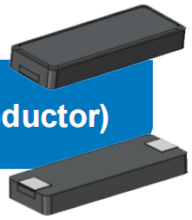
Co-fired Alloy Power Inductor HTF－H Series (Single－phase Inductor)



Operating Temp

- -40˚C～+125˚C (Including self-heating)

Features

- Ultra-thin
- High operating current and low loss
- High reliability

Applications

- xPU power supply for high-end PC/PAD
- VRM/TLVR power supply for server/AI server
- Large current, ultra-thin application

Product Identification

1	2	3	4	5	6
HTF	130517	H	R14	L	T

1	Type	
	HTF	Co-fired Alloy Power Inductor

2	External Dimensions(L×W×H) [mm]	
	060321	5.5×2.5×2.1
	070415	7.0×4.5×1.5
	100424	10.0×4.0×2.4
	130517	12.8×4.8×1.7
	100750	9.8×6.8×5.0
	100846	9.8×7.8×4.6
	120840	12.8×8.2×4.0

3	Feature Type	
	H	Single-phase Inductor

4	Nominal Inductance	
	Example	Nominal Value
	R10	0.10uH
	R12	0.12uH
	R14	0.14uH
	R15	0.15uH
	R22	0.22uH
	50N	0.05uH
	65N	0.065μH

5	Inductance Tolerance	
	L	±15%
	M	±20%

6	Packing	
	T	Tape & Reel

Shape and Dimensions

Recommended Land Pattern (Typ.)

Unit: mm

Series	A	B	C	D	E	a Typ.	b Typ.	c Typ.
HTF060321H	5.5±0.1	2.5±0.1	2.1±0.05	2.5±0.1	0.4±0.1	2.9	4.3	5.9

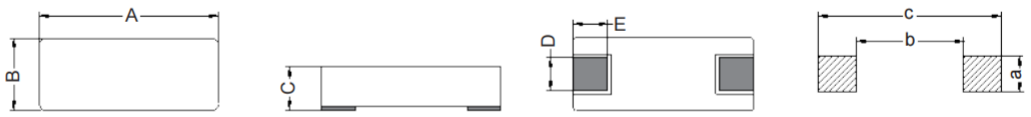
Specifications

Part Number	Inductance	DC Resistance		Full Load Inductance	Heat Rating Current	
Units	nH	mΩ		nH	A	
Symbol	L@1MHz	DCR		FLL※2	Irms※3	
		Max.	Typ.	Min.	Max.	Typ.
HTF060321H65NLT	65±15%	0.20	0.15	20	48	55

※1: All Specifications are for room temperature (25℃) unless otherwise noted;
※2: Full load inductance (FLL) test condition: 1MHz, 1V, 50A;
※3: Irms: DC current that causes the temperature rise (ΔT) from 20°C ambient. For Max. Value, ΔT<40°C; for Typ. Value, ΔT is approximate 40°C.

Shape and Dimensions

Recommended Land Pattern (Typ.)



Unit: mm

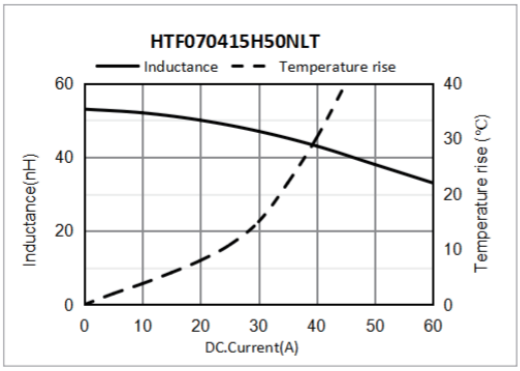
Series	A	B	C	D	E	a Typ.	b Typ.	c Typ.
HTF070415H	7.0±0.2	4.5±0.2	1.3±0.2	2.5±0.3	1.5±0.3	2.9	3.6	7.4
HTF100424H	10.0±0.2	4.0±0.2	2.4 Max.	3.5±0.3	1.5±0.3	3.9	6.6	10.4
HTF100750H	9.8±0.2	6.8±0.2	5.0±0.2	3.0±0.3	2.2±0.3	3.0	4.4	10.2
HTF100846H	9.8±0.2	7.8±0.2	4.6±0.2	2.4±0.3	2.5±0.3	3.0	4.06	11.18
HTF130517H	12.8±0.2	4.8 Max.	1.7 Max.	2.2±0.3	1.5±0.3	2.6	9.4	13.2
HTF120840H	12.8±0.4	8.2 Max.	4.0 Max.	3.5±0.5	2.5±0.5	5.0	6.0	14.5

