## Through Hole Transformers Converter



## ELECTRICAL SPECIFICATIONS

Transformer power rating: 3 W
Isolation, primary - secondary: $500 \mathrm{~V}, 60 \mathrm{~Hz}$. Operating characteristics may be varied to suit specific applications by appropriate selection of circuit components

## FEATURES

- Designed especially for low-power solid state circuits

- Designed for mounting on printed circuit boards

RoHS COMPLIANT

- Miniature size for minimum space
- High conversion efficiency from DC input to filtered DC output
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


## APPLICATIONS

Power supply for gas discharge display, battery-operated portable instruments, operational amplifier power supplies

## MECHANICAL SPECIFICATIONS

Coil: secured to bottom of case with epoxy
Terminals: 0.025 " $[0.635 \mathrm{~mm}$ ] square, solder plated

## OPERATING TEMPERATURE RANGE

$-20^{\circ} \mathrm{C}$ to $+80^{\circ} \mathrm{C}$. Intended for use in enclosed commercial and industrial applications

## STANDARD ELECTRICAL SPECIFICATIONS

| MODEL | $\begin{gathered} \text { INPUT } \\ \left(V_{D C}\right) \end{gathered}$ | OUTPUT | FREQUENCY REFERENCE (kHz) | CIRCUIT EFFECTIVE | TEST CIRCUIT | SCHEMATIC NUMBER |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TC-10-01B | 3.6 | $+7.2 \pm 0.2 \mathrm{~V}_{\mathrm{DC}}$ at 150 MW | 7.5 | 50 \% | 1 | 1 |
|  |  | $-7.2 \pm 0.2 \mathrm{~V}_{\mathrm{DC}}$ at 150 MW |  |  |  |  |
| TC-10-02B | 5 | $200 \pm 10 \mathrm{~V}_{\mathrm{DC}}$ at 250 MW | 11 | 50 \% | $2{ }^{(1)}$ | 4 |
| TC-10-03B | 5 | $200 \pm 10 \mathrm{~V}_{\text {DC }}$ at 250 MW | 11 | 60 \% | 2 | 2 |
|  |  | $+15 \pm 0.4 \mathrm{~V}_{\mathrm{DC}}$ at 125 MW |  |  |  |  |
|  |  | $-15 \pm 0.4 \mathrm{~V}_{\text {DC }}$ at 125 MW |  |  |  |  |
| TC-10-04B | 5 | $+15 \pm 0.4 \mathrm{~V}_{\mathrm{DC}}$ at 500 MW | 8 | 75 \% | 3 | 1 |
|  |  | $-15 \pm 0.4 \mathrm{~V}_{\mathrm{DC}}$ at 500 MW |  |  |  |  |
| TC-10-05B | 5 | $+170 \pm 5.1 \mathrm{~V}_{\mathrm{DC}}$ at 850 MW | 11 | 75 \% | 4 | 5 |
|  |  | $+32 \pm 1.0 \mathrm{~V}_{\mathrm{DC}}$ at 510 MW |  |  |  |  |
| TC-10-06B | 5 | $+35 \pm 1.0 \mathrm{~V}_{\mathrm{DC}}$ at 610 MW | 11 | 70 \% | $4{ }^{(1)}$ | $5{ }^{(1)}$ |
| TC-10-07B | 7.5 | $16.3 \pm 0.4 \mathrm{~V}_{\mathrm{DC}}$ at 330 MW | 7 | 65 \% | 5 | 1 |
| TC-10-08B | 12 | $\pm 15 \pm 0.4 \mathrm{~V}_{\mathrm{DC}}$ at 1 W | 7.5 | 72 \% | 3 | 1 |
| TC-10-09B | 12 | $160 \pm 5 \mathrm{~V}_{\text {DC }}$ at 1.5 W | 10 | 75 \% | 6 | 3 |
| TC-10-10B | 12 | $14.2 \pm 0.7 \mathrm{~V}_{\mathrm{DC}}$ at 3 W | 10 | 70 \% | 5 | 1 |
| TC-10-11B | 12 | $+24 \pm 0.5 \mathrm{~V}_{\mathrm{DC}}$ at 2 W | 10 | 80 \% | 5 | 1 |
| TC-10-12B | 24 | $170 \pm 5.1 \mathrm{~V}_{\mathrm{DC}}$ at 850 MW | 11 | 70 \% | 4 | 5 |
|  |  | $32 \pm 1.0 \mathrm{~V}_{\mathrm{DC}}$ at 510 MW |  |  |  |  |

## Note

(1) Specifications relate to transformer when operated in applicable test circuit and at specified load power.
TEST CIRCUITS

## Notes

- Omit winding 4, 5, 6 and associated circuit to test TC-10-028.
- Omit winding 7, 8 and associated circuit to test TC-10-068.
${ }^{(1)} \mathrm{RC}$ network may be required to suppress spurious oscillations. $\mathrm{R}=100 \Omega, \mathrm{C}=0.001 \mu \mathrm{~F}$.
${ }^{(2)} \mathrm{RC}$ network may be required to suppress spurious oscillations.
(3) $R C$ network may be required to suppress spurious oscillations. $R=10 \Omega, C=0.004 \mu \mathrm{~F}$.


## SCHEMATICS

|  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4. |  | 5. |  |  |  |

## Note

${ }^{(1)}$ Omit high voltage winding for TC-10-06.


## Note

(1) Shows typical pin spacing, pin 10 is omitted on all models except $-05,-06,-12$.

## PART MARKING

- Model
- Date code

| ORDERING INFORMATION |  |  |  |
| :---: | :---: | :---: | :---: |
| TC-10 | -01B | EB | e2 |
| MODEL | DASH NUMBER | PACKAGE CODE | JEDEC® ${ }^{\circledR}$ LEAD (Pb)-FREE STANDARD |

## GLOBAL PART NUMBER



MODEL


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