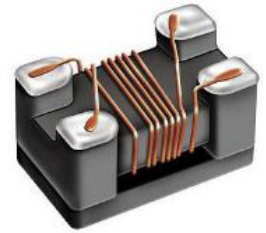


WIRE WOUND COMMON MODE CHOKE COIL

绕线式共模滤波器



PWCM SERIES



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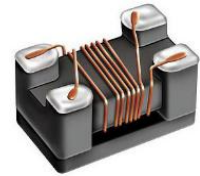
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Wire Wound Common Mode Choke Coil-PWCM Series

绕线式共模滤波器-PWCM 系列



INTRODUCTION AND CHARACTERISTICS 产品介绍及特性

INTRODUCTION	产品介绍
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◆ The PWCM series is effective for common mode noise suppression in differential signal. A full series of common mode choke is designed for excellent noise attenuation with compact sizing for use in wide range of applications.

◆ PWCM 系列能有效的抑制差分型号上的高频共模杂讯。绕线共模由于其优秀的衰减噪音及小尺寸特点而得到广泛应用。

CHARACTERISTICS	特性
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- ◆ Excellent solderability and high heat resistance for reflow soldering or wave soldering
- ◆ Minature size, suitable for SMT
- ◆ With large coupling coefficient little impact on high-speed differential signal
- ◆ Prevention of common mode noise at high frequency

- ◆ 良好的焊接性，适合于回流焊或波峰焊
- ◆ 体积小，适合高密度表面贴装
- ◆ 耦合系数大，对高速差分信号影响小
- ◆ 对高频共模噪声有很好的抑制

APPLICATIONS	应用产品
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- ◆ USB lines of PC, peripheral equipments
- ◆ LVDS lines of note PC, LCD
- ◆ Redialed noise suppression on digital product clock lines signal lines and suppression noise on circuit

- ◆ 电脑及外设 USB 线
- ◆ 笔记本电脑、LCD 的 LVDS 线
- ◆ 用于数据传输线、信号线。电源及回路部分的抗干扰

PRODUCT IDENTIFICATION 产品型号

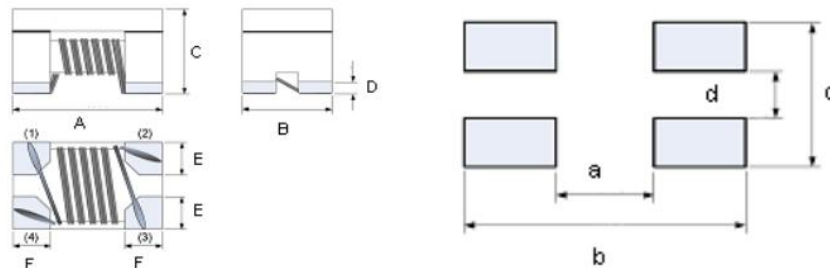
PWCM **2012** **F** **221** **T** **2L**
 ① ② ③ ④ ⑤ ⑥

①Product Series Code 产品系列码	PWCM	Wire Wound Common Mode Choke Coil 绕线式共模滤波器
②Size Code 尺寸码	2012	长×宽 (L×W) (mm) 2.0×1.2
③Material Code 材质代号	F	材质代码
④Nominal Impedance 阻抗	300	30 Ω
	301	300 Ω
⑤Packing 包装形式	T	Tape and Reel 编带
⑥Number of Lines 引线数	2L	2 线

