

# 小尺寸模压片式功率电感—MWTC 系列

## Mini Molded Chip Power Inductors – MWTC Series



### 工作温度

Operating Temp

- ◆ -40°C ~ +125°C (Including self-heating)

### 特征

Features

- ◆ 铁合金材料，高通流，低损耗
- ◆ 黑胶热喷，表面致密性更好
- ◆ 闭合磁路设计，漏磁干扰小
- ◆ Metal material for large current and low loss
- ◆ Vinyl thermal spray, better surface compactness
- ◆ Closed magnetic circuit design reduces leakage flux

### 用途

Applications

- ◆ 智能手机、平板
- ◆ 笔记本电脑、虚拟现实、增强现实
- ◆ 便携式游戏机、智能穿戴、WiFi 模组
- ◆ Smart phone, pad
- ◆ Notebooks, VR, AR
- ◆ Portable gaming devices, Smart wear, Wi-Fi module

### 产品型号

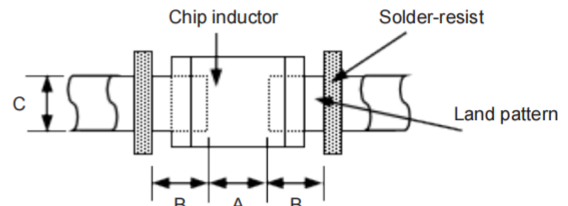
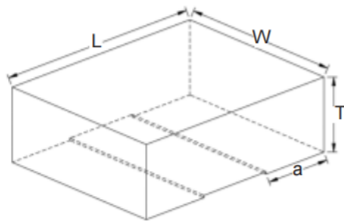
Product Identification

1	2	3	4	5	6	7
MWTC	201608	S	XXX	□	T	□□□

1	2	3																								
<p>分类 Type</p> <table border="1"> <tr> <td>MWTC</td> <td>小尺寸模压片式功率电感 Mini Molded Chip Power Inductor</td> </tr> </table>	MWTC	小尺寸模压片式功率电感 Mini Molded Chip Power Inductor	<p>外形尺寸 (L×W×H) [mm] External Dimensions (L×W×H) [mm]</p> <table border="1"> <tr> <td>1412065</td> <td>1.4×1.2×0.65</td> </tr> <tr> <td>141208</td> <td>1.4×1.2×0.8</td> </tr> <tr> <td>160808</td> <td>1.6×0.8×0.8</td> </tr> <tr> <td>2012065</td> <td>2.0×1.2×0.65</td> </tr> <tr> <td>201208</td> <td>2.0×1.2×0.8</td> </tr> <tr> <td>201210</td> <td>2.0×1.2×1.0</td> </tr> <tr> <td>201608</td> <td>2.0×1.6×0.8</td> </tr> <tr> <td>201610</td> <td>2.0×1.6×1.0</td> </tr> <tr> <td>252008</td> <td>2.5×2.0×0.8</td> </tr> <tr> <td>252010</td> <td>2.5×2.0×1.0</td> </tr> </table>	1412065	1.4×1.2×0.65	141208	1.4×1.2×0.8	160808	1.6×0.8×0.8	2012065	2.0×1.2×0.65	201208	2.0×1.2×0.8	201210	2.0×1.2×1.0	201608	2.0×1.6×0.8	201610	2.0×1.6×1.0	252008	2.5×2.0×0.8	252010	2.5×2.0×1.0	<p>特征代码 Feature Type</p> <table border="1"> <tr> <td>S</td> <td>Standard</td> </tr> </table>	S	Standard
MWTC	小尺寸模压片式功率电感 Mini Molded Chip Power Inductor																									
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160808	1.6×0.8×0.8																									
2012065	2.0×1.2×0.65																									
201208	2.0×1.2×0.8																									
201210	2.0×1.2×1.0																									
201608	2.0×1.6×0.8																									
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252008	2.5×2.0×0.8																									
252010	2.5×2.0×1.0																									
S	Standard																									
4	5	7																								
<p>公称电感量 Nominal Inductance</p> <table border="1"> <tr> <th>Example</th> <th>Nominal Value</th> </tr> <tr> <td>R47</td> <td>0.47μH</td> </tr> <tr> <td>1R0</td> <td>1.0μH</td> </tr> </table>	Example	Nominal Value	R47	0.47μH	1R0	1.0μH	<p>感量精度 Inductance Tolerance</p> <table border="1"> <tr> <td>M</td> <td>±20%</td> </tr> <tr> <td>N</td> <td>±30%</td> </tr> </table>	M	±20%	N	±30%	<p>设计代号 Design Code</p> <table border="1"> <tr> <td>□□□</td> <td>Design Code</td> </tr> </table> <p>* Standard product is blank</p>	□□□	Design Code												
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<p>包装 Packing</p> <table border="1"> <tr> <td>T</td> <td>编带 Tape &amp; Reel</td> </tr> </table>	T	编带 Tape & Reel																								
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### 外观尺寸

