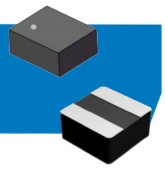
绕线模压片式功率电感—WC 系列
Wire Wound Molded SMD Power Inductors –WC Series



工作温度 Operating Temp

- -55℃ ~+155℃ (Including self-heating)

特征 Features

- 在高开关频率（高达 5MHz）下具有极低 DCR 和交流损耗
- 闭合磁路设计减少漏磁和电磁干扰（EMI）
- 优秀的饱和电流特性
- 超宽温度应用范围（-55℃ ~155℃）
- 无热老化问题
- 高可靠性
- 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℃)
- No thermal aging issues
- High reliability

用途 Applications

- 高端手机、平板电脑、5G 模块
- 服务器、基站等
- 各种 DC-DC 转换电源模块
- High performance phones, tablets, 5G modules
- Server, base station, etc.
- Various DC-DC conversion power modules

产品型号 Product Identification

1	2	3	4	5	6	7	8
WC	□	0430	□	1R0	M	T	□□□

1

分类 Type	
WC	模压片式功率电感 Molded SMD Power Inductors

2

特征代码 Feature Type	
X	标准型 Standard Type
HE	特殊型 Special Type

3

外形尺寸 (L×W×H) [mm] External Dimensions(L×W×H) [mm]	
252012	2.5×2.0×1.2
322512	3.2×2.5×1.2
322520	3.2×2.5×2.0
0412	4.0×4.0×1.2
0415	4.0×4.0×1.5
0420	4.0×4.0×2.0
0430	4.0×4.0×3.0
0515	5.3×5.1×1.5
0634	6.6×6.4×3.38

4

特性类别 Feature Type	
A/C	普通品 Normal
CE/CG	性能更优 Better Performance

5

公称感量 Nominal Inductance	
Example	Nominal Value
1R0	1.0μH
4R7	4.7μH

6

感量精度 Inductance Tolerance	
M	±20%

7

包装 Packing	
T	编带 Tape & Reel

8

设计代号 Design Code	
□□□	Design Code
* Standard product is blank	

外观尺寸
Shape and Dimensions

Fig.1

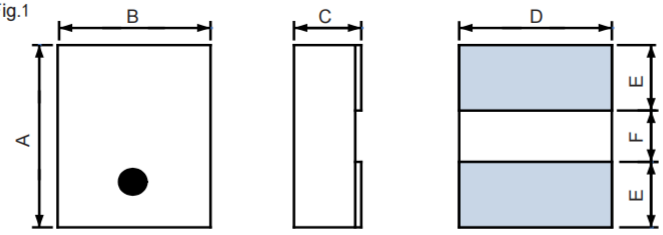


Fig.2

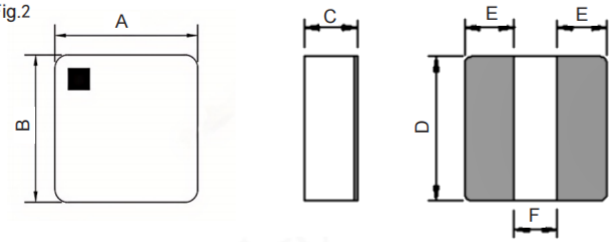
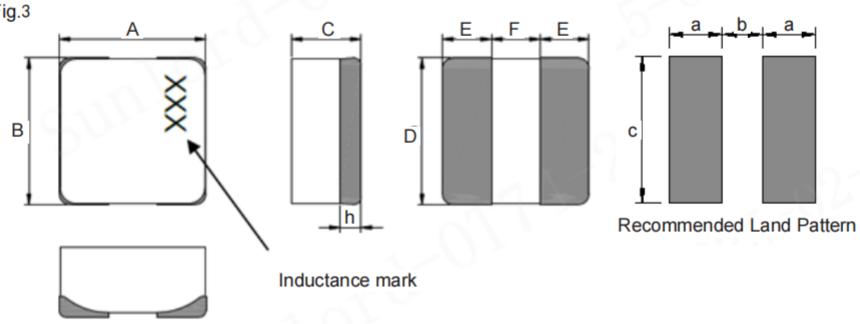