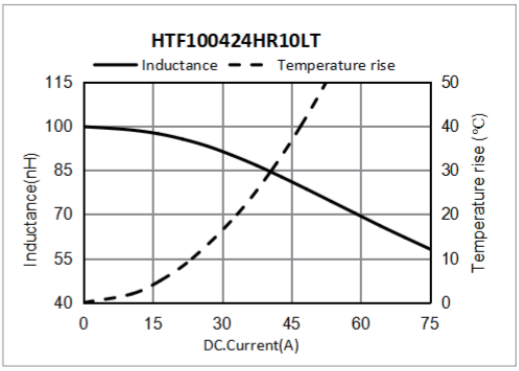
Specifications

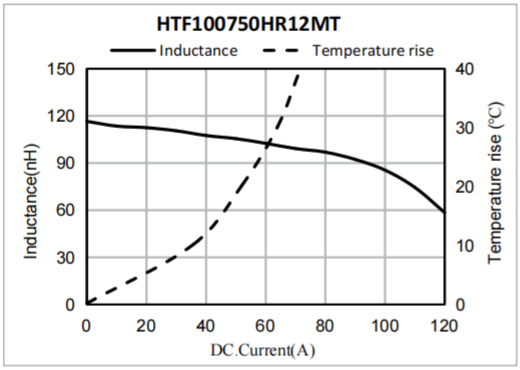
Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
Units	nH	mΩ		A		A	
Symbol	L@1MHz	DCR		Isat※3		Irms※4	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
HTF070415H50NLT	50±15%	0.27	0.25	40	45	40	45
HTF100424HR10LT	100±15%	0.35	0.30	51	57	38	45
HTF100750HR12MT	120±20%	0.19	0.17	91	107	56.7	68
HTF100846HR15LT	150±15%	0.19	0.18	70.6	83	64	80
HTF130517HR14LT	140±15%	0.45	0.35	36	40	36	42
HTF120840HR22MT	220±20%	0.60	0.39	63	70	38	45

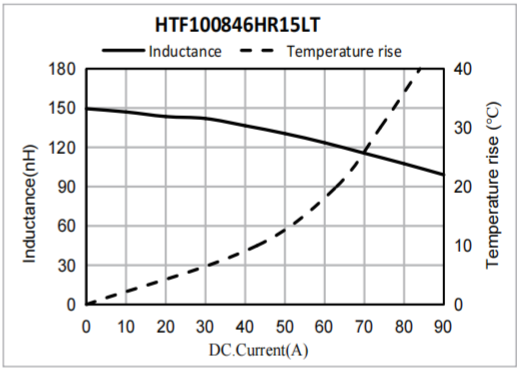
※1: All Specifications are for room temperature (25°C) unless otherwise noted;
※2: Rated current: Isat (max.) or Irms (max.), whichever is smaller;
※3: Isat: Max.Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;
※4: Irms: DC current that causes the temperature rise (ΔT) from 20°C ambient.For Max. Value, ΔT<40°C; for Typ. Value, ΔT is approximate 40°C.