Shape and Dimensions



Unit: mm

Series	L	W	T Max.	a	A Typ.	B Typ.	C Typ.
MWTC1412065	1.4±0.2	1.2±0.2	0.65	0.4±0.15	0.5	0.6	1.2
MWTC141208	1.4±0.2	1.2±0.2	0.8	0.4±0.15	0.5	0.6	1.2
MWTC160808	1.6±0.2	0.8±0.2	0.8	0.4±0.2	0.7	0.6	0.8
MWTC2012065	2.0±0.2	1.2±0.2	0.65	0.6±0.2	0.7	0.8	1.2
MWTC201208	2.0±0.2	1.2±0.2	0.8	0.6±0.2	0.7	0.8	1.2
MWTC201210	2.0±0.2	1.2±0.2	1.0	0.6±0.2	0.7	0.8	1.2
MWTC201608	2.0±0.2	1.6±0.2	0.8	0.6±0.2	0.7	0.8	1.6
MWTC201610	2.0±0.2	1.6±0.2	1.0	0.6±0.2	0.7	0.8	1.6
MWTC252008	2.5±0.2	2.0±0.2	0.8	0.8±0.2	0.8	1.0	2.0
MWTC252010	2.5±0.2	2.0±0.2	1.0	0.8±0.2	0.8	1.0	2.0

**规格特性**  
Specifications

MWTC1412065 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC1412065SR10 □ T	0.10	0.0135	0.0115	125	6.8	7.4	6.0	6.3
MWTC1412065SR24 □ T	0.24	0.026	0.024	125	5.5	6.0	4.0	4.5
MWTC1412065SR33 □ T	0.33	0.032	0.028	120	5.4	5.7	3.5	3.7
MWTC1412065SR47 □ T	0.47	0.041	0.036	115	3.0	3.3	2.9	3.2
MWTC1412065SR47 □ TB01	0.47	0.038	0.034	115	3.6	4.0	3.0	3.3

MWTC141208 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC141208SR24 □ T	0.24	0.024	0.020	135	6.5	7.0	4.9	5.3
MWTC141208SR33 □ T	0.33	0.027	0.023	130	5.2	5.6	4.0	4.2
MWTC141208SR47 □ T	0.47	0.032	0.028	110	4.0	4.2	3.2	3.6

MWTC160808 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC160808SR24 □ T	0.24	0.027	0.023	105	4.8	5.3	3.5	3.9
MWTC160808SR47 □ T	0.47	0.043	0.038	100	3.3	3.6	3.0	3.3
MWTC160808SR56 □ T	0.56	0.058	0.050	80	2.7	3.0	2.2	2.5
MWTC160808S1R0 □ T	1.0	0.110	0.095	60	2.1	2.3	1.8	2.0
MWTC160808S2R2 □ T	2.2	0.290	0.240	40	1.2	1.3	1.0	1.1

MWTC2012065 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC2012065SR47 □ T	0.47	0.034	0.032	96	4.5	4.8	4.0	4.3
MWTC2012065SR47 □ TY01	0.47	0.034	0.032	96	4.8	5.1	3.8	4.1
MWTC2012065S1R0 □ T	1.0	0.086	0.078	53	2.5	2.7	2.4	2.7
MWTC2012065S2R2 □ T	2.2	0.200	0.173	50	1.6	1.8	1.5	1.8
MWTC2012065S2R2 □ TB01	2.2	0.160	0.127	36	1.8	2.0	2.0	2.2