Fig.3



Unit: mm

Series	Shape	A	B	C Max.	D	E	F	a Typ.	b Typ.	c Typ.
WCX252012A	Fig.1	2.5±0.2	2.0±0.2	1.2	1.9±0.25	0.8±0.25	0.9±0.25	0.8	0.9	2.0
WCX322512A	Fig.1	3.2±0.2	2.5±0.2	1.2	2.5±0.2	1.15±0.2	0.9±0.2	1.2	0.8	2.5
WCX322520C	Fig.1	3.2±0.2	2.5±0.2	2.0	2.5±0.3	0.8±0.3	1.6 Typ.	0.9	1.5	2.5
WCX0412C	Fig.2	4.0±0.3	4.0±0.3	1.2	4.0±0.3	1.3±0.3	1.2±0.3	1.6	1.1	4.3
WCX0415C	Fig.2	4.0±0.3	4.0±0.3	1.5	4.1 Typ.	1.3±0.3	1.2 Typ.	1.6	1.1	4.3
WCX0420C	Fig.2	4.0±0.3	4.0±0.3	2.0	4.1 Typ.	1.3±0.3	1.2 Typ.	1.6	1.1	4.3
WCHE0420CE/CG/ WCHE0420CE-Y01	Fig.2	4.0±0.3	4.0±0.3	2.0	4.1 Typ.	1.3±0.3	1.2 Typ.	1.6	1.1	4.3
WCHE0420CE-R04	Fig.3	4.0±0.3	4.0±0.3	2.0	4.1 Typ.	1.3±0.3	1.2 Typ.	1.6	1.1	4.3
WCX0430C	Fig.2	4.0±0.3	4.0±0.3	3.0	4.1 Typ.	1.3±0.3	1.2 Typ.	1.6	1.1	4.3
WCX0515C/CE	Fig.2	5.3±0.2	5.1±0.2	1.5	5.3±0.3	1.7±0.3	1.7 Typ.	2.0	1.5	5.4
WCX0634C/CE	Fig.2	6.6±0.2	6.4±0.2	3.38	6.6 Typ.	1.8±0.2	2.8 Typ.	2.0	2.6	6.8

规格特性
Specifications

WCX252012A Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX252012A1R5MT	1.5±20%	44	40	/	3.5	4.0	4.5	5.0

All information and data presented in this Catalog are for information only. You are requested to approve our product specification before your ordering.

规格特性
Specifications

WCX322512A Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX322512AR47MT	0.47±20%	14.0	11.5	80	9.0	9.9	8.0	8.8
WCX322512AR68MT	0.68±20%	16.5	15.0	/	5.5	6.5	6.6	7.3
WCX322512A1R0MT	1.0±20%	27.5	23.0	45	6.4	7.1	5.0	5.5

WCX322520C Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX322520C220MT	22±20%	450	380	/	0.9	1.1	1.2	1.5

WCX0412C Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX0412C4R7MT	4.7±20%	100	90	15	3.5	4.0	3.0	3.5

WCX0415C Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX0415CR10MT	0.1±20%	2.5	1.6	108	31.0	35.0	21.5	26.5
WCX0415CR22MT	0.22±20%	3.0	2.6	96	19.0	24.0	17.0	23.0
WCX0415CR33MT	0.33±20%	4.8	4.4	83	13.0	14.5	13.9	16.0
WCX0415CR47MT	0.47±20%	6.1	5.5	64	9.5	11.5	11.3	13.0
WCX0415CR68MT	0.68±20%	9.2	8.3	52	8.0	9.6	9.6	11.0
WCX0415C1R0MT	1.0±20%	12.5	11.3	40	6.0	7.4	8.3	9.5
WCX0415C1R5MT	1.5±20%	18.0	16.5	29	6.5	6.9	6.0	6.5

