



MINA PLANAR MAGNETIC T-300-48-21-1KW-FB

**FULL-BRIDGE TOPOLOGY TRANSFORMER
NOMINAL INPUT VOLTAGE 300 VOLTS
NOMINAL OUTPUT VOLTAGE 48 VOLTS**

PLANAR TRANSFORMER SPECIFICATION

One of the most significant components that goes into a power supply is the power transformer, Mina can provide you with our unique planar magnetic for your next design or retrofit your existing product with our planar transformer and inductor. With our fifteen years of research and development using new material we can produce new planar constructions thereby producing a highly efficient planar transformer that is lower in cost compared to conventional wire or copper wound transformers across all switch mode power conversion topology and power levels. These planar transformers are available for all switch mode topologies and they provide shielding to minimize or eliminate radiated EMI and RFI. They are suitable for Zero Voltage Switching (ZVS), Zero Current Switching (ZCS) or hard switching application. This is a Full-Bridge topology planar transformer. If pins 6-9 are shorted and connected to chassis ground, radiated EMI will be minimized or eliminated. They are suitable for Zero Voltage Switching (ZVS), Zero Current Switching (ZCS) or hard switching application. They also meet military, aerospace, industrial and telecommunication applications requirements. If you do not find a transformer suitable for your applications, we will be glad to provide customer one. Please let us know what you want by either sending us e-mail or completing the form on our website "What I Want". We will respond immediately.

ELECTRICAL SPECIFICATION¹

PARAMETER	UNITS
Input Voltage Range	280 – 450 VDC
Input Current Peak To Peak	7.1 Amps Maximum (Low Line) ²
Input Current Average	4.5 Amps Maximum (Low Line) ²
Nominal Output Voltage	48 Volts
Output Voltage Range	40 Volts - 55Volts
Output Current	21 Amps Maximum
Primary Turns	24 Turns
Secondary Turn	5 Turn
Flux Density Peak to Peak	180 mT Maximum
Switching Frequency	200 kHz Minimum
Maximum Duty Cycle	95.0 %
Maximum Temperature Rise Hot Spot	15 ⁰ C
Efficiency At Maximum Power	99.5%
Isolation Voltage Primary to Core	2500 VDC
Isolation Voltage Primary to Secondary	4000 VDC
Isolation Voltage Secondary To Core	2500 VDC
Primary DC Resistance	0.02 Ω
Secondary DC Resistance	0.0005 Ω

1. See 1KW Class Mechanical Specification And Electrical Winding Orientation Data Sheet

2. Assumes Converter efficiency is 80%