MWTC201208 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC201208SR11 □ T	0.11	0.013	0.010	185	10	11	5.6	6.5
MWTC201208SR24 □ T	0.24	0.019	0.016	130	6.5	7.2	5.4	6.0

**规格特性**  
Specifications

MWTC201208 Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐振频率 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC201208SR33 □ T	0.33	0.028	0.023	125	5.6	6.2	4.0	4.3
MWTC201208SR33 □ TB01	0.33	0.025	0.023	125	5.4	6.2	4.1	4.3
MWTC201208SR47 □ T	0.47	0.042	0.037	96	5.5	6.2	3.7	3.9
MWTC201208SR47 □ TY02	0.47	0.025	0.020	96	4.8	5.3	4.0	4.4
MWTC201208S1R0 □ T	1.0	0.102	0.092	74	2.8	3.1	2.0	2.3
MWTC201208S1R0 □ TD01	1.0	0.050	0.046	60	3.3	3.5	3.2	3.5
MWTC201208S2R2 □ T	2.2	0.238	0.216	45	2.2	2.5	1.1	1.3
MWTC201208S2R2 □ TD01	2.2	0.130	0.120	42	1.9	2.1	1.8	2.0

MWTC201210 Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐振频率 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC201210SR11 □ T	0.11	0.010	0.008	264	13.0	14.5	6.4	7.1
MWTC201210SR24 □ T	0.24	0.022	0.019	136	6.2	6.7	4.5	5.0
MWTC201210SR24 □ TD01	0.24	0.015	0.012	136	6.8	7.5	5.0	5.5
MWTC201210SR47 □ T	0.47	0.024	0.021	96	5.1	5.7	4.8	5.2
MWTC201210S1R0 □ T	1.0	0.051	0.046	56	3.6	4.0	3.1	3.5
MWTC201210S2R2 □ T	2.2	0.112	0.100	36	2.1	2.4	1.9	2.2

MWTC201608 Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐振频率 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC201608SR24 □ T	0.24	0.022	0.018	120	7.5	8.2	5.5	6.2
MWTC201608SR33 □ T	0.33	0.026	0.021	115	6.6	7.2	5.1	5.7
MWTC201608SR47 □ T	0.47	0.024	0.021	104	5.0	5.5	3.6	4.1
MWTC201608S1R0 □ T	1.0	0.066	0.059	62	3.3	3.7	2.7	3.0
MWTC201608S1R0 □ TD01	1.0	0.052	0.045	57	4.1	4.5	3.7	4.2
MWTC201608S1R5 □ T	1.5	0.086	0.073	56	3.0	3.3	2.3	2.5
MWTC201608S2R2 □ T	2.2	0.148	0.134	40	2.3	2.6	1.8	2.0
MWTC201608S2R2 □ TD01	2.2	0.090	0.080	33	2.3	2.5	2.3	2.5
MWTC201608S2R2 □ TY01	2.2	0.110	0.100	33	2.9	3.2	2.4	2.6

MWTC201610 Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐振频率 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC201610SR24 □ T	0.24	0.017	0.014	142	7.0	7.8	5.0	5.6
MWTC201610SR24 □ TD02	0.24	0.015	0.011	120	7.0	7.8	5.0	5.6
MWTC201610SR33 □ T	0.33	0.021	0.018	110	6.8	7.6	4.8	5.3
MWTC201610SR47 □ T	0.47	0.029	0.026	98	6.0	6.5	4.0	4.4
MWTC201610SR47 □ TD01	0.47	0.021	0.018	72	5.6	6.2	4.8	5.5

## 规格特性 Specifications

MWTC201610 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC201610SR68 □ T	0.68	0.035	0.030	68	4.8	5.4	3.5	3.9
MWTC201610S1R0 □ T	1.0	0.046	0.042	46	4.6	4.9	3.4	4.0
MWTC201610S1R0 □ TD01	1.0	0.037	0.034	60	4.2	4.5	4.2	4.5
MWTC201610S1R5 □ T	1.5	0.074	0.064	40	3.2	3.5	2.8	3.2
MWTC201610S2R2 □ T	2.2	0.135	0.123	40	3.8	4.2	2.1	2.3
MWTC201610S2R2 □ TD01	2.2	0.074	0.066	30	2.6	2.9	2.0	2.3
MWTC201610S4R7 □ T	4.7	0.235	0.213	26	1.6	1.9	1.3	1.5
MWTC201610S6R8 □ T	6.8	0.265	0.240	15	1.55	1.75	1.4	1.6