WCX0420C Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX0420C75NMT	0.075±20%	1.0	0.85	200	40.0	45.0	35.0	39.0
WCX0420CR10MT	0.1±20%	1.0	0.85	140	32.0	38.0	33.0	38.0
WCX0420CR15MT	0.15±20%	1.0	0.85	123	17.0	19.0	30.0	35.0
WCX0420CR22MT	0.22±20%	2.0	1.5	108	16.0	18.5	23.0	26.0
WCX0420CR33MT	0.33±20%	3.6	3.0	79	15.7	18.1	19.9	23.0
WCX0420CR47MT	0.47±20%	4.5	4.1	61	11.2	13.4	17.0	19.7
WCX0420CR68MT	0.68±20%	6.4	5.8	50	9.8	12.0	12.8	14.8

规格特性
Specifications

WCX0420C Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX0420CR82MT	0.82±20%	6.4	5.8	40	8.2	10.4	12.8	14.8
WCX0420C1R0MT	1.0±20%	8.4	7.6	39	7.6	9.0	11.7	13.5
WCX0420C1R5MT	1.5±20%	13.6	12.4	32	6.3	7.5	9.5	11.0
WCX0420C2R2MT	2.2±20%	22.7	20.6	26	5.6	6.4	7.8	9.0
WCX0420C3R3MT	3.3±20%	28.6	26.0	18	4.7	5.4	6.6	7.3

WCHE0420CE/CG Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCHE0420CER47MT	0.47±20%	3.9	2.6	58	12.0	14.3	17.4	20.7
WCHE0420CE1R0MT	1.0±20%	8.6	5.7	38	9.7	10.8	10.2	12.5
WCHE0420CGR47MT	0.47±20%	3.1	2.0	58	10.1	11.4	19.8	23.3
WCHE0420CG1R0MT	1.0±20%	6.4	4.3	38	6.7	8.2	11.8	14.5

WCHE0420CE-Y01 Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCHE0420CER47MTY01	0.47±20%	3.1	2.0	58	11.3	12.7	19.8	23.3
WCHE0420CE1R0MTY01	1.0±20%	6.4	4.3	38	7.9	8.8	11.8	14.5

WCHE0420CE-R04 Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCHE0420CER47MTR04	0.47±20%	3.1	2.0	58	11.3	12.7	19.8	23.3
WCHE0420CE1R0MTR04	1.0±20%	6.4	4.3	38	7.9	8.8	11.8	14.5

WCX0430C Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX0430CR12MT	0.12±20%	1.1	0.9	120	35.0	39.0	27.4	33.4
WCX0430CR22MT	0.22±20%	1.5	1.2	98.2	23.0	27.0	23.5	28.9
WCX0430CR33MT	0.33±20%	2.2	1.8	76.4	18.8	21.4	19.4	22.4
WCX0430CR47MT	0.47±20%	3.1	2.6	62.4	15.6	17.7	17.0	19.6
WCX0430CR68MT	0.68±20%	3.9	3.5	50	14.3	16.3	14.1	16.2
WCX0430C1R0MT	1.0±20%	5.7	5.2	42.7	11.9	13.5	12.6	14.5

All information and data presented in this Catalog are for information only. You are requested to approve our product specification before your ordering.

规格特性
Specifications

WCX0430C Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX0430C1R5MT	1.5±20%	8.6	7.8	33.7	9.6	11.0	9.8	11.3
WCX0430C2R2MT	2.2±20%	11.8	10.7	24.5	7.1	8.1	9.0	10.3
WCX0430C3R3MT	3.3±20%	17.7	16.1	21.6	5.3	5.8	8.0	8.3
WCX0430C4R7MT	4.7±20%	23.4	21.3	18.6	4.8	5.5	6.1	7.0
WCX0430C6R8MT	6.8±20%	37.4	34.0	14.3	4.1	4.8	4.6	5.3

