

'E102' Range: 7kW – 30kW

ADVANTAGES

Himag Solutions' 'E102' range of planar power transformers is ideal for use in any high-frequency SMPS or Inverter. The advantages of planar transformers include:

- high power density
- low profile
- improved efficiency, up to 99.5%
- excellent thermal conductivity
- low leakage inductance
- high reliability
- multiple topologies
- customised terminations



Typical E102 Planar Transformer

(actual length 219mm, actual width 102 mm, actual height 40mm)

CUSTOM DESIGN

It is not always possible to incorporate an off-the-shelf transformer into a new design. So in addition to our standard range of E102 sized planar transformers (shown overleaf), Himag Solutions also provides a custom E102 design service, at no additional cost. New design requests can be submitted via the online request form at www.himag.co.uk.

THERMAL PERFORMANCE

The Himag Solutions' construction technique provides minimal thermal interfaces, resulting in excellent thermal conductivity. To compliment this, Himag Solutions also offer a range of heatsinks that can be used in conjunction with these transformers.

MECHANICAL

All Himag Solutions' transformers are available with a range of different termination styles and mounting methods, these include:

- Bolted
- Fly-leads

For a list of available styles, please see our brochure.

APPLICATIONS

Typical applications include:

- battery charging
- high voltage PSU's
- telecom rectifiers
- renewables
- hybrid/electric vehicles
- aerospace
- defence
- medical applications
- inverter welders
- induction heating

TOPOLOGIES

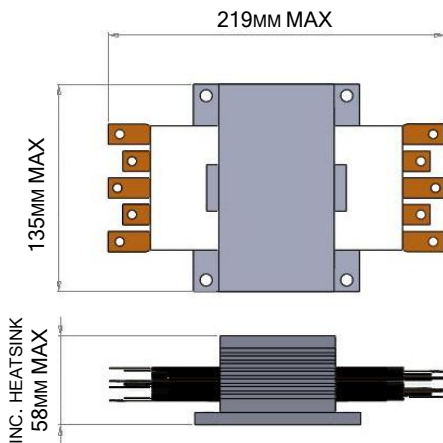
Typical topologies that suit planar transformers are:

- Full Bridge
- Half-Bridge
- Flyback
- Forward
- Resonant

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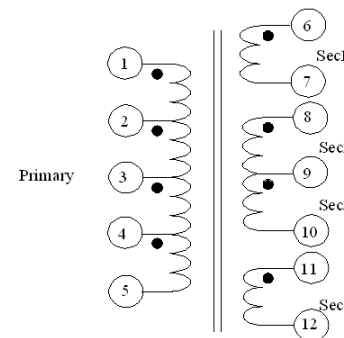
OUTPUT POWER	INPUT VOLTAGE	FREQUENCY	OUTPUT VOLTAGE	OUTPUT CURRENT	TURNS RATIO	PRIMARY INDUCTANCE	HIMAG SOLUTIONS PART NO.
CUSTOM	up to 1000V	up to 250kHz	up to 1000V	up to 500A	CUSTOM	CUSTOM	CUSTOM
9kW	450V - 650V	100kHz	250V	37A	16:6	2.1mH	166801
11kW	550V - 600V	50kHz	55V	200A	26:3	5.5mH	163501
13.5kW	375V - 425V	60kHz	225V	60A	12:8	1.2mH	163401
15kW	583V - 745V	75kHz	65V	320A	8:1	1.0mH	164802
16kW	440V - 630V	32kHz	816V	20A	13:27	2.8mH	164301
20kW	250V - 320V	50kHz	55V	360A	12:3+3	2.4mH	160401
30kW	540V - 700V	100kHz	350V	90A	16:6+6	4.2mH	169001

DIMENSIONS



POSS. MIN DIMENSIONS 194MM X 102MM X 22.5MM

CIRCUIT DIAGRAM



ADDITIONAL TECHNICAL INFORMATION

- Isolation Voltage:
 - Pri-Sec = 5500Vrms
 - Pri-Core, Sec-Core = 2750Vrms
- Insulation Class = Class F (155°C)
- Leakage Inductance = 1µH - 6µH (typ)
- Efficiency = up to 99.5%
- Weight = 1kg (typ)
- Low DC winding resistance