

SIZE 71

Power Capacity 30 to 500W



Description

Payton size 71 provides planar solution for low to 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)
30W, Flyback CCM at 300kHz 500W Forward at 200 kHz	L = 29-45 W = 26 H = 8-20	40 gr.	500 Vdc - 4k Vrms	600 Vpeak max.	40A 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_L (nH/t ²)	1600	1000	630	400	315	250	160
TYPICAL VALUE OF MAX. Amper Turns	13	25	47	75	95	120	187

A_L values not listed are available upon request.

3. Typical Thermal Impedance For Different Cooling Conditions

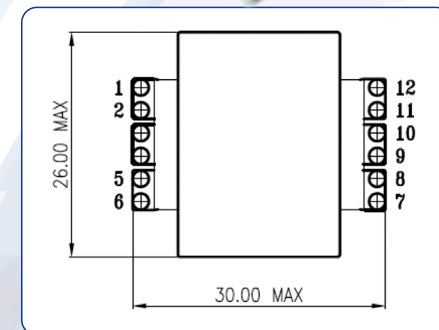
NATURAL COOLING (Hot Spot - Air)	BLOWING AIR 3m/sec (Hot Spot - Air)	ONE SIDE HEATSINK (Hot Spot - Heatsink)	TWO SIDES HEATSINK (Hot Spot - Heatsink)
22°C/W	12°C/W	8°C/W	4°C/W

Transformer Type T71 P.N. 514280

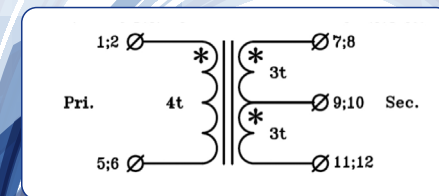
This T71DC-4-6C, medium power, low input voltage, high frequency, small dimensional planar transformer is developed for a high power density DC-DC converter, providing the following specifications:

Transformer Specifications

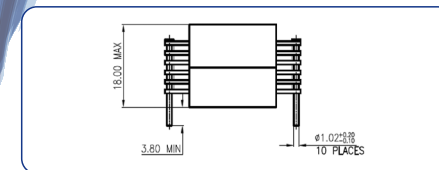
Total output power	387 W (24.2Vdc@16Adc)
Operating frequency	300 kHz
Input voltage range	18 - 36V
Topology	Full Bridge, ZVT.
Max. Volt-Sec. product	116V- μ Sec
Duty cycle	0.82
Primary current	12.8Arms
Secondary output current	16Arms
Primary to Half Sec. ratio	4 : 3
Dielectric strength	
pri. to sec.+core	500Vdc
sec. to core	500Vdc
Ambient temperature	-55°C to +85°C
Total losses (With 85°C heat sink)	5W
Hot spot temperature (With 85°C heat sink)	125°C
Weight	36 gr.



TOP VIEW



ELECTRICAL DIAGRAM



SIDE VIEW

(All dimensions are given in mm.)