WCX0515C/CE Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@100KHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX0515CR15MT	0.15±20%	3.0	2.5	/	30.0	34.0	18.0	22.0
WCX0515CER15MT	0.15±20%	3.0	2.5	/	30.0	34.0	18.0	22.0

WCX0634C/CE Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@1.5MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
WCX0634CR56MT	0.56±20%	3.3	2.8	/	25.0	30.0	24.0	29.0
WCX0634CER56MT	0.56±20%	3.3	2.8	/	26.0	31.0	24.0	29.0

※1: 所有的测试数据均以 20℃环境温度为基准;
※1: All test data is referenced to 20℃ ambient;

※2: 额定电流：以 Isat 和 Irms 中更小者为准;
※2: Rated current: Isat or Irms, whichever is smaller;

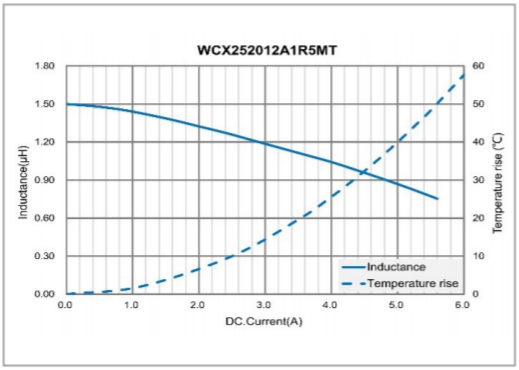
※3: 饱和电流：通直流电使没有通电时的感量下降 30% 左右的电流;
※3: Isat: DC current at which the inductance drops approximate 30% from its value without current;

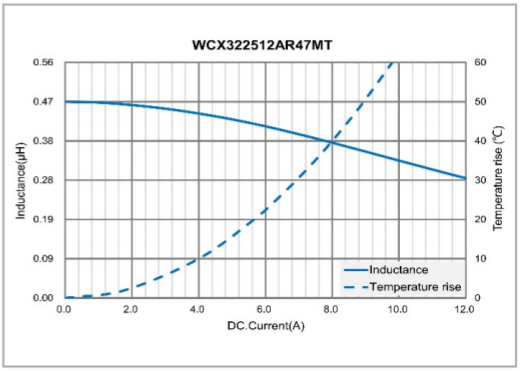
※4: 温升电流：使得温度从 25℃环境温度升高（△ T =40℃）的直流电流。
※4: Irms: DC current that causes the temperature rise (△T=40℃) from 25℃ ambient.

※5: 可提供公差为 ±20% 或其他值的电感。请联系当地销售人员。
※5: Inductance with tolerance of ±20% or other value is also available. Please contact your local sales.

电气特性
Typical Electrical Characteristics

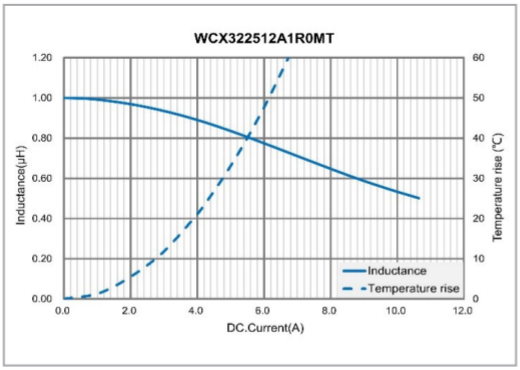
Inductance & Temperature vs. DC Current Characteristics

