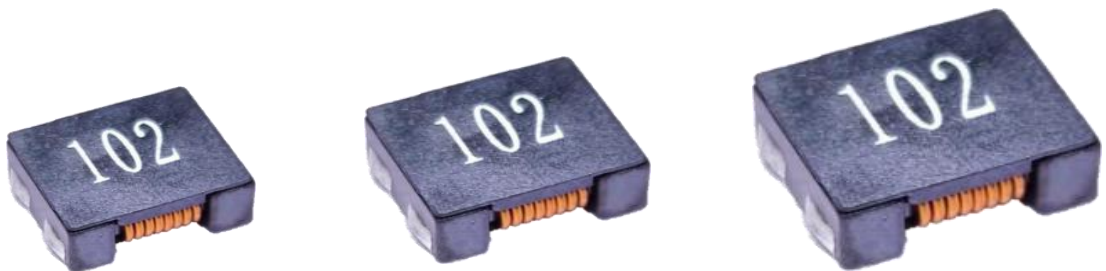




Common Mode Filters

For power line

DCM Series



DCM7060	[7.0*6.0*3.8]mm * Dimensions Code JIS[EIA]
DCM9070	[9.0*7.0*4.8]mm * Dimensions Code JIS[EIA]
DCM1211	[12.0*10.8*6.4]mm * Dimensions Code JIS[EIA]
DCM1513	[15.0*13.0*6.5]mm * Dimensions Code JIS[EIA]

一、特点:

1. 特有方型闭磁路磁芯在保持特性的同时实现小型化, 适用于大电流的片式共模滤波器。
2. 低高度设计, 同时具备较高的共模阻抗, 能够大幅降低噪音。
3. 工作环温范围: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

二、用途:

1. 用于应对所有电子设备的电源线噪音。
2. 用于应对笔记本电脑、文字处理机等较大型电子设备的适配器线、电池线的噪音。

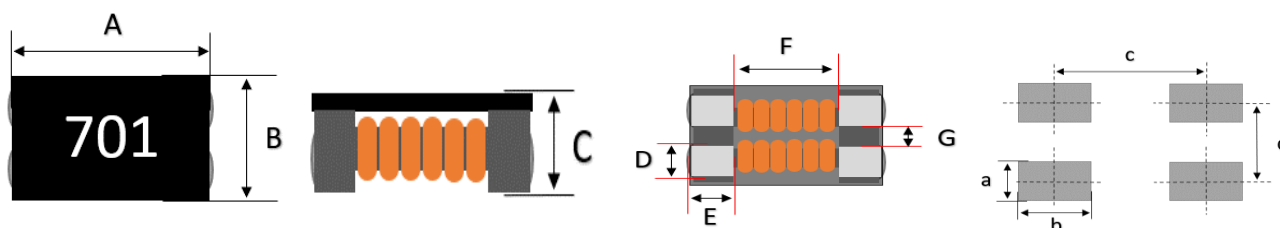
三、型号的命名方法:

DCM	7060	-	301	-	2
系列名称	长(L)*宽(W)*高(H) 7.0*6.0*3.5mm		阻抗 (Z)		管理编号

测量设备:

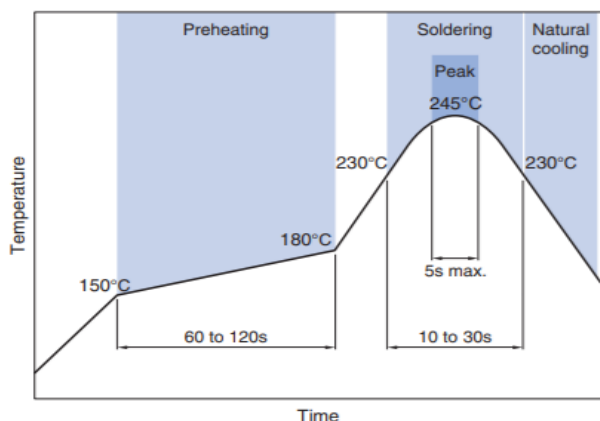
测量项目	型号	厂商	备注
Z(阻抗)、L	IM 7580	HIOKI	*有时使用同等测量设备
直流电阻	HIOKI 3541	HIOKI	
额定电流	4284A+42841A+42842C	Agilent	

