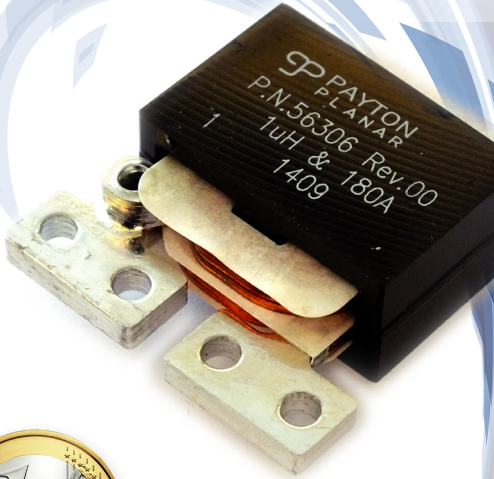


## SIZE 200

Power Capacity 300 to 1000W



### Description

Payton SIZE 200 provides a planar solution for medium power applications (such as telecommunication) providing high efficiency, low EMI, excellent repeatability, low profile and weight with an operating temperature range of -40°C to +130°C.

### 1. Transformer Application

POWER CAPACITY	DIMENSIONS (mm)	TYPICAL WEIGHT	DIELECTRIC ISOLATION	OPERATING VOLTAGE	OPERATING CURRENT (RMS)
300W, forward at 100 kHz 1000W, full bridge at 200 kHz	L=40-80 W=38 H=10-20	70 gr.	500 V <sub>DC</sub> - 4k V <sub>rms</sub>	500 V <sub>peak</sub> max.	120 A max.

Typical efficiency: 97-99%

Recommended frequency range: 100 kHz – 2.5 MHz.

#### Topologies:

Full bridge; Half bridge; Push-Pull; Forward; Flyback; Boost; Buck; Resonant topologies (in order of preference).

Mounting Options: a. Horizontal, b. Vertical

### 2. Inductor Application

STANDARD A <sub>L</sub> (nH/t <sup>2</sup> )	1600	1000	630	400	315	250	160
TYPICAL VALUE OF MAX. Amper Turns	34	56	89	139	185	234	330

A<sub>L</sub> values not listed are available upon request.

### 3. Typical Thermal Impedance For Different Cooling Conditions

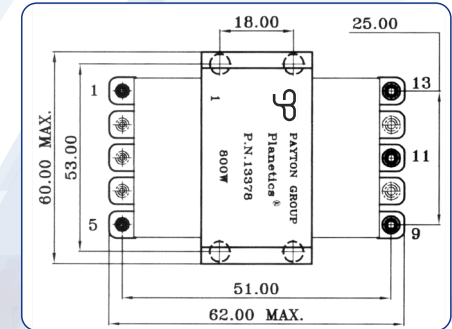
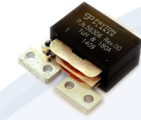
NATURAL COOLING (Hot Spot - Air)	BLOWING AIR 3m/sec (Hot Spot - Air)	ONE SIDE HEATSINK (Hot Spot - Heatsink)	TWO SIDES HEATSINK (Hot Spot - Heatsink)
12°C/W	6.5°C/W	3.6°C/W	1.8°C/W

## Transformer Type T200 DC P.N. 13378

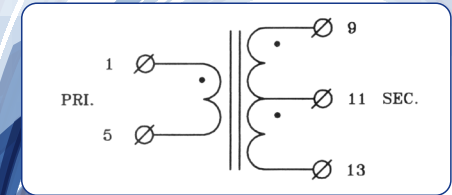
This T200DC-9-4C, medium power, high input voltage, high frequency, small dimensional planar transformer is developed for a high power density DC-DC converter, providing the following specifications:

### Transformer Specifications

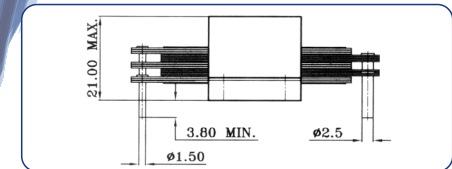
Total output power	800 W (25 Vdc@32 Adc)
Operating frequency	100 kHz
Input voltage range	110 - 150 Vdc.
Topology	Full bridge, phase shift
Max. Volt-Sec. product	1020 V- $\mu$ Sec
Duty cycle	0.94 max.
Primary current	10.7 Arms
Primary to Sec. ratio	9:2:2
Dielectric strength	
pri. to sec.+core	1500 Vdc
sec. to core	500 Vdc
Ambient temperature	-40°C to +50°C
Total losses	
(With 85°C heat sink)	8 W
Hot spot temperature	
(With 85°C heat sink)	115°C
Weight	120 gr.



TOP VIEW



ELECTRICAL DIAGRAM



SIDE VIEW

(All dimensions are given in mm.)