SHAPE AND DIMENSIONS 外观尺寸

RECOMMENDED LAND PATTERN 推荐的焊盘尺寸

Land Pattern



Unit:mm

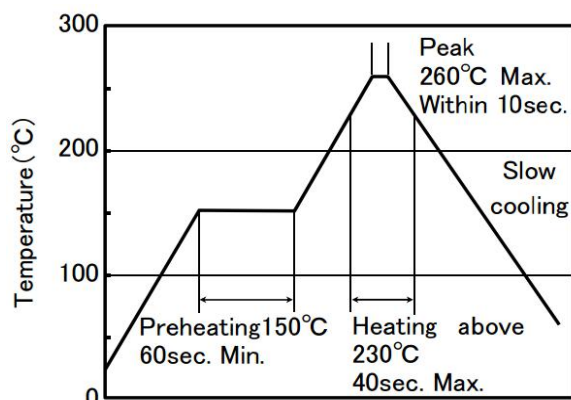
SIZE 尺寸	A	B	C	D Max.	E Typ.	F Typ.	a Typ.	b Typ.	c Typ.	d Typ.
1210(0504)	1.2±0.2	1.0±0.2	0.8±0.1	0.1	0.36	0.33	0.5	1.55	1	0.3
1608(0603)	1.6±0.1	0.8±0.1	1.1±0.1	0.1	0.25	0.33	0.73	1.89	0.85	0.25
2012(0805)	2.0±0.2	1.2±0.2	1.2±0.2	0.17	0.45	0.5	0.8	2.6	1.2	0.4
2520(1008)	2.5±0.2	2.0±0.2	1.2±0.2	0.2	0.6	0.45	1.2	3.2	2	0.6
3216(1206)	3.2±0.2	1.6±0.2	1.8±0.2	0.22	0.6	0.7	1.6	3.7	1.6	0.4
3225(1210)	3.2±0.2	2.5±0.2	1.8±0.2	0.3	0.8	0.6	2.2	4	2.5	0.9
4532(1812)	4.5±0.2	3.2±0.2	2.8±0.2	0.5	1.1	0.8	2.7	5.1	3.2	1

STORAGE AND OPERATING CONDITIONS 储存及操作条件

Operating Temperature Range	-40℃~+85℃
Storage Temperature and Humidity Range	-10℃~+40℃, 70%RH max.

RECOMMENDED SOLDERING CONDITION 建议焊锡方式

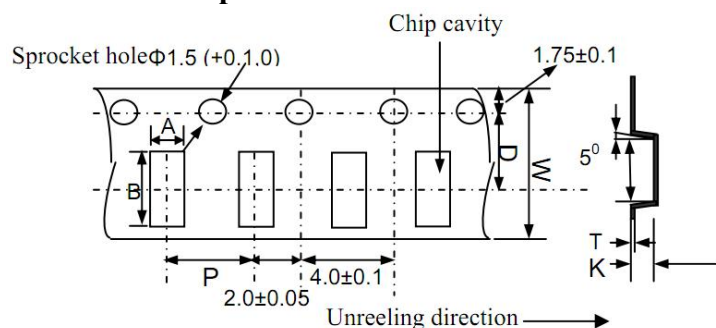
REFLOW SOLDERING 回流焊



- ① Ceramic chip components should be preheated to within 100 to 130°C of the soldering.
- ② Assured to be reflow soldering for 2 times.

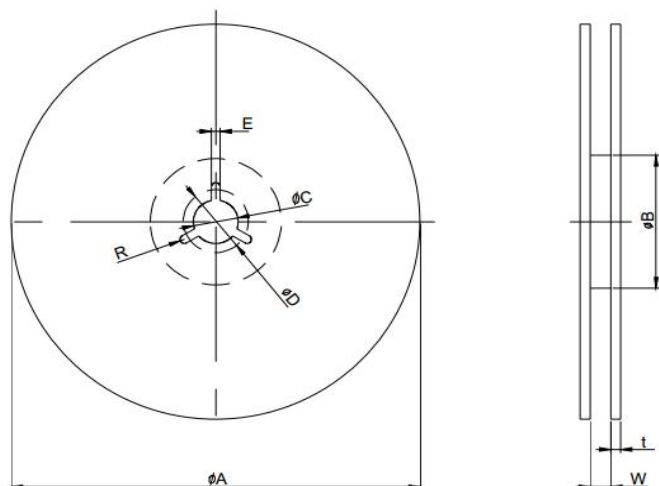
PACKING STANDARD 包装标准

◆ Embossed Tape



Type	Chip Thickness	W	A	B	D	P	K max.	T max.	Quantity (pcs/reel)
									ø178mm
PWCM1210	0.80	8.0	1.16	1.41	3.5	4	0.99	0.25	3000
PWCM1608	1.1	8.0	0.9	1.75	3.5	4	1.31	0.25	2000
PWCM2012	1.2	8.0	1.55	2.25	3.5	4	1.55	0.3	2000
PWCM2520	1.2	8.0	2.25	2.75	3.5	4	1.55	0.27	2000
PWCM3216	1.8	8.0	1.88	3.53	3.5	4	2	0.26	2000
PWCM3225	1.8	12.0	2.7	3.5	5.5	8	2.01	0.35	3000
PWCM4532	2.8	12.0	3.51	4.82	5.5	8	3.15	0.4	2000

