

Wire Wound Molded SMD Power Inductors-WT Series

Operating Temp. : -55°C~+155°C(Including self-heating)



FEATURES

- Extremely low DCR and ultra low AC losses for high switching frequencies (up to 5MHz)
- Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI)
- Excellent saturation characteristics
- Ultra wide temperature range of application (-55~155°C)
- No thermal aging issues
- High reliability

APPLICATIONS

- High-end phones, tablets, 5G modules
- Server, base station, etc.
- Various DC-DC conversion power modules

PRODUCT IDENTIFICATION

WT

①



②

0430

③

T

④

1R0

⑤

M

⑥

T

⑦



⑧

① Type	
WT	Molded SMD Power Inductors

③ External Dimensions(LxWxH) [mm]	
0415	4.0x4.0x1.5
0420	4.0x4.0x2.1
0430	4.0x4.0x3.1

⑥ Inductance Tolerance	
N	±30%
M	±20%

⑦ Packing	
T	Tape & Reel

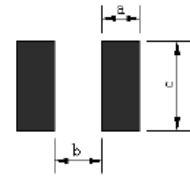
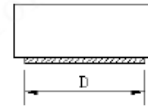
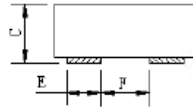
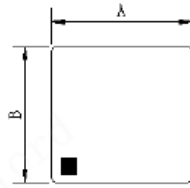
② Feature Type	
X	Standard Type
H	Special Type

④ Feature type	
T	Internal code

⑤ Nominal Inductance	
Example	Nominal Value
1R0	1.0μH
4R7	4.7μH

⑧ Process code	
R01	Special Process code
* Standard product is blank	

SHAPE AND DIMENSIONS



Recommended Land Pattern

(Typ.)

Unit: mm

Series	A	B	C Max.	D Typ	E	F	a Typ.	b Typ.	c Typ.
0415	4.0±0.3	4.0±0.3	1.5	3.2±0.3	0.8±0.2	1.6±0.3	0.98	1.39	3.4
0420	4.0±0.3	4.0±0.3	2.1	3.2±0.3	0.8±0.2	1.6±0.3	0.98	1.39	3.4
0430	4.0±0.3	4.0±0.3	3.1	3.2±0.3	0.8±0.2	1.6±0.3	0.98	1.39	3.4

SPECIFICATIONS

WTH0415T Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	mΩ		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		I _{rms}	
WTH0415TR33MTR01	0.33±20%	4.8	4.4	83	14.0	16.0	13.9	16.0
WTH0415TR47MTR01	0.47±20%	6.1	5.5	64	10.5	11.7	11.3	13.0
WTH0415TR68MTR01	0.68±20%	8.9	8.1	52	8.5	9.6	9.6	11.0
WTH0415T1R0MTR01	1.0±20%	11.9	10.8	40	7.2	8.3	8.3	9.5

WTX0420T Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	mΩ		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		I _{rms}	
WTX0420TR33MTR01	0.33±20%	3.2	3.0	79	15.7	18.1	19.9	23.0
WTX0420TR47MTR01	0.47±20%	4.5	4.1	61	11.2	13.4	17.0	19.7
WTX0420TR68MTR01	0.68±20%	6.4	5.8	50	9.8	12.0	12.8	14.8
WTX0420TR82MTR01	0.82±20%	6.4	5.8	40	8.2	10.4	12.8	14.8
WTX0420T1R0MTR01	1.0±20%	8.4	7.6	39	7.6	9.0	11.7	13.5
WTX0420T1R5MTR01	1.5±20%	13.6	12.4	32	6.3	7.5	9.5	11
WTX0420T2R2MTR01	2.2±20%	22.7	20.6	26	5.6	6.4	7.8	9
WTX0420T3R3MTR01	3.3±20%	28.6	26.0	18	4.7	5.4	6.6	7.3

WTX0430T Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	mΩ		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		I _{rms}	
WTX0430TR33MTR01	0.33±20%	2.2	2.0	76.4	18.8	21.4	19.4	22.4
WTX0430TR47MTR01	0.47±20%	3.1	2.6	62.4	15.6	17.7	17.0	19.6
WTX0430TR68MTR01	0.68±20%	3.9	3.5	50.0	14.3	16.3	14.1	16.2
WTX0430T1R0MTR01	1.0±20%	5.7	5.2	42.7	11.9	13.5	12.6	14.5
WTX0430T1R5MTR01	1.5±20%	8.6	7.8	33.7	9.6	11.0	9.8	11.3

