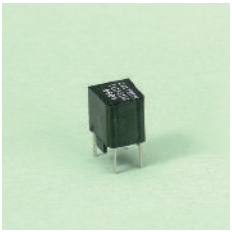
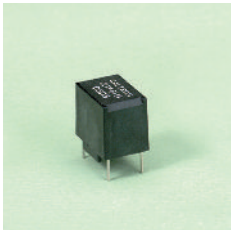
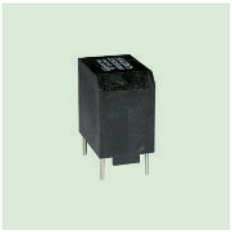
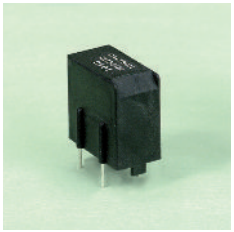
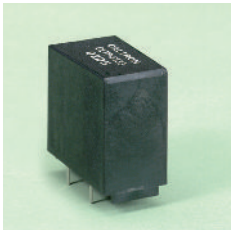
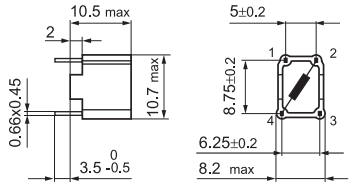






CLTP - 10, 14, 20, 22, 33 SERIES IN VERTICAL VERSION

Chokes in vertical version enable space economising, compact printed circuit board assembly.
All choke types comply with the guidelines of EN 60938-2.
In combination with suitable capacitors, high quality interference suppression filters against parasite interference influences are achieved. Main application fields are:
general purpose filtering of parasite disturbance factors above all with symmetric interferences e.g. in frequency converters, switch mode power supplies, automotive electronics etc.
Frequently they are also used in combination with current compensated interference suppression chokes.
Optimum adaptation of core materials and technical design guarantee the best possible compliance with the world-wide high requirements with the smallest volume.
The simple construction enables high performance parameters with the smallest heat development and an optimum price-performance ratio. Four closed housings are complemented by one version in open structure.

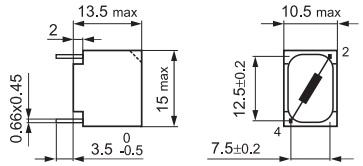
Nominal current	**: 0,63 ÷ 4A**
Inductance at I_N = 0	**: 47 ÷ 1000 µH**
Inductance drop at I_N	**: approx. 30%**
Max. operating voltage	**: UR 600 VDC**
Operating frequency	**: up to 20 kHz**
Test voltage	**: 2 kVAC / 2s, wdg. to ambient**
Climatic class	**: 40/125/21 as per IEC 60068-1**
Inflammability	**: UL 94 V-0**

Case type 10



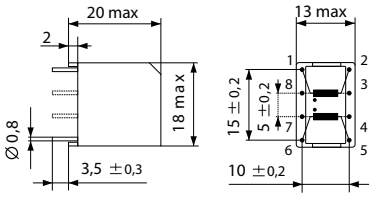
Type	I_N [A] @ ϑa 70°C	L_O [µH] ± 15%	R_{Cu} [mΩ] ± 10%	P_{loss} [W]	f_{res} [MHz] approx.
CLTP-6110-D6D1	0.63	100	600	0.3	9
CLTP-6110-01C5	1	47	270	0.3	16

Case type 14



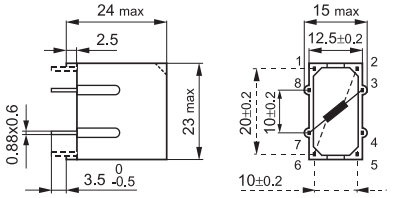
CLTP-6114-D6D5	0.63	470	750	0.3	1.5
CLTP-6114-01D2	1	180	245	0.3	3
CLTP-6114-02C5	2	47	60	0.3	11

Case type 20



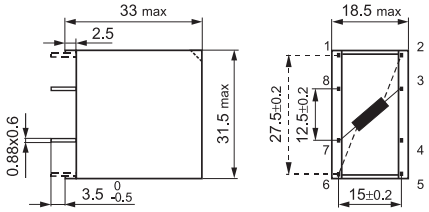
CLTP-6120-D6D7	0.63	680	700	0.3	0.9
CLTP-6120-02D1	1.5	120	140	0.3	3.5
CLTP-6120-03C3	3.15	27	30	0.3	16

Case type 22



CLTP-6122-0101	1	1000	650	0.7	1.6
CLTP-6122-02D3	2	270	170	0.7	2
CLTP-6122-04C7	4	68	35	0.6	9

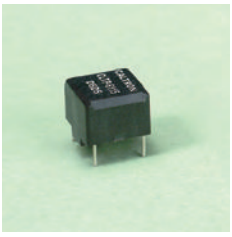
Case type 33

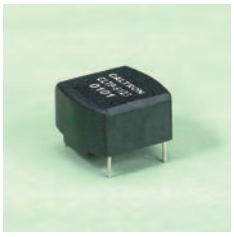


CLTP-6133-02D5	2	470	290	1.2	2
CLTP-6133-03D2	3.15	180	90	0.9	4
CLTP-6133-04D1	4	120	52	0.9	6.5

Current derating over 70°C: $I = I_N \cdot \sqrt{(125 - \vartheta a) / 55}$
L_O measured according to EN 60938-2
R_{Cu} measured at 25°C ambient temperature