◆ Reel Dimensions



Symbol	ø178mm Reel
A	Ø178±2
B	Ø60±2
C	Ø13±0.8
D	Ø21±0.8
E	2
W8	10±1.5
W12	14.5±1.5
T	2±0.5
R	1

SPECIFICATIONS 规格特性
PWCM 1210(0504) TYPE

Part Number 型号	Impedance At 100MHz 阻抗 Z	Insulation resistance 绝缘阻抗 IR	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir	Rated Voltage 额定电压 Vdc	Thickness 厚度
Units 单位	$\Omega \pm 25\%$	Ω	Ω	mA	Volts	mm
PWCM1210F200T2L	20	10M	0.15	500	20	0.8 ± 0.1
PWCM1210F350T2L	35	10M	0.18	430	20	0.8 ± 0.1
PWCM1210F600T2L	60	10M	0.30	400	20	0.8 ± 0.1
PWCM1210F900T2L	90	10M	0.30	400	20	0.8 ± 0.1
PWCM1210F161T2L	160	10M	0.40	260	20	0.8 ± 0.1
PWCM1210F201T2L	200	10M	0.40	250	20	0.8 ± 0.1
PWCM1210F361T2L	360	10M	0.55	250	20	0.8 ± 0.1

PWCM 1608(0603) TYPE

Part Number 型号	Impedance At 100MHz 阻抗 Z	Insulation resistance 绝缘阻抗 IR	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir	Rated Voltage 额定电压 Vdc	Thickness 厚度
Units 单位	$\Omega \pm 25\%$	Ω	Ω	mA	Volts	mm
PWCM1608F250T2L	25	10M	0.10	500	20	1.1 ± 0.1
PWCM1608F600T2L	60	10M	0.20	350	20	1.1 ± 0.1
PWCM1608F900T2L	90	10M	0.25	300	20	1.1 ± 0.1
PWCM1608F141T2L	140	10M	0.25	300	20	1.1 ± 0.1
PWCM1608F221T2L	220	10M	0.25	300	20	1.1 ± 0.1

PWCM 2012(0805) TYPE

Part Number 型号	Impedance At 100MHz 阻抗 Z	Insulation resistance 绝缘阻抗 IR	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir	Rated Voltage 额定电压 Vdc	Thickness 厚度
Units 单位	$\Omega \pm 25\%$	Ω	Ω	mA	Volts	mm
PWCM2012F300T2L	30	10M	0.20	450	50	1.2 ± 0.2
PWCM2012F670T2L	67	10M	0.25	400	50	1.2 ± 0.2
PWCM2012F900T2L	90	10M	0.35	330	50	1.2 ± 0.2
PWCM2012F121T2L	120	10M	0.30	370	50	1.2 ± 0.2
PWCM2012F181T2L	180	10M	0.35	330	50	1.2 ± 0.2
PWCM2012F201T2L	200	10M	0.40	300	50	1.2 ± 0.2
PWCM2012F221T2L	220	10M	0.40	300	50	1.2 ± 0.2
PWCM2012F261T2L	260	10M	0.40	300	50	1.2 ± 0.2
PWCM2012F361T2L	360	10M	0.45	280	50	1.2 ± 0.2
PWCM2012F371T2L	370	10M	0.40	280	50	1.2 ± 0.2
PWCM2012F601T2L	600	10M	0.55	200	50	1.2 ± 0.2
PWCM2012F751T2L	750	10M	0.70	180	50	1.2 ± 0.2
PWCM2012F901T2L	900	10M	0.80	150	50	1.2 ± 0.2



PWCM2012F102T2L	1000	10M	0.80	150	50	1.2±0.2
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SPECIFICATIONS 规格特性**PWCM 2520(1008) TYPE**