SPECIFICATIONS

WTX0430T Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	mΩ		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WTX0430T2R2MTR01	2.2±20%	11.8	10.7	24.5	7.1	8.1	9.0	10.3
WTX0430T3R3MTR01	3.3±20%	17.7	16.1	21.6	5.3	5.8	8.0	8.3
WTX0430T4R7MTR01	4.7±20%	23.4	21.3	18.6	4.8	5.5	6.1	7.0
WTX0430T6R8MTR01	6.8±20%	37.4	34.0	14.3	4.1	4.8	4.6	5.3

※1: Rated current: Isat or Irms, whichever is smaller;

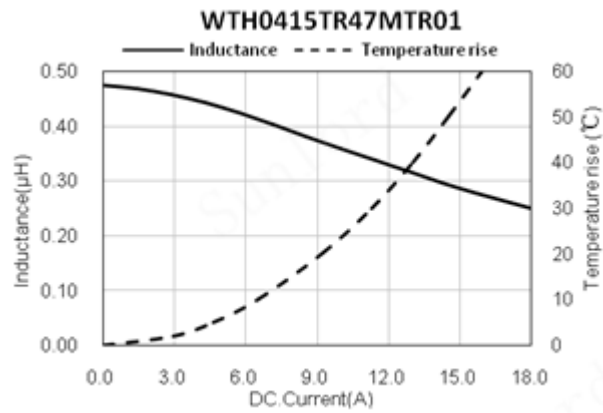
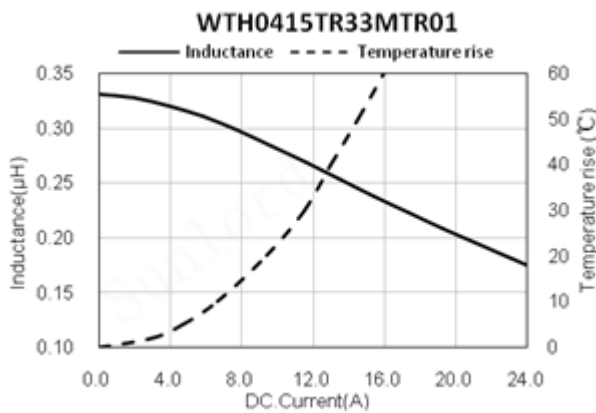
※2: Isat: DC current at which the inductance drops approximate 30% from its value without current;

※3: Irms: DC current that causes the temperature rise ($\Delta T = 40^{\circ}\text{C}$) from 20°C ambient.

TYPICAL ELECTRICAL CHARACTERISTICS

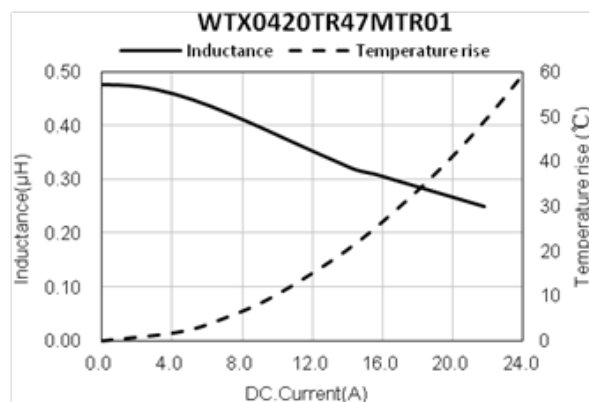
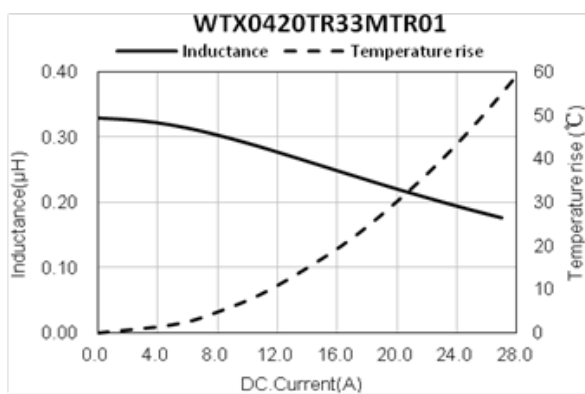
WTH0415T Series

Inductance & Temperature vs. DC Current Characteristics



WTX0420T Series

Inductance & Temperature vs. DC Current Characteristics



TYPICAL ELECTRICAL CHARACTERISTICS

WTX0430T Series

Inductance & Temperature vs. DC Current Characteristics