MWTC252008 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC252008S1R0 □ T	1.0	0.053	0.046	55	3.5	3.8	3.2	3.5
MWTC252008S1R0 □ TD01	1.0	0.046	0.039	56	4.3	4.8	3.5	3.8
MWTC252008S4R7 □ T	4.7	0.180	0.165	20	1.75	1.95	1.8	2.0
MWTC252008S100 □ T	10	0.570	0.507	14	1.2	1.4	0.95	1.05

MWTC252010 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	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
MWTC252010SR24 □ T	0.24	0.014	0.0115	144	8.4	9.4	6.0	7.0
MWTC252010SR33 □ T	0.33	0.016	0.013	95	7.5	8.5	5.0	5.5
MWTC252010SR47 □ T	0.47	0.020	0.016	81	6.0	6.6	4.7	5.0
MWTC252010SR47 □ TD02	0.47	0.020	0.016	81	6.5	7.0	5.7	6.1
MWTC252010SR47 □ TB01	0.47	0.023	0.018	61	8.0	8.3	6.0	7.0
MWTC252010SR68 □ T	0.68	0.029	0.024	63	5.8	6.6	4.5	5.2
MWTC252010S1R0 □ T	1.0	0.043	0.038	53	4.5	5.0	3.4	3.7
MWTC252010S1R0 □ TD01	1.0	0.039	0.032	55	5.8	6.5	3.6	3.9
MWTC252010S1R0 □ TD02	1.0	0.030	0.027	53	5.0	5.4	4.5	4.7
MWTC252010S1R5 □ T	1.5	0.042	0.037	35	3.7	4.0	3.6	4.1
MWTC252010S2R2 □ T	2.2	0.065	0.057	27	3.2	3.5	2.3	2.6
MWTC252010S3R3 □ T	3.3	0.110	0.095	22	2.6	2.9	1.9	2.2
MWTC252010S4R7 □ T	4.7	0.136	0.124	19	1.9	2.2	1.6	1.7
MWTC252010S100 □ T	10	0.420	0.360	14	1.5	1.7	1.2	1.4

※ □ : 请注明电感公差代码 (M=±20%, N=±30%)。

※ □ : Please specify the inductance tolerance code (M=±20%, N=±30%) .

※1: 所有的测试数据均以 20°C 环境温度为基础;

※1: All test data is referenced to 20°C 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: 通入直流电流后电感感值从初始状态下下降约 30% 时对应的电流;

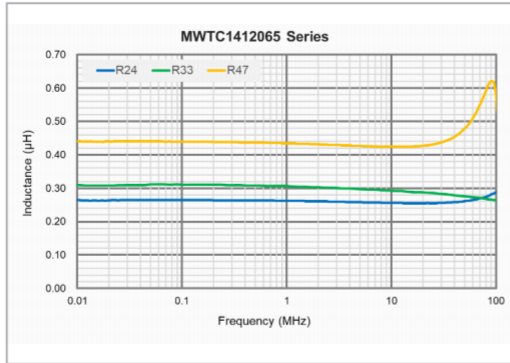
※3: Isat: DC current at which the inductance drops approximate 30% from its value without current;

※4: 温升电流: 使得温度从 20°C 环境温度升高 (ΔT=40°C) 的直流电流。

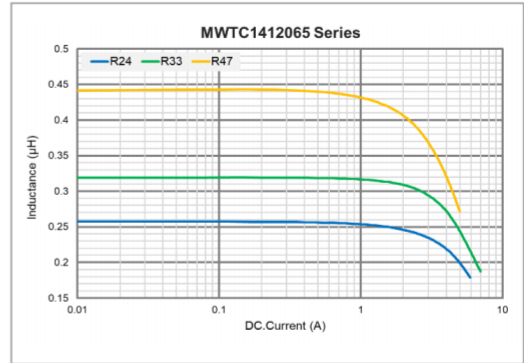
※4: Irms: DC current that causes the temperature rise (ΔT=40°C) from 20°C ambient.

