PAYTON 1400W SMPS MODULE

Functional specs

Date : 21/11/16

1. Generic Type	: T78AC-44-4C + I78-12uH/4.5Arms.
2. Total output power	: **1400 W (12Vdc/116.7Adc).**
3. Operating frequency of transformer	: 100 kHz.
4. Input voltage of power stage	: 350 ÷ 410 Vdc.
5. Topology	: ZVS, Phase shift, **Full Bridge**.
6. Ambient temperature range	: -40 ÷ +55°C.
7. Estimated max power losses	: 27W
8.Operational temperature range **(Including Module self-temperature rise)**	: -40 ÷ +130°C.
9. Mechanical dimensions (**For reference only**)	: Length – 40mm max. : Width – 32 mm max. : Height – 32 mm max.

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Contact engineer: Amir Yativ (amir@paytongroup.com) 21/11/16 18:29

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PAYTON 1400W SMPS Transformer

Functional specs

1. Generic Type	: T78AC-44-4C
2. Input voltage of transformer	: 348 ÷ 408 Vdc.
3. Operating duty cycle, **max.**	: 0.87
4. Volt-second product, **max.**	: 2984 (2x1492) V-µsec.
5. Pri. to half sec. ratio (Sec. current, **max.** – 78.1**Arms**.)	**: 22 : 1**
6. Primary current, **max**.	: 4.48**Arms**.(5.1A peak)
7. Dielectric strength	
(Pri. to Sec.)	: 4000Vrms.
(Pri. to Core.)	: 2500Vrms.
(Sec. to Core)	: 500Vdc.
8. Estimated power losses	: 4W @ 400W nominal operation 9.5W @ 800W nominal operation. 25W @ 1400W nominal operation.

PAYTON 12uH & 4.5Arms Inductor

Functional specs

1. Generic Type	: I78-12uH/4.5Arms.
2. Inductor application	: Leakage inductor
3. Inductance L @ 0 ÷ 5.1 A	: 12µH±20%
4. Max. Inductor current	: 4.48Arms (5.1Apeak)
5. Dielectric strength (L to core)	: 2500Vrms;
6. Estimated power losses	: 0.1W @ 400W nominal operation 0.5W @ 800W nominal operation. 2.0W @ 1400W nominal operation.

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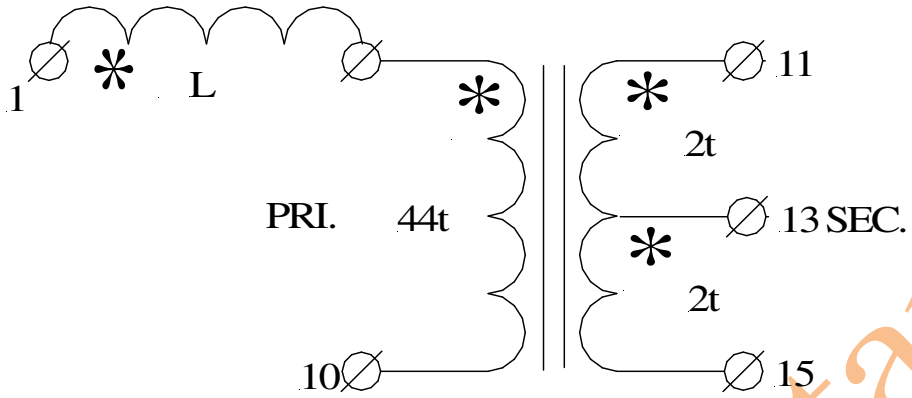
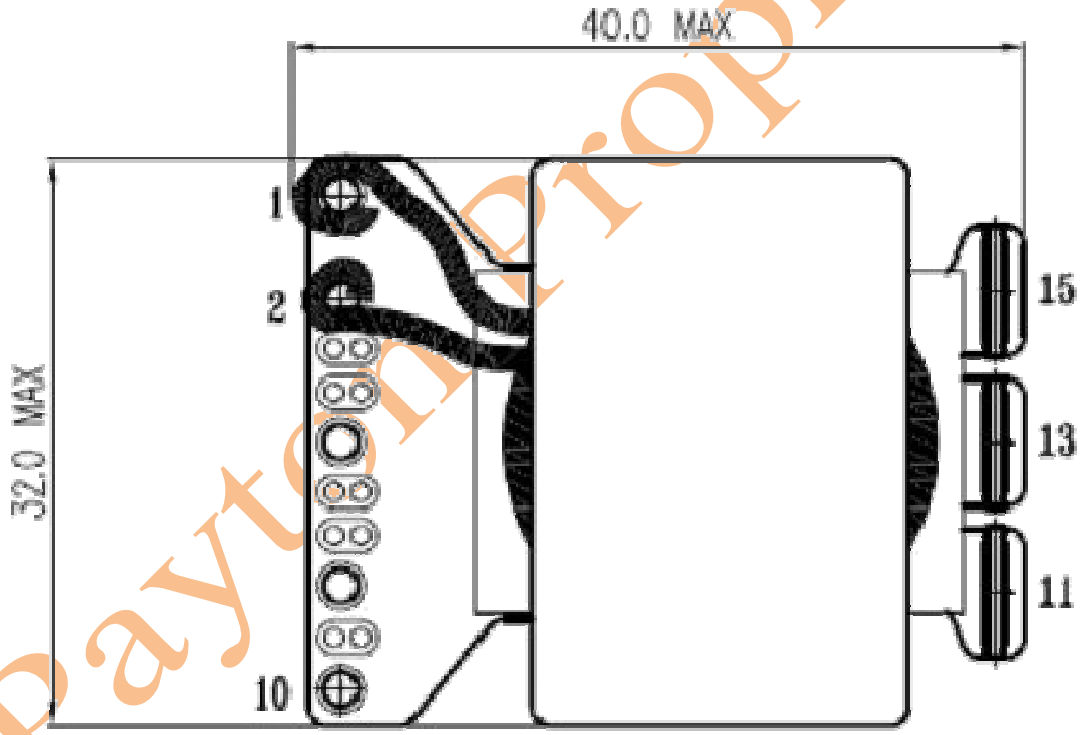
Electrical diagram.



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



Note Terminations made of through hole pins.

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