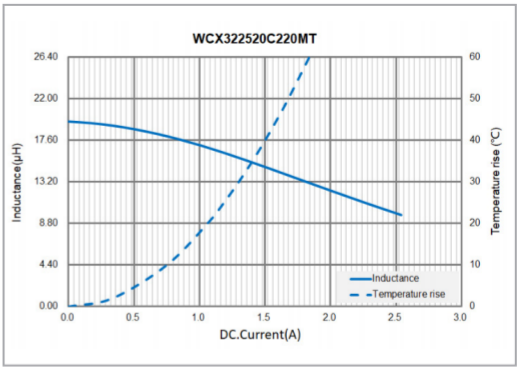


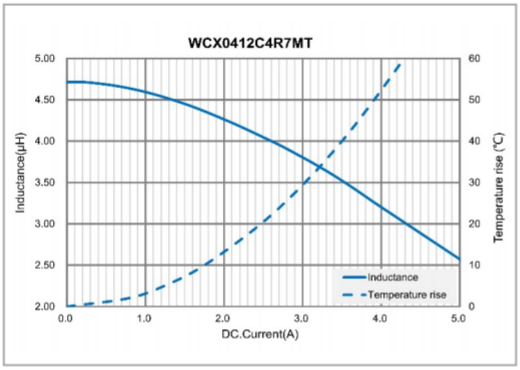


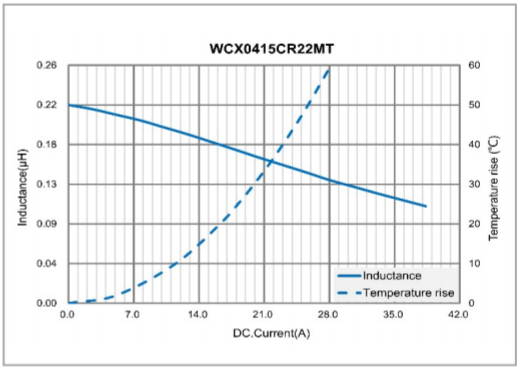
电气特性
Typical Electrical Characteristics

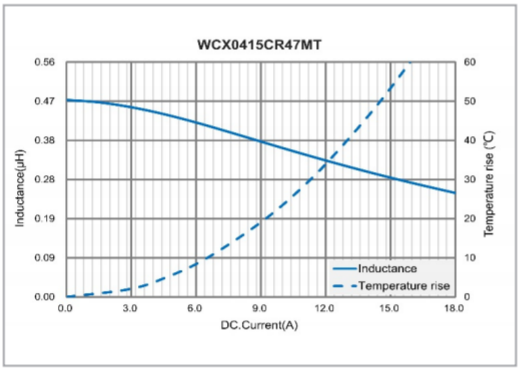
Inductance & Temperature vs. DC Current Characteristics