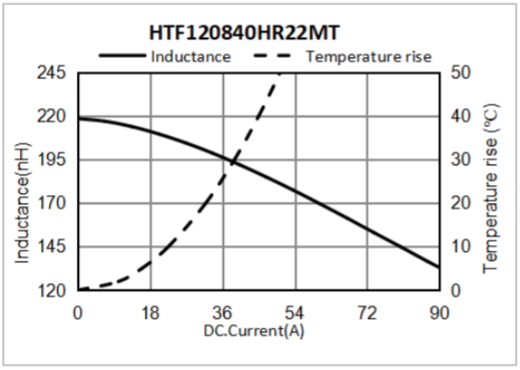
Typical Electrical Characteristics

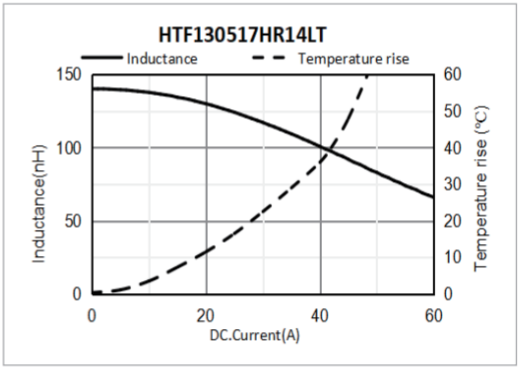












Co-fired Alloy Power Inductor HTF－MP Series (Multiphase Inductor)

Operating Temp

- -40℃~+125℃

Features

- Ultra-thin
- High operating current and low loss
- High reliability

Applications

- xPU power supply for high-end PC/PAD
- VRM/TLVR power supply for server/AI server
- Large current, ultra-thin application

Product Identification

1	2	3	4	5	6	7
HTF	030208	MP	10N	M	T	-4PH

1

Type	
HTF	Co-fired Alloy Power Inductor

2

External Dimensions(L×W×H) [mm]	
030208	3.2×1.6×0.8
090925	8.5×9.4×2.5
100760	9.8×7.0×6.0

