



# TI 108 - 110

## LOW COUPLING CAPACITY GATE DRIVE TRANSFORMERS



### PURPOSE

Pulse transformers are used in high frequency power converters, when an electrical pulse has to be transferred from the control stage to the power stage, by keeping the galvanic isolation between the circuits, according to the safety standards related to each different application fields. The electrical signal is applied to the primary side and transferred to the secondary side, to fire electronic switches. The 108 and 110 families are based on different sizes of EE cores.

### FEATURES

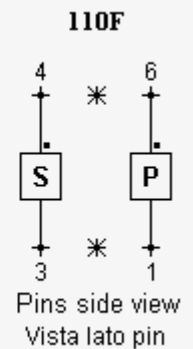
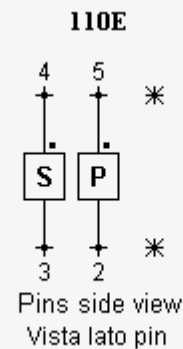
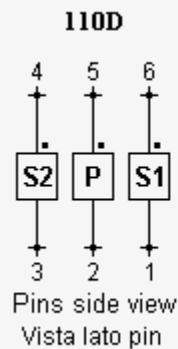
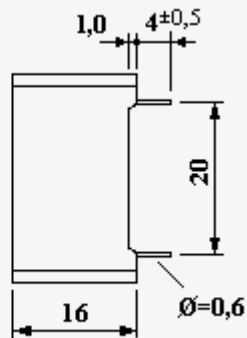
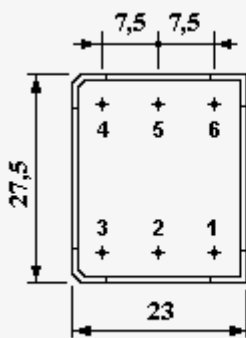
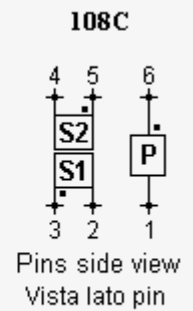
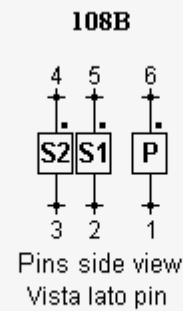
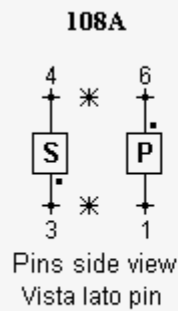
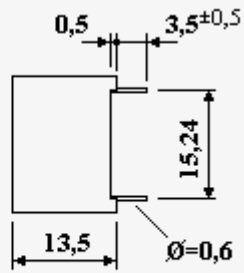
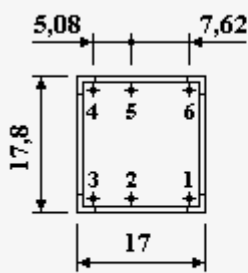
The peculiarity of this kind of components is the low coupling capacity between the windings, that is particularly important to avoid undesired firings of electronic switches; on the other hand, the leakage inductance is relatively high. They are mainly used in the multiple shot firing technique.

Standard versions are designed with one or two secondary windings.

The automatic winding process enhances their quality/price ratio.

Code	n	Vt [ $\mu$ Vs]	I <sub>MAX</sub> [mA]	t <sub>r</sub> [ $\mu$ s]	R <sub>c</sub> [ $\Omega$ ]	C <sub>k</sub> [pF]	U <sub>is</sub> [Vrms]	U <sub>p</sub> [Vrms]	Drawing
TI 108010	1 : 1	250	250	1,5	40	7	500	3100	108A
TI 108020	1 : 1 : 1	250	250	1,5	40	7	500	3100	108C
TI 108030	2 : 1	350	250	3,5	40	8	500	3100	108A
TI 108040	2 : 1 : 1	350	250	3,5	40	8	500	3100	108B
TI 108050	3 : 1	300	250	2,5	40	8	500	3100	108A
TI 108060	3 : 1 : 1	300	250	2,5	40	8	500	3100	108C

TI 110153	1 : 1 : 1	600	100	1,2	100	8	500	4000	110D
TI 110154	3 : 1 : 1	600	100	1,2	100	7	500	4000	110D
TI 110155	1 : 1	500	100	1,0	100	7	500	4000	110E
TI 110233	1 : 1 : 1	300	250	1,2	40	7	500	4000	110D
TI 110234	3 : 1 : 1	300	250	1,0	40	7	500	4000	110D
TI 110239	1 : 1	350	250	2,0	40	5	500	10000	110F



values in mm

## SYMBOLS:

- n turns ratio
- $Vt$  secondary transfer area (voltage\*time integral), that can be transferred with unipolar pulse
- $t_r$  rise time, needed to transfer the pulse when the rated load resistance is connected to the secondary side
- $I_{MAX}$  maximum secondary current, available with a rise time equal to  $t_r$  (rated load resistance connected to the output)
- $R_C$  rated burden resistance
- $L_p$  primary winding inductance
- $L_s$  primary leakage inductance
- $C_k$  coupling capacity between windings
- $R_p$  primary winding resistance
- $R_s$  secondary winding resistance
- $I_p$  rated primary effective current (thermal current)
- $U_{is}$  rated working voltage
- $U_p$  isolation voltage

TI02 - Rev.0



Certificate nr. 50 100 3372



**SIRIO ELETTRONICA s.r.l.**

Via Selve, 2 - 35037 TEOLO (PD) - ITALY

Phone: 0039 049 9901090

Fax: 0039 049 9901868

E-mail: [postoffice@sirio-ic.com](mailto:postoffice@sirio-ic.com)

[www.sirio-ic.com](http://www.sirio-ic.com)