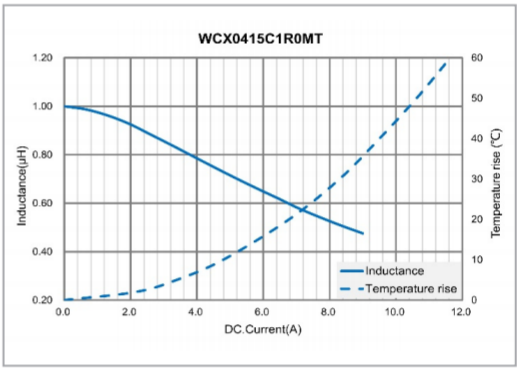


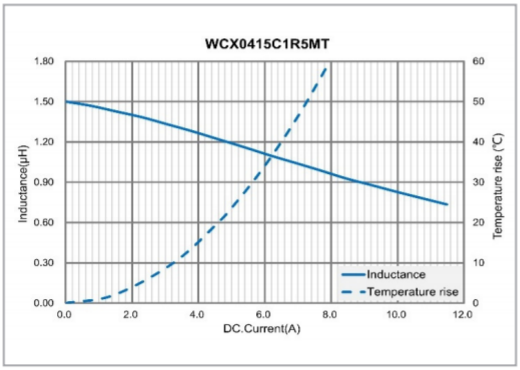


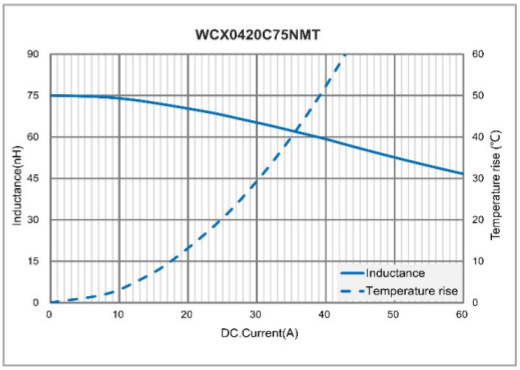










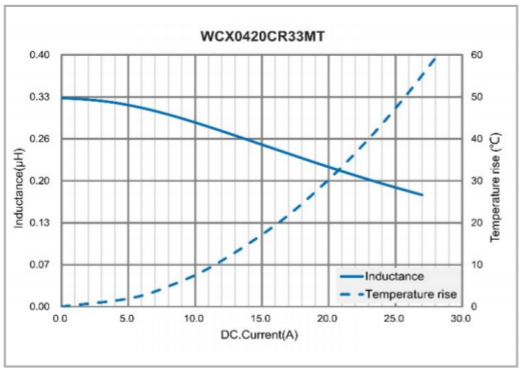


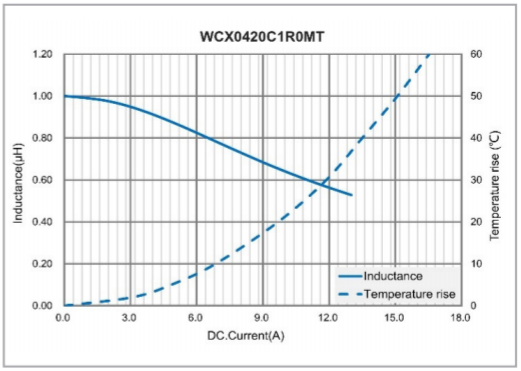
All information and data presented in this Catalog are for information only. You are requested to approve our product specification before your ordering.

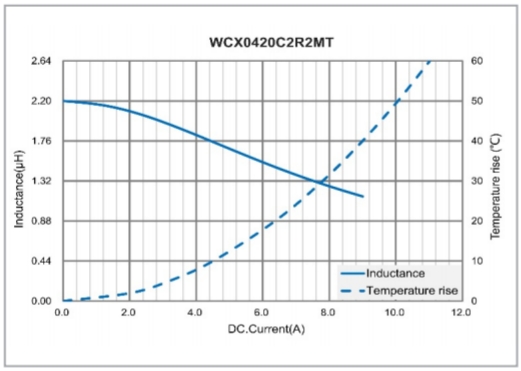
电气特性

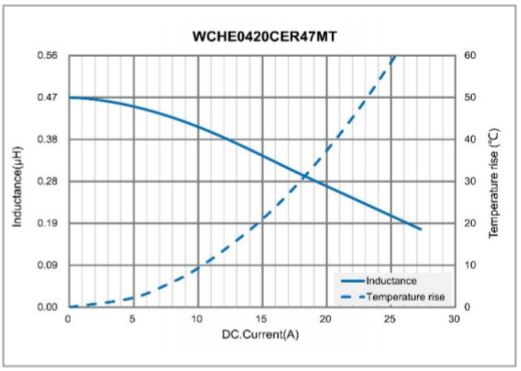
Typical Electrical Characteristics

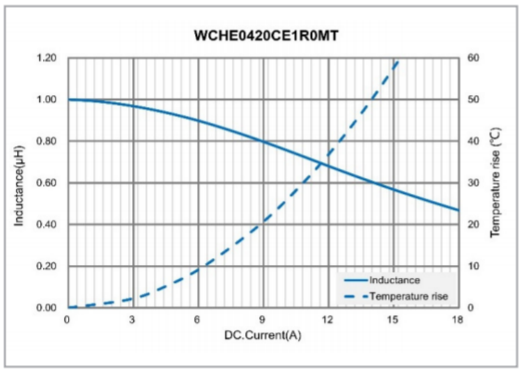
Inductance & Temperature vs. DC Current Characteristics