3

Feature Type	
MP	Multiphase Inductor

4

Nominal Inductance	
Example	Nominal Value
10N	10nH
20N	20nH
70N	70nH
85N	85nH

5

Inductance Tolerance	
M	±20%

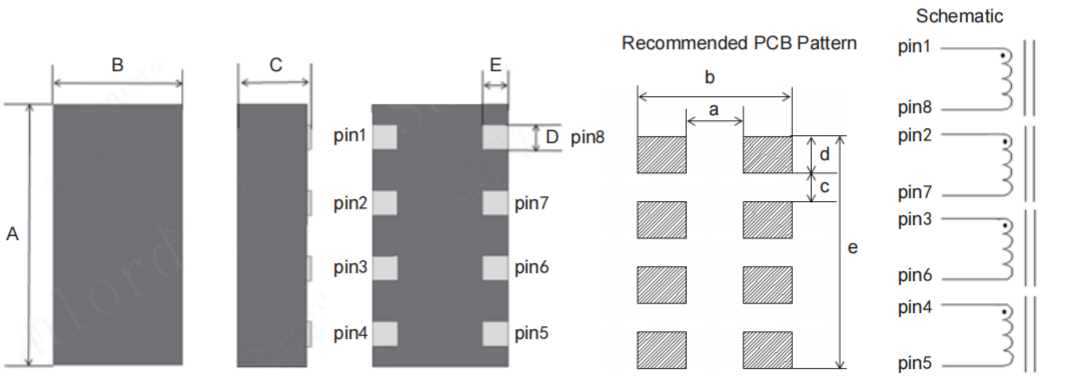
6

Packing	
T	Tape & Reel

7

Design Code	
-2PH	Two-phase Inductor
-4PH	Four-phase Inductor

Shape and Dimensions



Unit: mm

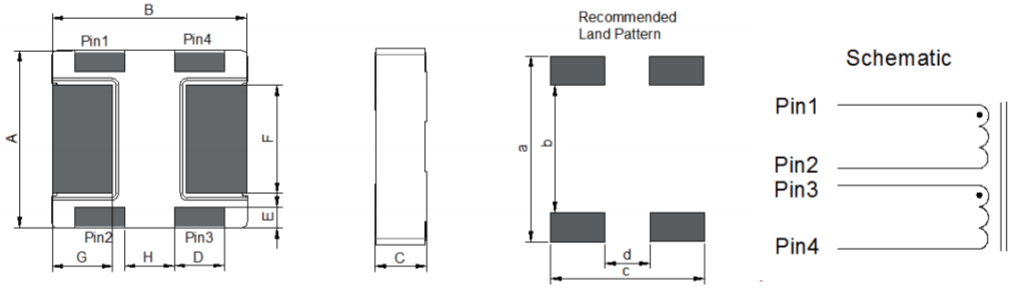
Series	A	B	C	D	E	a Typ.	b Typ.	c Typ.	d Typ.	e Typ.
HTF030208MP-4PH	3.20±0.20	1.60±0.20	0.80±0.20	0.30±0.15	0.30±0.15	0.7	1.9	0.35	0.45	2.85

Specifications

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
Units	nH	mΩ		A		A	
Symbol	L@10MHz	DCR		Isat※3		Irms※4	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
HTF030208MP10NMT-4PH	10±20%	0.79	0.70	12	15	12	14
HTF030208MP20NMT-4PH	20±20%	0.79	0.70	6	8	12	14

※1: All Specifications are for room temperature (25°C) unless otherwise noted;
※2: Rated current: Isat (max.) or Irms (max.), whichever is smaller;
※3: Isat: Max.Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;
※4: Irms: DC current that causes the temperature rise (ΔT) from 20°C ambient. For Max. Value, ΔT<40°C; for Typ. Value, ΔT is approximate 40°C.
※5: All Specifications are for single phase, tested Pin1-8 or Pin2-7 or Pin3-6 or Pin4-5.

Shape and Dimensions



Unit: mm

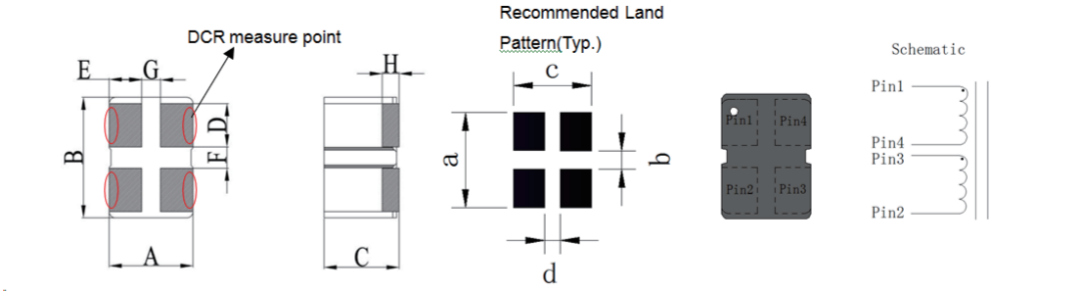
Series	A	B	C	D	E	F	G	H	a Typ.	b Typ.	c Typ.	d Typ.
HTF090925MP-2PH	8.5±0.1	9.4±0.1	2.5±0.1	2.4±0.1	0.95±0.15	5.2±0.2	2.9±0.2	2.4±0.3	8.9	6.2	7.6	2.0

Specifications

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
Units	nH	mΩ		A		A	
Symbol	L@10MHz	DCR		Isat※3		Irms※4	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
HTF090925MP70NMT-2PH	70±20%	0.20	0.18	20	25	/	/

※1:All Specifications are for room temperature (25°C) unless otherwise noted;
※2:Rated current: Isat (max.) or Irms (max.), whichever is smaller;
※3:Isat: Max.Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;
※4:Irms: DC current that causes the temperature rise (ΔT) from 20°C ambient.For Max. Value, ΔT<40°C; for Typ. Value, ΔT is approximate 40°C .
※5:All Specifications are for single phase, tested Pin1-4 or Pin2-3.