**电气特性**  
Typical  
Electrical  
Characteristics

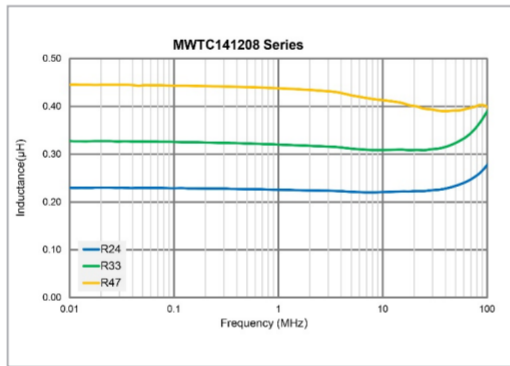
MWTC1412065 Series  
Inductance vs. Frequency Characteristics



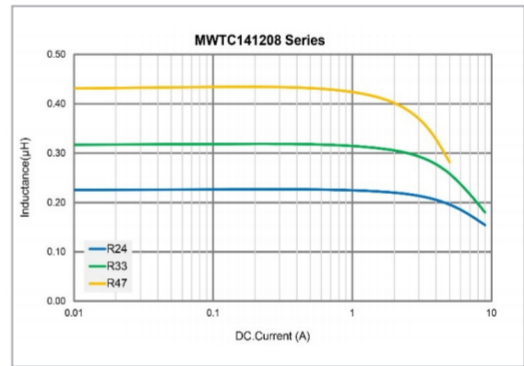
Inductance vs. DC Current Characteristics



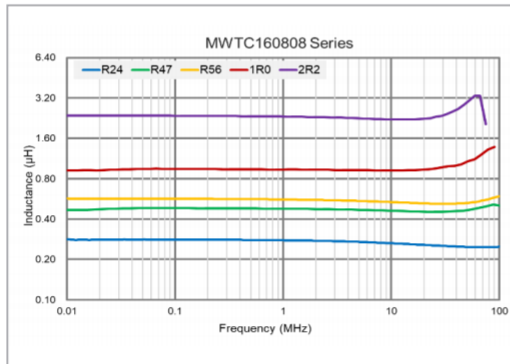
MWTC141208 Series  
Inductance vs. Frequency Characteristics



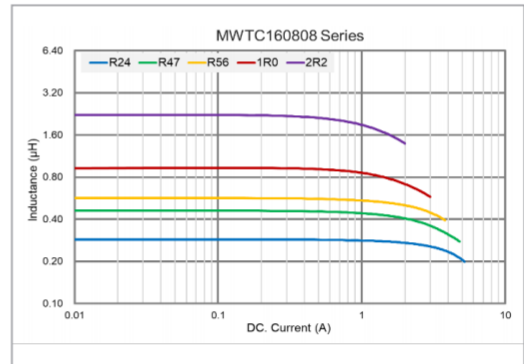
Inductance vs. DC Current Characteristics



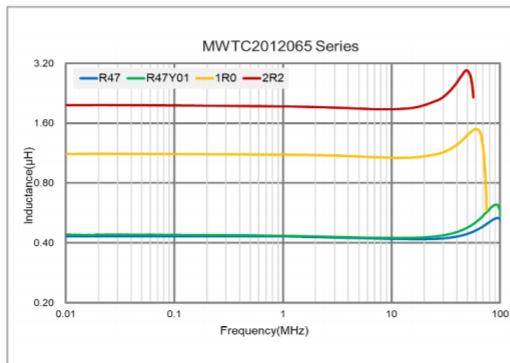
MWTC160808 Series  
Inductance vs. Frequency Characteristics