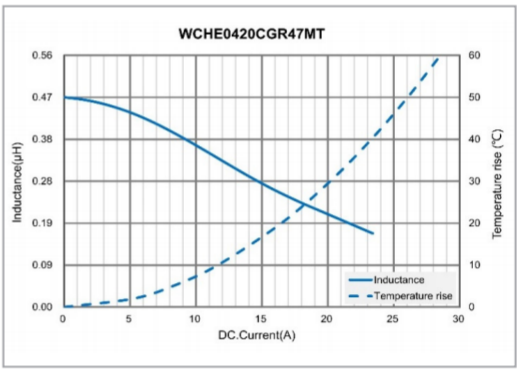


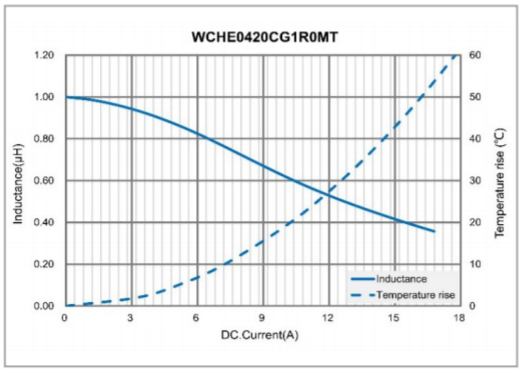


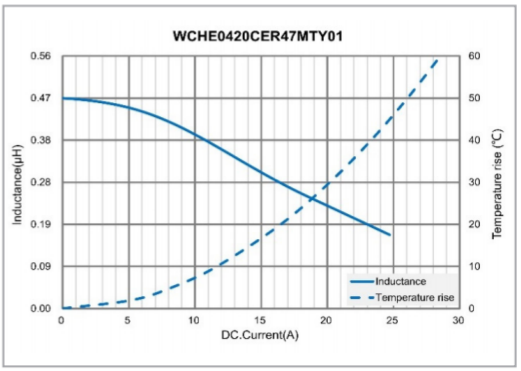






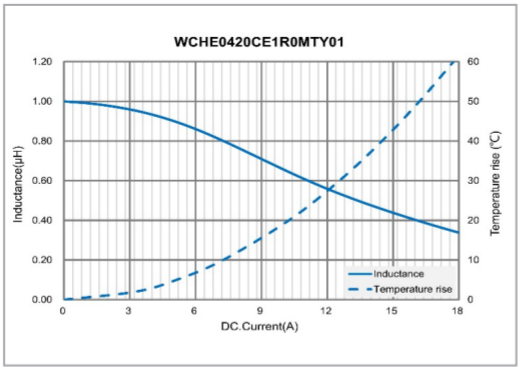


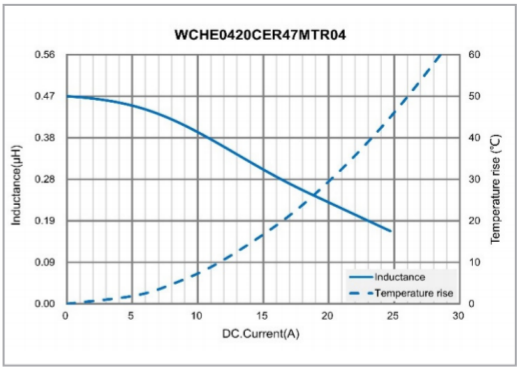


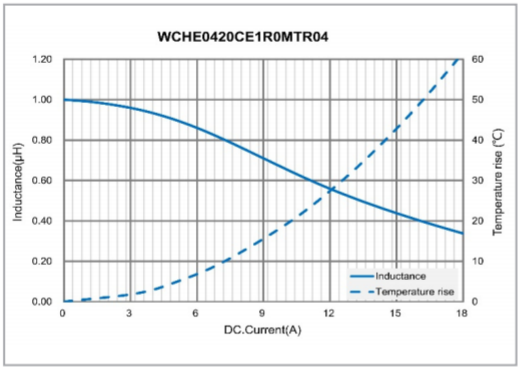


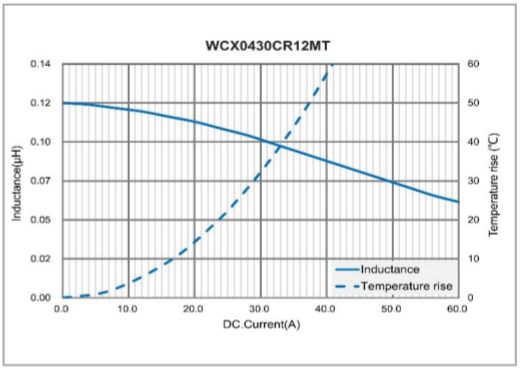
电气特性
Typical Electrical Characteristics

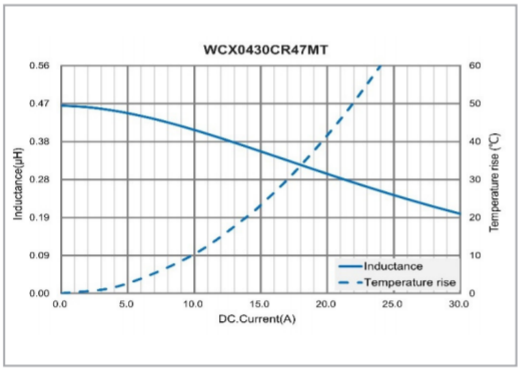
Inductance & Temperature vs. DC Current Characteristics