Shape and Dimensions



Unit: mm

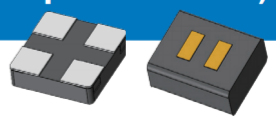
Series	A	B	C	D	E	F	G	H	a Typ.	b Typ.	c Typ.	d Typ.
HTF100760MP-2PH	7.0±0.2	9.8±0.2	5.8±0.2	3.6±0.2	2.8±0.2	1.7±0.2	1.4±0.2	0.7±0.2	8.9	1.7	7.0	1.4

Specifications

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
Units	nH	mΩ		A		A	
Symbol	L@10MHz	DCR		Isat※3		Irms※4	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
HTF100760MP85NMT-2PH	85±20%	0.16	0.14	75	88	58	68

※1: All Specifications are for room temperature (25℃) unless otherwise noted;
※2: Rated current: Isat (max.) or Irms (max.), whichever is smaller;
※3: Isat: Max.Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;
※4: Irms: DC current that causes the temperature rise (ΔT) from 20℃ ambient. For Max. Value, ΔT<40℃; For Typ. Value, ΔT is approximate 40℃.
※5: All Specifications are for single phase, tested Pin1-4 or Pin2-3.

Co-fired Alloy Power Inductor HTF－CL Series (Coupled Inductor)



Operating Temp

- -40℃~+125℃ (Including self-heating)

Features

- Ultra-thin
- High operating current and low loss
- With patented insulation technology, the product has high reliability and the coupling coefficient can be designed flexibly

Applications

- xPU power supply for high-end PC/PAD
- VRM/TLVR power supply for server/AI server
- Large current, ultra-thin application

Product Identification

1	2	3	4	5	6	7
HTF	0924	CL	R33	L	T	-2PH

1 Type	
HTF	Co-fired Alloy Power Inductor

2 External Dimensions(L×W×H) [mm]	
060524	6.0×5.0×2.4
0924	9.3×9.3×2.4

3 Feature Type	
CL	Coupled Inductor

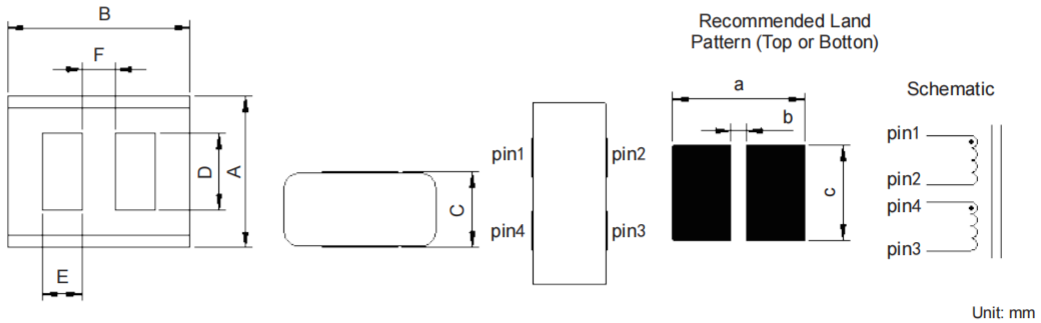
4 Nominal Inductance	
Example	Nominal Value
R33	0.33uH
39N	39nH

5 Inductance Tolerance	
L	±15%
M	±20%

6 Packing	
T	Tape & Reel

7 Design Code	
-2PH	Two-phase Inductor

Shape and Dimensions



Unit: mm

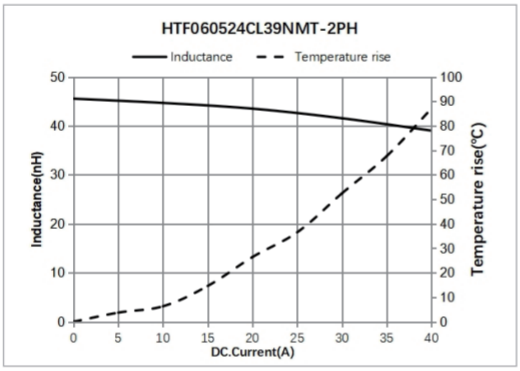
Series	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
HTF060524CL-2PH	5.00±0.10	6.00±0.10	2.40±0.025	2.50±0.10	1.30±0.10	1.10±0.10	4.3	0.8	3.1