Part Number 型号	Impedance At 100MHz 阻抗 Z	Insulation resistance 绝缘阻抗 IR	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir	Rated Voltage 额定电压 Vdc	Thickness 厚度
Units 单位	$\Omega \pm 25\%$	Ω	Ω	mA	Volts	mm
PWCM2520F301T2L	300	10M	0.25	400	50	1.2±0.2
PWCM2520F451T2L	450	10M	0.30	350	50	1.2±0.2
PWCM2520F601T2L	600	10M	0.38	330	50	1.2±0.2
PWCM2520F102T2L	1000	10M	0.50	240	50	1.2±0.2

PWCM 3216(1206) TYPE

Part Number 型号	Impedance At 100MHz 阻抗 Z	Insulation resistance 绝缘阻抗 IR	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir	Rated Voltage 额定电压 Vdc	Thickness 厚度
Units 单位	$\Omega \pm 25\%$	Ω	Ω	mA	Volts	mm
PWCM3216F900T2L	90	10M	0.30	370	50	1.8±0.2
PWCM3216F161T2L	160	10M	0.40	340	50	1.8±0.2
PWCM3216F261T2L	260	10M	0.50	310	50	1.8±0.2
PWCM3216F601T2L	600	10M	0.80	260	50	1.8±0.2
PWCM3216F102T2L	1000	10M	1.00	230	50	1.8±0.2
PWCM3216F222T2L	2200	10M	1.20	200	50	1.8±0.2

PWCM 3225(1210) TYPE

Part Number 型号	Impedance At 100MHz 阻抗 Z	Insulation resistance 绝缘阻抗 IR	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir	Rated Voltage 额定电压 Vdc	Thickness 厚度
Units 单位	$\Omega \pm 25\%$	Ω	Ω	mA	Volts	mm
PWCM3225F800T2L	80	10M	0.12	640	50	1.8±0.2
PWCM3225F161T2L	160	10M	0.15	480	50	1.8±0.2
PWCM3225F271T2L	270	10M	0.25	450	50	1.8±0.2
PWCM3225F601T2L	600	10M	0.12	1000	50	1.8±0.2
PWCM3225F102T2L	1000	10M	0.35	350	50	1.8±0.2

SPECIFICATIONS 规格特性

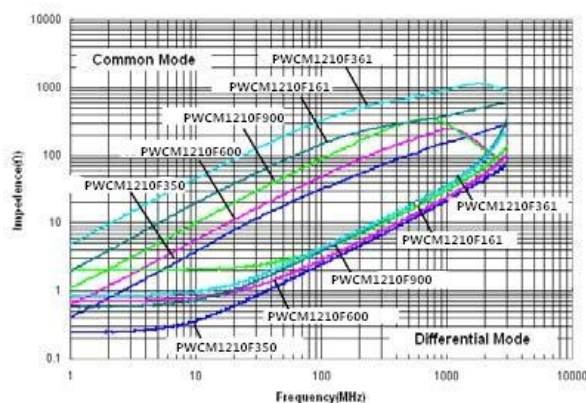
PWCM4532(1812) TYPE

Part Number 型号	Impedance At 100MHz 阻抗 Z	Insulation resistance 绝缘阻抗 IR	DC Resistance 直流电阻 RDC	Rated Current 额定电流 Ir	Rated Voltage 额定电压 Vdc	Thickness 厚度
Units 单位	$\Omega \pm 25\%$	Ω	Ω	mA	Volts	mm
PWCM4532F331T2L	330	10M	0.11	1100	50	2.8 ± 0.2
PWCM4532F601T2L	600	10M	0.12	1000	50	2.8 ± 0.2
PWCM4532F801T2L	800	10M	0.16	900	50	2.8 ± 0.2
PWCM4532F102T2L	1000	10M	0.18	800	50	2.8 ± 0.2
PWCM4532F142T2L	1400	10M	0.20	700	50	2.8 ± 0.2

