

PAYTON 2000 W SMPS TRANSFORMER

Functional specs

Date : 17/06/18

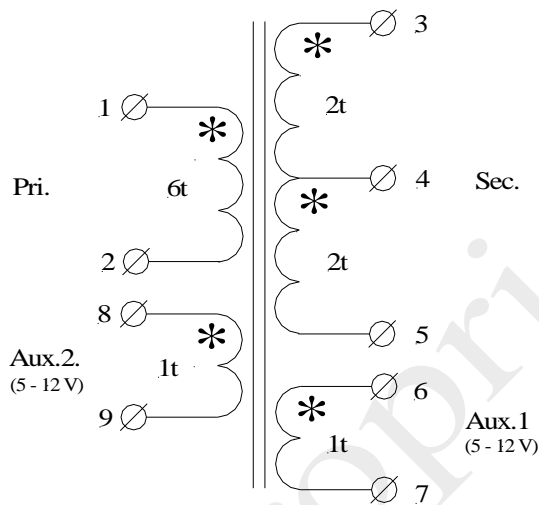
1. Generic Type : T541AC-6-4C-1-1.
2. Total output power range : 2000W (50Vdc /40Adc; 12V/0.1Adc; 5V/0.1Adc)
3. Operating frequency of transformer : 650 ÷ 1000 kHz.
4. Input voltage of power stage : 297V - 363V for an output power of 1800W @50V,
440V for a period < 1 second
5. Input voltage of transformer : 148.5 ÷ 181.5Vpeak, Bipolar Square waveform.
220V for a period < 1 second
6. Topology : Half Bridge LLC.
7. Operating duty cycle, max. : 1.0.
8. Primary current, max : 14Arms.
9. Primary winding inductance : 7μH ^{+15%}/_{-15%}.
10. Estimated leakage inductance : 1.6μH.
11. Pri. to half Sec. ratio : 6 : 2
(Sec. current, max – 28.3Arms)
12. Pri. to Aux.1, Aux.2 ratio : 6 : 1
(Aux. current, max – 0.3Arms)
13. Dielectric strength :
(Pri. to Sec + Aux + Core) : 3000Vrms.
(Aux. to Core) : 3000Vrms.
(Pri. to Aux.) : 3000Vrms.
(Sec. to Core) : 1000Vrms.
14. Ambient temperature range : -20 ÷ 60°C.
15. Estimated power losses : 26W.
16. Estimated temperature rise : 75°C.
(two sided attached 50°C heatsink)
17. Estimated hot spot temperature : 125°C.
(two sided attached 50°C heatsink)
18. Mechanical dimensions : Length - 43 mm.
(for reference only) : Width - 36 mm.
: Height – 21 mm, max

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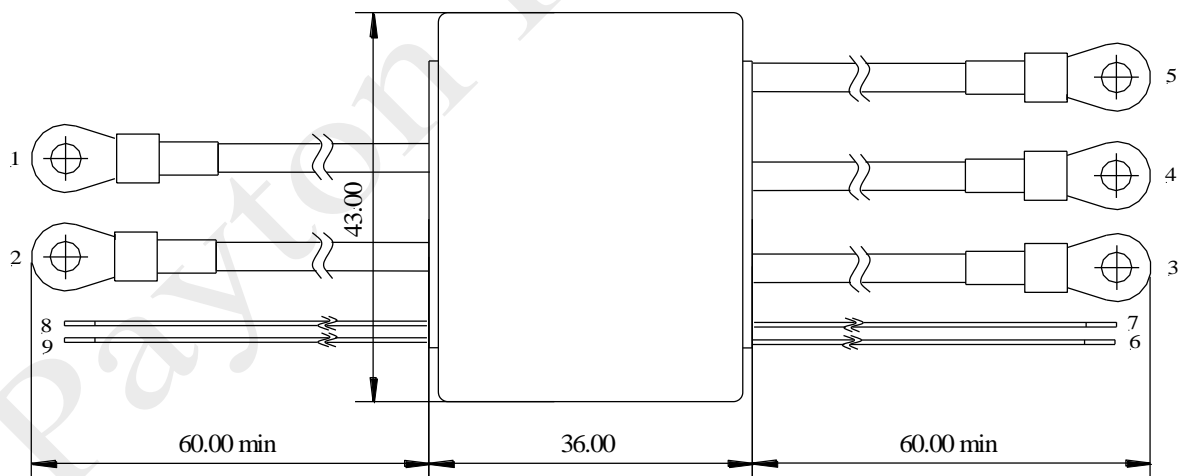
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Electrical diagram.



Terminals layout sketch (preliminary; top view; not to scale).



Note: Primary and secondary terminations are flying wires 60 mm min length with ring terminals;
Aux. terminations are flying wires with tinned ends.