Specifications

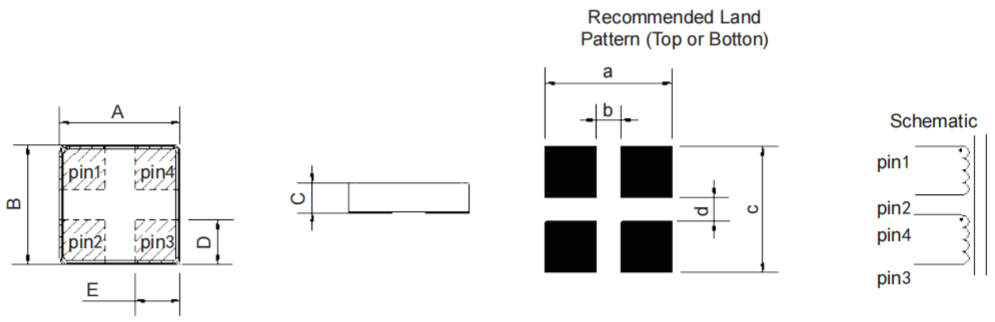
Part Number	Inductance	DC Resistance	FLL@I=130A	Insulation Resistance	Heat Rating Current	Coupling Coefficient
Units	nH	mΩ	nH	kΩ	A	/
Symbol	OCL@1MHz※2	DCR※5	FLL※3	IR※6	Irms※4	K
HTF060524CL39NMT-2PH	39.0±20%	0.25 Max.	10 Min.	1 Min.	28	0.2 Typ.

※1: All Specifications are for room temperature (25℃) unless otherwise noted;
※2: Inductance (OCL) test conditions: 1MHz/1Vrms, 0.0Adc;
※3: Full Load Inductance (FLL) Test conditions: 1MHz/1Vrms,130A bias;
※4: Irms: DC current that causes the temperature rise (ΔT) from 20℃ ambient, ΔT is approximate 40℃ ;
※5: DC Resistance is measured from Pin1 to Pin2;
※6: Insulation Resistance is measured from Pin1 to Pin4;
※7: OCL/ DCR/ FLL/ Irms are for single phase, tested Pin1-2 or Pin3-4.

Typical Electrical Characteristics



Shape and Dimensions



Unit: mm

Series	A	B	C Max.	D	E	a Typ.	b Typ.	c Typ.	d Typ.
HTF0924CL-2PH	9.3±0.2	9.3±0.2	2.4	3.5±0.3	3.5±0.3	10.0	2.0	10.0	2.0

Specifications

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current		Coupling Coefficient
Units	uH	mΩ		A		A		/
Symbol	L@1MHz	DCR		Isat※3		Irms※4		K
		Max.	Typ.	Max.	Typ.	Max.	Typ.	Typ.
HTF0924CLR33LT-2PH	0.33±15%	2.00	1.80	39	43	20	22	-0.55

※1: All Specifications are for room temperature (25℃) unless otherwise noted;
※2: Rated current: Isat (max.) or Irms (max.), whichever is smaller;
※3: Isat: Max.Value, DC current at which the inductance drops less than 30% from its value without current; Typ. Value, DC current at which the inductance drops 30% from its value without current;
※4: Irms: DC current that causes the temperature rise (ΔT) from 20°C ambient.For Max. Value, ΔT<40℃; for Typ. Value, ΔT is approximate 40℃ ;
※5: L/ DCR/ Isat/ Irms are for single phase, tested Pin1-2 or Pin3-4.