



MINA PLANAR MAGNETIC T-300-12-83-1KW-FB

**FULL-BRIDGE TOPOLOGY TRANSFORMER
NOMINAL INPUT VOLTAGE 300 VOLTS
NOMINAL OUTPUT VOLTAGE 12 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 | 6.6 Amps Maximum (Low Line) ² |
| Input Current Average | 4 Amps Maximum (Low Line) ² |
| Nominal Output Voltage | 12 Volts |
| Output Voltage Range | 9 Volts - 16Volts |
| Output Current | 83 Amps Maximum |
| Primary Turns | 24 Turns |
| Secondary Turn | 1 Turn |
| Flux Density Peak to Peak | 190 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%