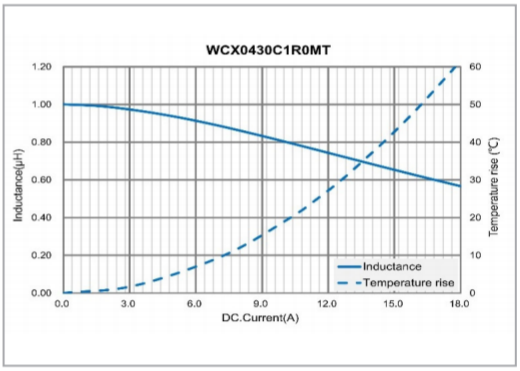


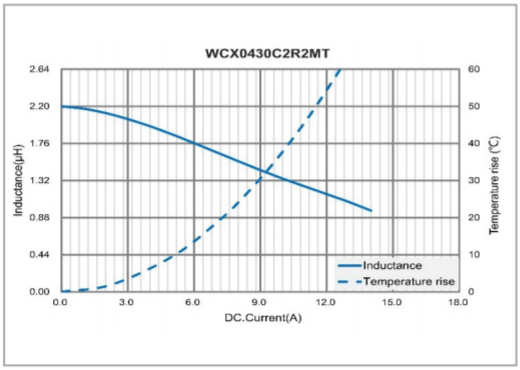


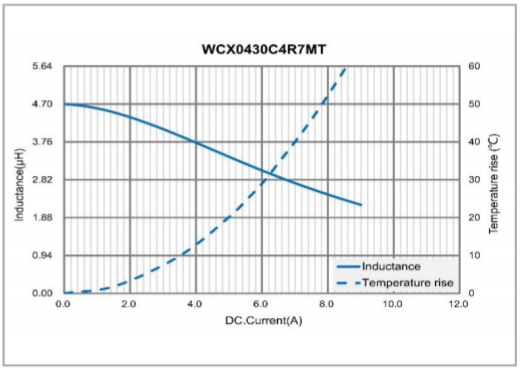












All information and data presented in this Catalog are for information only. You are requested to approve our product specification before your ordering.

电气特性

Typical Electrical Characteristics

Inductance & Temperature vs. DC Current Characteristics