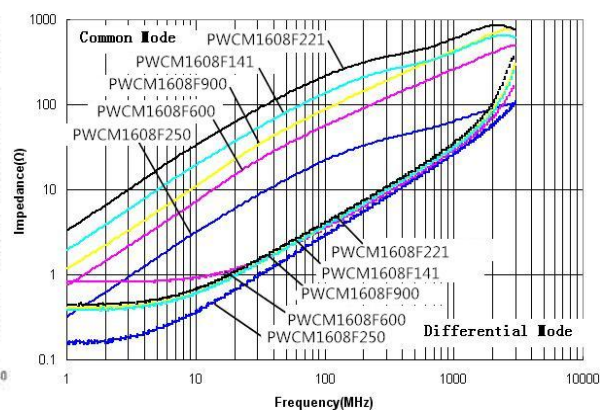
TYPICAL ELECTRICAL CHARACTERISTICS 典型电气特性

COMMON MODE & DIFFERENTIAL MODE vs. FREQUENCY

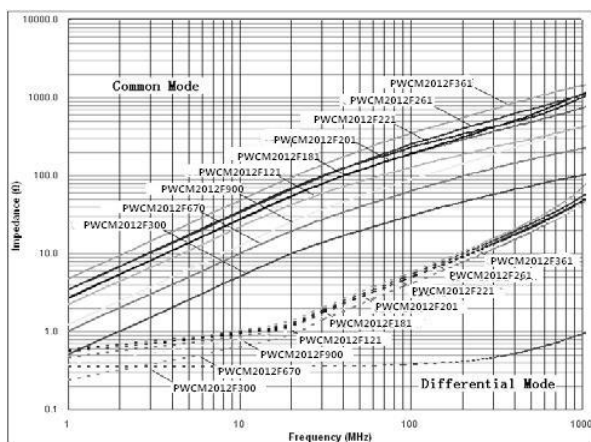
PWCM1210



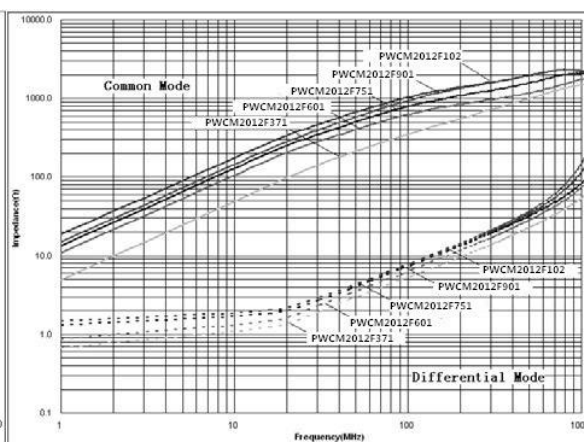
PWCM1608



PWCM2012



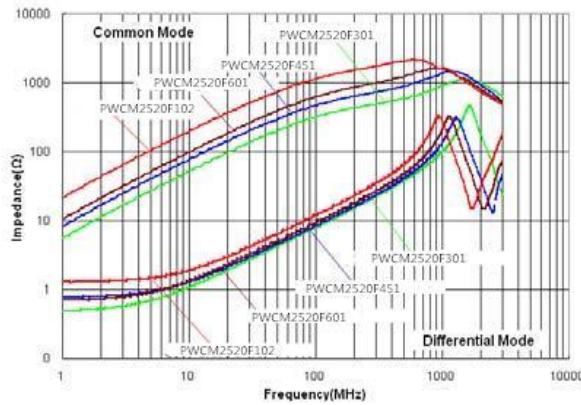
PWCM2012



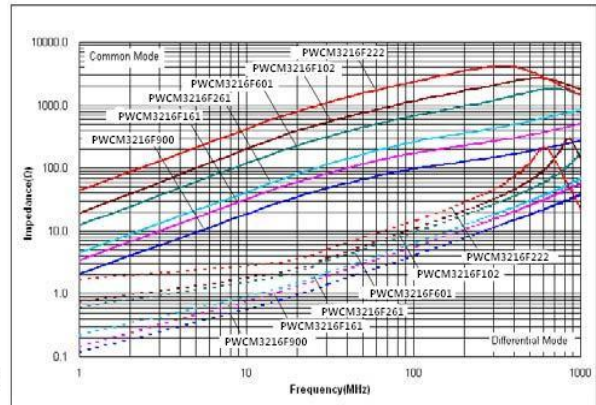
TYPICAL ELECTRICAL CHARACTERISTICS 典型电气特性

COMMON MODE & DIFFERENTIAL MODE vs. FREQUENCY

PWCM2520



PWCM3216



PWCM3225

