

SIZE 20

Power Capacity 10 to 40W



Description

Payton SIZE 20 provides a planar solution for low 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)
10W, flyback at 100 kHz 30W, forward at 500 kHz	L = 15-20 W = 16 H = 5-8	4-6 gr.	Up to 1500 Vrms	100 Vpeak max.	10 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_L (nH/t ²)	630	400	315	160	100	63
TYPICAL VALUE OF MAX. Amper Turns	7	14	19	42	70	110

A_L values not listed are available upon request.

3. Typical Thermal Impedance For Different Cooling Conditions

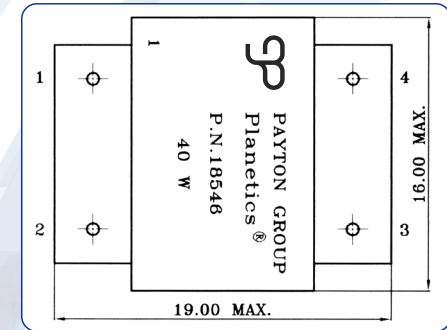
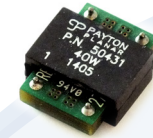
NATURAL COOLING (Hot Spot - Air)	BLOWING AIR 3m/sec (Hot Spot - Air)	ONE SIDE HEATSINK (Hot Spot - Heatsink)	TWO SIDES HEATSINK (Hot Spot - Heatsink)
65°C/W	35°C/W	20°C/W	10°C/W

Transformer Type T20 DC P.N. 18546

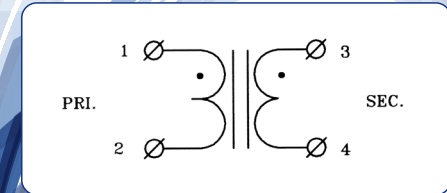
This T20-12-2, low power, miniature planar transformer is developed for a low power DC-DC converter and may be used in telecommunication equipment, providing the following specifications:

Transformer Specifications

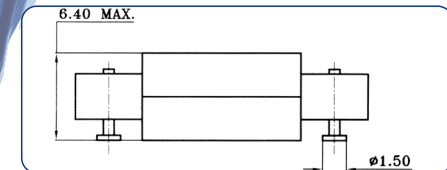
Total output power	40 W (3.3 Vdc/12 Adc)	
Operating frequency	500 -700 kHz	
Input voltage range	36 - 75 Vdc	
Topology	Forward	
Max. Volt-Sec. product	36.2V- μ Sec	
Duty cycle	0.62 max.	
Primary current	1.1 Arms	
Secondary current	6.3 Arms	
Primary to Sec. ratio	12 : 2	
Dielectric strength	pri. to sec.+core	1750 Vdc
	sec. to core	500 Vdc
Ambient temperature	-40°C to +85°C	
Total losses	0.55W	
Hot spot temperature (With 85°C heat sink)	100°C	
Weight	4 gr.	



TOP VIEW



ELECTRICAL DIAGRAM



SIDE VIEW

(All dimensions are given in mm.)