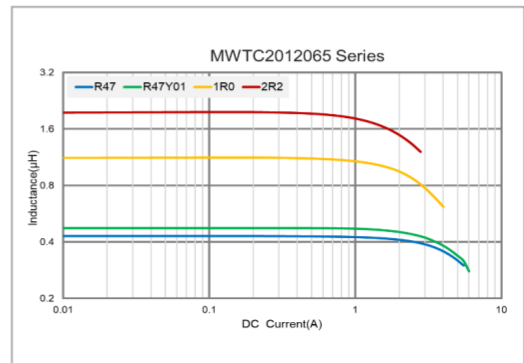
Inductance vs. DC Current Characteristics



MWTC2012065 Series  
Inductance vs. Frequency Characteristics

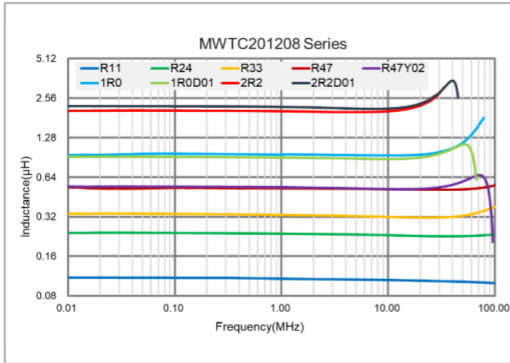


Inductance vs. DC Current Characteristics

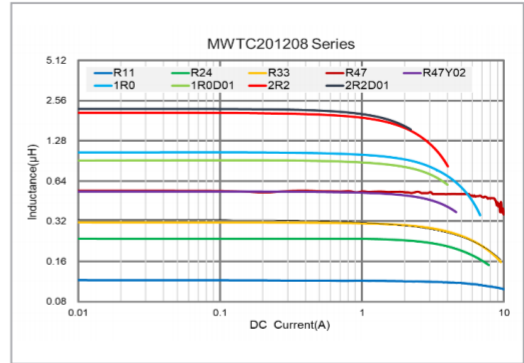


**电气特性**  
Typical  
Electrical  
Characteristics

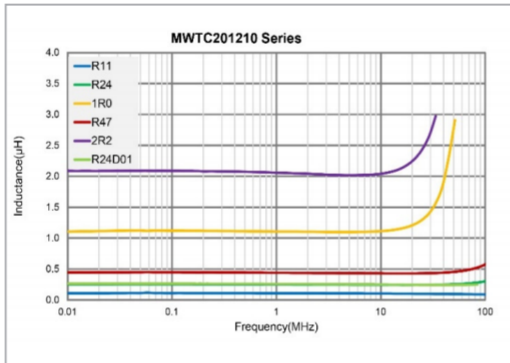
MWTC201208 Series  
Inductance vs. Frequency Characteristics



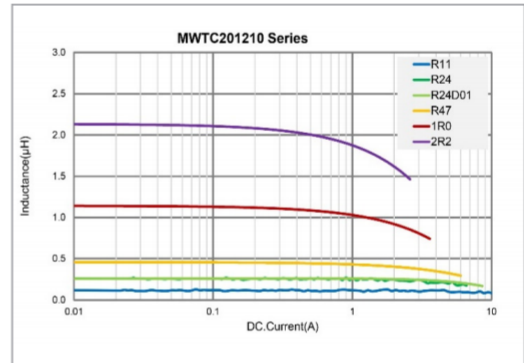
Inductance vs. DC Current Characteristics



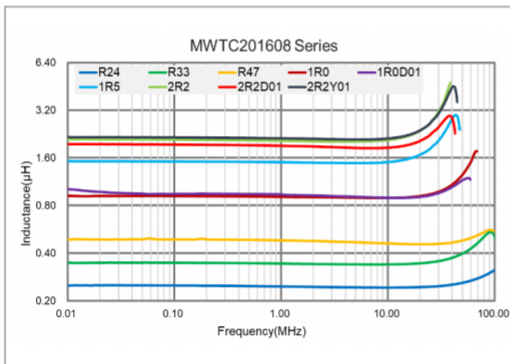
MWTC201210 Series  
Inductance vs. Frequency Characteristics



