Voltage/Current After Rectification)	2.5kW typ. 3kW surge	Primary To Secondary And Core	2500VAC for 1min
Output Power (Output Voltage/Current After Rectification)	28.4VDC / 83A, 100A surge	Secondary To Core	500VDC
Turns Ratio - Np / Ns	16 / 2+2T	Primary Inductance, Np, Min.	1792µH
Switching Frequency	100kHz	Primary Resistance, Rdc, Np, Max.	22mOhm
Duty Cycle At Low Input	80.0%	Secondary Resistance, Rdc, Ns, Max.	1mOhm (0.5+0.5mOhm)
Efficiency At Full Power (Calculated)	99.1% (21W losses)	Leakage Inductance 1-2/3-4-5 Shorted, Typ.	1.5µH
Baseplate/Heatsink Temperature Max.	+85°C	Weight Range	150-400grams
Mounted On Heatsink With Max. Temp.	+90°C		

NOTES:

- 1) FOR OPTIMAL PERFORMANCE A THERMALLY CONDUCTIVE SUBSTRATE BETWEEN FERRITE AND HEATSINK SHOULD BE UTILIZED
- 2) PATENTED TERMINALS AVAILABLE FOR SPLITTING HIGH CURRENT WINDING

SIZE 350
2kW-6kW

DESIGN EXAMPLE

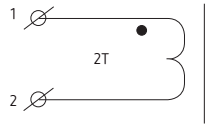
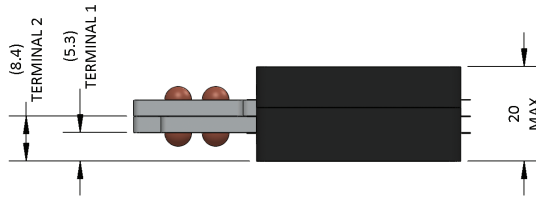
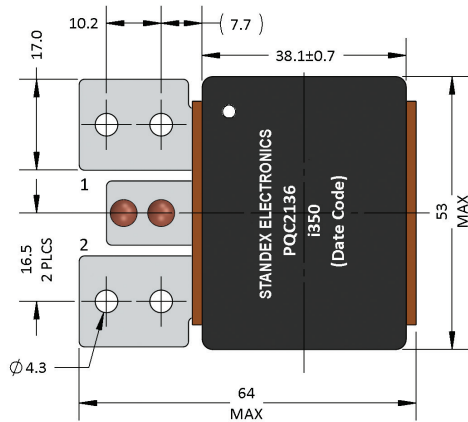


TRANSFORMER DESIGN | EXAMPLE - PQC2014

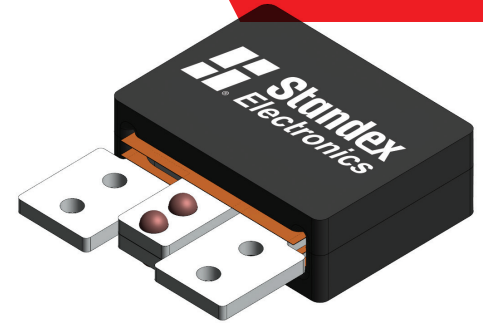
ELECTRICAL SPECIFICATIONS	Topology	Full Bridge ZVS	Temp. Rise Hot Spot Heatsink, Max.	+53°C
	Input Voltage	110-150VDC	Minimum Isolation Voltage	
	Output Power (Output Voltage/Current After Rectification)	3100VDC/0.5A (1.55kW max)	Primary To Core	500VAC
	Turns Ratio Np / Ns1 + Ns2	4T/60T + 60T	Secondary To Primary And Core	3000VDC
	Switching Frequency	100kHz	Primary Inductance, Np, Min.	100µH
	Duty Cycle At 150 VDC	95%	Primary Resistance, Np, Max.	2mOhm
	Efficiency At Full Power (Calculated)	99.3% (11W losses)	Secondary Resistance, Ns1 or Ns2, Max.	800mOhm
	Ambient Temperature Max.	+20°C	Leakage Inductance 1-2/3-4-5 Shorted, Typ.	0.2µH
	Airflow Temperature, Speed (Recommended)	50CFM	Weight Range	150-400grams

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SIZE 350
2kW-6kW
DESIGN EXAMPLE



INDUCTOR DESIGN | EXAMPLE - PQC2136

ELECTRICAL SPECIFICATIONS	Inductance At Rated Current	0.5µH ±3%	Temp. Rise Hot Spot Baseplate (Heatsink Cooling), Max.	+40°C
	Rated Current (Ave. ±12.5A Ripple)	250A	Heatsink Temperature Max.	+65°C
	Ripple Frequency	200kHz	Resistance Max.	0.2mOhm
	Minimum Isolation Voltage (Winding To Core)	500VDC	Total Losses	18.4W

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