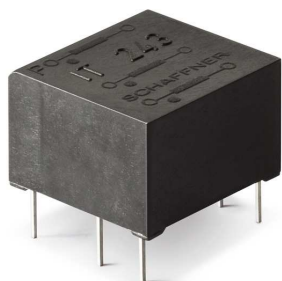


Pulse Transformer with Double Secondary Winding



- ▮ Galvanic separation of drive and power circuit
- ▮ Voltage resistance up to 4 kV
- ▮ Ignition current up to 1 A
- ▮ Turns ratio up to 3:1:1



Approvals

ROHS

Features and benefits

- ▮ Galvanic separation with secondary winding
- ▮ Voltage resistance up to 4 kV
- ▮ Allows high potential difference voltage scaling
- ▮ Vacuum potting
- ▮ Very low partial discharge effects
- ▮ PCB through hole mounting
- ▮ Custom-specific versions on request

Technical specifications

Nominal operating voltage	Up to 500 V
Operating frequency	40 kHz max. 500 kHz max. for data transmission
Ignition currents	0.025 to 1 A @ 40°C
Rise time	0.4 to 4 µs
Test voltage	Up/50 Hz/2 s max. according to VDE 110b
Max. partial discharge voltage	1.5 x U ^{nom}
Temperature range (operation and storage)	-25°C to +70°C (25/70/21)
Flammability corresponding to	UL 94 V-0 listed materials

Typical applications

- ▮ Gate drive circuit
- ▮ Power supplies
- ▮ Power converters
- ▮ Frequency converters
- ▮ Switching applications
- ▮ DC/DC converters
- ▮ Line coupling transformers in high-speed data transmission

Pulse transformer selection table

Pulse transformer	Turns ratio	Ignition current I _{ign} [A]	Voltage		Voltage time area V _{0t} [Vμs]	Rise time t _r [μs]	Inductance *		Resistance		Coupling capacitance C _k [pF]	Input/Output connections	Weight [g]
			U _{nom} [V]	U _p [kV]			L _p [mH]	L _{str} [μH]	R _p [Ω]	R _s [Ω]			
IT 143	1:1:1	0.025	500	4	800	0.6	15	200	3	3	10	02	14
IT 242	1:1:1	0.1	500	3.2	250	0.9	2.5	75	0.75	0.75	7	02	6
IT 243	1:1:1	0.1	500	3.2	250	1	2.5	85	0.8	0.8	7	02	6
IT 213	1:1:1	0.25	380	2.5	450	0.4	6.5	20	1.4	1.4	40	02	9
IT 233	1:1:1	0.25	500	4	300	1.3	3	45	0.8	0.8	7	02	13
IT 253	1:1:1	0.25	500	3.2	160	1.3	1.1	45	0.55	0.55	6	02	6
IT 312	1:1:1	0.25	380	2.5	1200	1	21	35	2.4	2.7	30	02	24
IT 313	1:1:1	1	380	2.5	450	0.6	3	6	0.33	0.4	27	02	24
IT 249	2:1:1	0.25	500	3.2	330	4	17	140	3.1	1.5	9	02	6
IT 244	3:1:1	0.1	500	3.2	200	0.7	15	70	2.8	0.9	9	02	6
IT 234	3:1:1	0.25	500	4	280	1	17	40	2	0.7	9	02	13
IT 314	3:1:1	1	380	2.5	500	1	35	20	1.6	0.7	30	02	25

* Tolerance: +50%; -30%

Explanations:

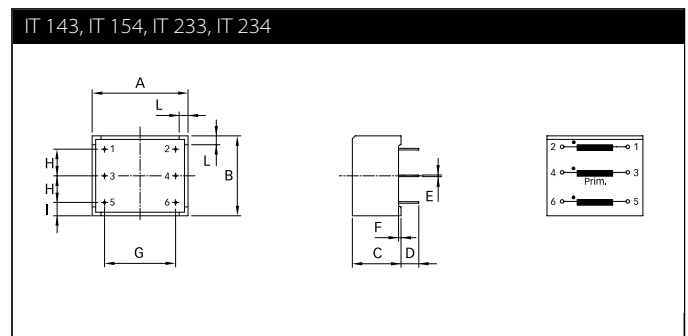
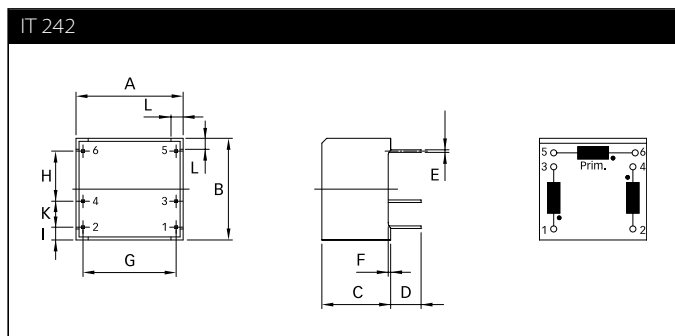
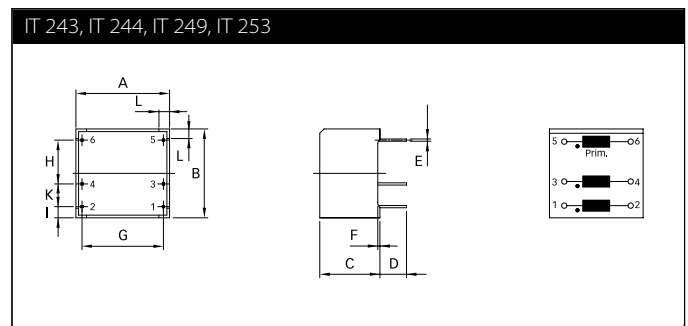
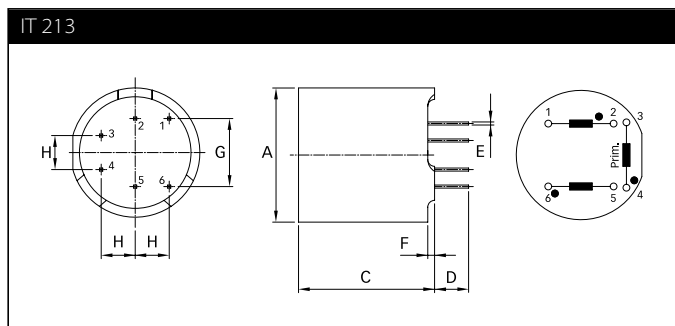
- t_r rise time at given load resistor R and 70% of the output pulse height.

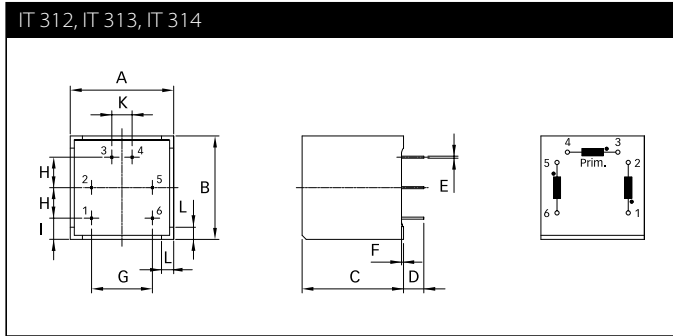
- L_p primary inductance measured at 1 kHz (secondary coil open).

- L_{str} stray inductance measured at the secondary side, short circuit at the primary side. If there are several secondary coils only one at the time is connected (measuring frequency 10 kHz).

- The ignition current is a set peak value where the voltage drop over the coil resistance is still insignificant (mostly below 1 V).

Mechanical data





Dimensions

	IT 213	IT 243	IT 244	IT 249	IT 253	IT 242	IT 143	IT 154	IT 233	IT 234	IT 312	IT 313	IT 314	Tol.
A	∅19	17.6	17.6	17.6	17.6	17.6	27*	27*	27*	27*	25.5*	25.5*	25.5*	±0.1
B		16.7	16.7	16.7	16.7	16.7	22.5*	22.5*	22.5*	22.5*	25.5*	25.5*	25.5*	±0.1
C	20	11.3	11.3	11.3	11.3	11.3	13.7	13.7	13.7	13.7	25*	25*	25*	±0.1
D	5	5	5	5	5	5	5	5	5	5	5	5	5	+1/-0
E	0.45	0.42	0.42	0.42	0.42	0.42	0.45	0.45	0.45	0.45	0.5	0.5	0.5	
F	1	0.4	0.4	0.4	0.4	0.4	0.7	0.7	0.7	0.7	0.5	0.5	0.5	
G	10	15.3	15.3	15.3	15.3	15.3	20	20	20	20	15	15	15	
H	5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	±0.2
I		2.1	2.1	2.1	2.1	2.1	3.75	3.75	3.75	3.75	5.25	5.25	5.25	±0.2
K		5	5	5	5	5					5	5	5	±0.2
L		2	2	2	2	2	2.5	2.5	2.5	2.5	3	3	3	

* Tolerance is ±0.2

All dimensions in mm; 1 inch = 25.4 mm
Tolerances according: ISO 2768-m/EN 22768-m

Please visit www.schaffner.com to find more details on filter connectors.



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