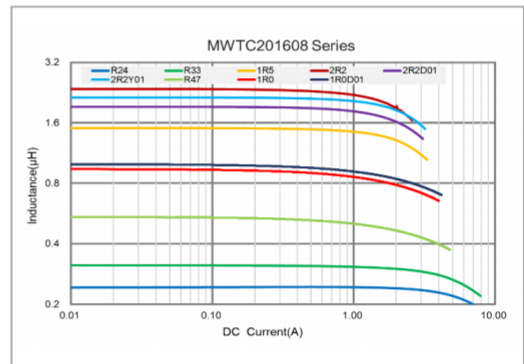
Inductance vs. DC Current Characteristics



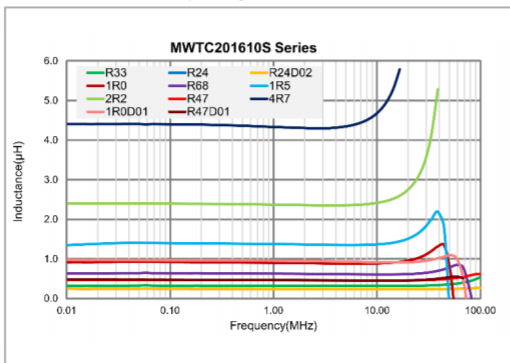
MWTC201608 Series  
Inductance vs. Frequency Characteristics



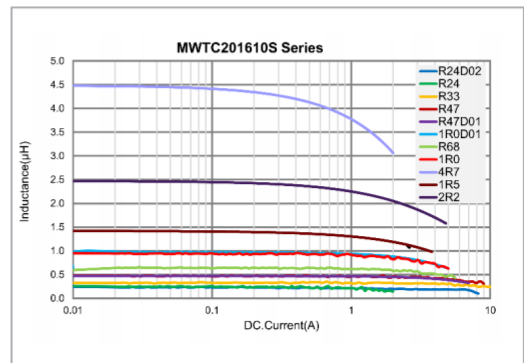
Inductance vs. DC Current Characteristics



MWTC201610 Series  
Inductance vs. Frequency Characteristics

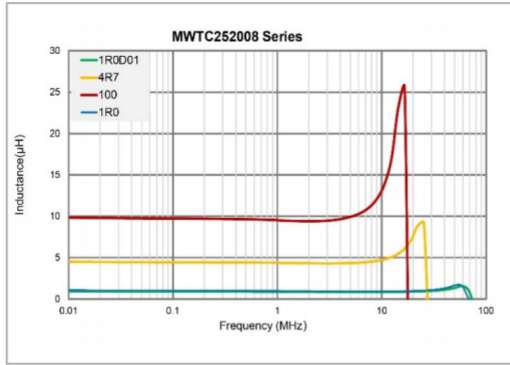


Inductance vs. DC Current Characteristics

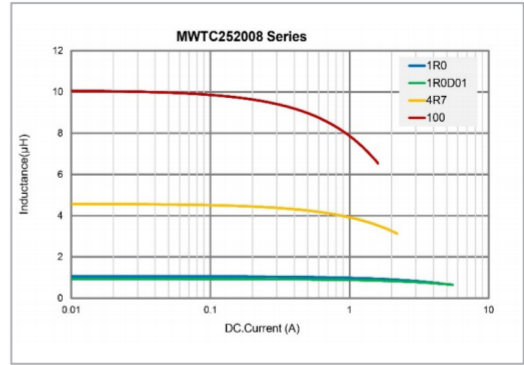


**电气特性**  
Typical  
Electrical  
Characteristics

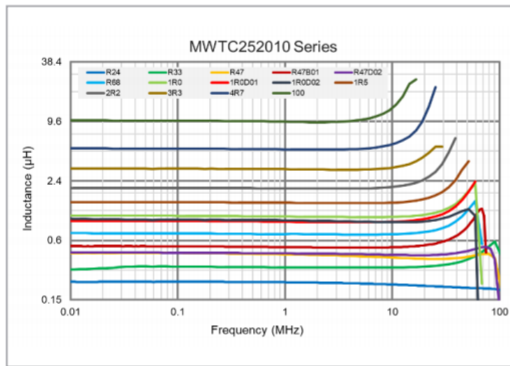
MWTC252008 Series  
Inductance vs. Frequency Characteristics



Inductance vs. DC Current Characteristics



MWTC252010 Series  
Inductance vs. Frequency Characteristics



Inductance vs. DC Current Characteristics

