

SIZE 20

Power Capacity 10 to 40 W



Description

CoilMaster 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	DIMENSION (mm)	TYPICAL WEIGHT	DIELECTRIC ISOLATION	OPERATING VOLTAGE	OPERATING CURRENT (RMS)
10 W, flyback at 100 kHz 30 W, 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

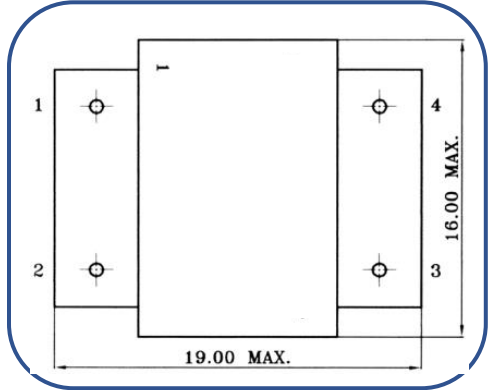
Standard A_L (nH/t ²)	630	400	315	160	100	63
Typical value of Max. Amper Turns	7	14	19	42	70	110

A_L values not listed are available upon request

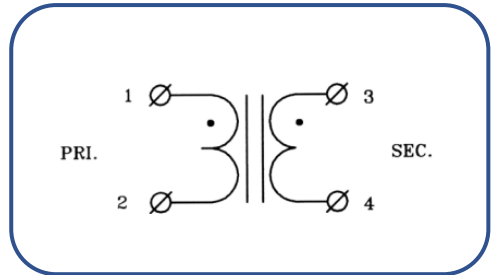
3. Typical Thermal Impedance for Different Cooling Condition

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

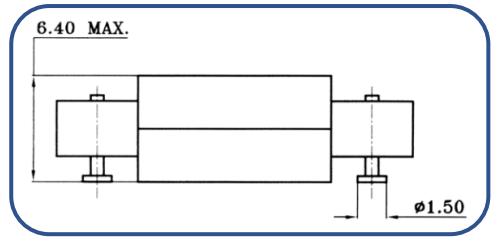
(All dimensions are given in mm.)



TOP VIEW



ELECTRICAL DIAGRAM



SIDE VIEW

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	36.2 V - 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	0.55 W	
Hot spot temperature (With 85°C heat sink)	100 °C	
Weight	4 gr.	