SMD versions and customer-specific components on request



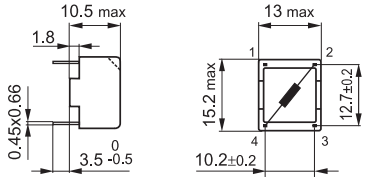



CLTP - 15, 18, 23, 28 SERIES IN HORIZONTAL VERSION

Chokes in horizontal version enable space economising, flat printed circuit board assembly.
All choke types comply with the guidelines of EN 60938-2.
In combination with suitable capacitors high quality interference suppression filters against parasite interference influences are achieved. Main application fields are:
general purpose filtering of parasite disturbance factors above all with symmetric interferences e.g. in frequency converters, switch mode power supplies, automotive electronics etc.
Frequently they are also used in combination with current compensated interference suppression chokes.
Optimum adaptation of core materials and technical design guarantee the best possible compliance to the world-wide hig requirements with the smallest volume.
The simple construction enables high performance parameters with the smallest heat development and an optimum price-performance ratio. The customer can select between four closed housings.

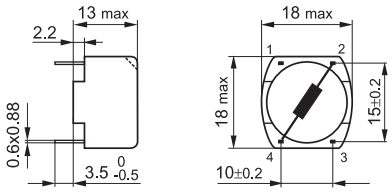
Nominal current	**: 0,63 ÷ 4A**
Inductance at I_N = 0	**: 27 ÷ 1000 µH**
Inductance drop at I_N	**: approx. 30%**
Max. operating voltage	**: UR 600 VDC**
Operating frequency	**: up to 20 kHz**
Test voltage	**: 2 kVAC / 2s, wdg. to ambient**
Climatic class	**: 40/125/21 as per IEC 60068-1**
Inflammability	**: UL 94 V-0**

Case type 15



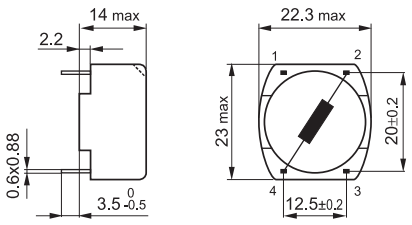
Type	I_N [A] @ ϑa 70°C	L_O [µH] ± 15%	R_{Cu} [mΩ] ± 10%	P_{loss} [W]	f_{res} [MHz] approx.
CLTP-6115-D6D5	0.63	470	750	0.3	1.5
CLTP-6115-01D2	1	180	245	0.3	3

Case type 18



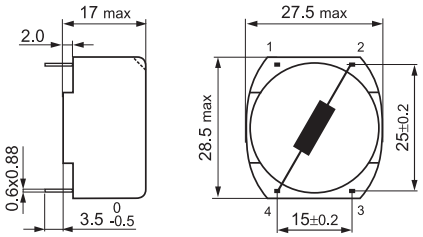
CLTP-6118-D6D7	0.63	680	700	0.3	0.9
CLTP-6118-02D1	1.5	120	140	0.3	3.5
CLTP-6118-03C3	3.15	27	30	0.3	16

Case type 23



CLTP-6123-0101	1	1000	650	0.7	1.6
CLTP-6123-02D3	2	270	170	0.7	2
CLTP-6123-04C7	4	68	35	0.6	9

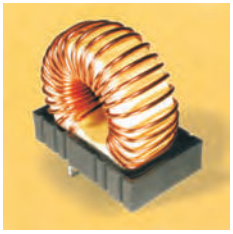
Case type 28



CLTP-6128-02D3	2	330	170	0.7	2
CLTP-6128-03D2	3.15	150	70	0.7	5
CLTP-6128-04D1	4	100	42	0.7	6

Current derating over 70°C: $I = I_N \cdot \sqrt{(125 - \vartheta a) / 55}$
L_O measured according to EN 60938-2
R_{Cu} measured at 25°C ambient temperature

SMD versions and customer-specific components on request



CLTT - 31 **OPTIMA SERIES**

General Information

Chokes in vertical version enable space economizing, compact printed circuit board assembly.
All choke types comply with the guidelines of EN 60938-2.
In combination with suitable capacitors, high quality interference suppression filters against parasite interference influences are achieved.
Main application fields are:
General purpose filtering of parasite disturbance factors, above all with symmetric interferences in frequency converters, switch mode power suppliers, automotive electronics, etc.
Often they are also used in combination with current compensated interference suppression chokes.
Optimum adaption of core materials and technical design guarantee the best possible compliance to the world wide high requirement with the smallest volume.
The simple construction enables high performance parameters with the smallest heat development and an optimum price-performance ratio.

Technical data

Type	[A] @ ϑa 70°C	[µH] ± 15%	[mΩ] ± 10%	[W]	[MHz] approx
CLTT-6131-02D5	2	560	265	1	2.5
CLTT-6131-03D2	3.15	220	105	1	3.5
CLTT-6131-04D1	4	150	65	1	5.5
CLTT-6131-06C6	6.3	56	30	1.2	14

Other ratings can be supplied upon request

Inductance drop at I : approx. 30%
Operating frequency : up to 20 kHz
Climatic class(IEC 60068-1) : 40/125/21
Inflammability : UL 94 V-0

Current derating over 70°C: $I = I \sqrt{(125 - \vartheta a) / 55}$
L measured according to EN 60938-2
R measured at 25°C ambient temperature

Case Type 31