四、形状与尺寸:

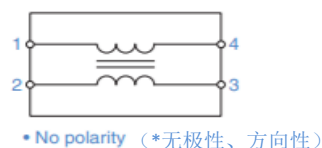


系列 Series	封装尺寸 Dimension							焊盘尺寸 Land Pattern			
	A	B	C	D	E	F	G	a	b	c	d
7060	7.0±0.5	6.0±0.5	3.8MAX	1.5±0.3	1.7±0.3	3.5Typ	1.5 Typ	2	2.2	5.3	3.2
9070	9.0±0.5	7.0±0.5	4.8MAX	1.5±0.3	1.7±0.3	5.7Typ	2.0 Typ	2	2.2	7.3	3.7
1211	12.0±0.5	10.8±0.5	6.4Max	2.7±0.5	2.5±0.5	7.0Typ	2.5 Typ	3.5	3.2	9.5	5.2
1513	15.0±0.5	13.0±0.5	6.5MAX	2.7±0.5	3.0±0.5	9.0Typ	3.3 Typ	3.5	3.7	12	6

■ 推荐回流焊温度曲线图



■ 电路图



- ※适合:
1. 本制品为对应Reflow焊锡制品, 不可使用浸渍式焊锡。
 2. 本制品为ROHS指令对应产品。
 3. RoHS指令对应: EU Directive 2002/95/EC, 不使用该指令中的免除项。
 4. 不适用铅、镉、汞、六价铬及特定卤化系阻燃剂PBB、PBDE。

电气特性:

7060 Series

產品編碼 P/N	@ 25 °C Ambient Temperture					
	阻抗 Impedance		DCR	絕緣性 (IR)	額定電流 (Rated Current)	額定電壓 (Rated Voltage)
	Ω		m Ω	M Ω		
	Min	Typ	Max	Min	mA	V
DCM7060-400-2	40	70	5	10	15000	80
DCM7060-101-2	100	140	10	10	9000	80
DCM7060-301-2	225	300	10	10	5000	80
DCM7060-501-2	275	350	10	10	5000	80
DCM7060-601-2	500	700	15	10	4000	80
DCM7060-701-2	500	700	15	10	4000	80
DCM7060-102-2	800	1020	17	10	3000	80
DCM7060-132-2	910	1300	21	10	2500	80
DCM7060-152-2	1300	1500	21	10	2500	80
DCM7060-272-2	2000	2700	63	10	1000	80
DCM7060-302-2	2500	3000	75	10	900	80

9070 Series

產品編碼 P/N	@ 25 °C Ambient Temperture					
	阻抗 Impedance		DCR	絕緣性 (IR)	額定電流 (Rated Current)	額定電壓 (Rated Voltage)
	Ω		m Ω	M Ω		
	Min	Typ	Max	Min	mA	V
DCM9070-301-2	225	300	6	10	6000	80
DCM9070-601-2	450	600	8	10	5500	80
DCM9070-701-2	500	700	10	10	5000	80
DCM9070-102-2	750	1000	13	10	4000	80
DCM9070-152-2	1300	1500	20	10	3500	80
DCM9070-222-2	1700	2200	60	10	2500	80
DCM9070-272-2	2000	2700	86	10	2000	80
DCM9070-302-2	2500	3000	80	10	2000	80

电气特性:

1211 Series

產品編碼 P/N	@ 25 °C Ambient Temperture					
	阻抗 Impedance		DCR	絕緣性 (IR)	額定電流 (Rated Current)	額定電壓 (Rated Voltage)
	Ω		m Ω	M Ω		
	Min	Typ	Max	Min	mA	V
DCM1211-800-2	80	230	2	10	10000	125
DCM1211-501-2	250	500	2	10	10000	125
DCM1211-701-2	500	700	6	10	8000	125
DCM1211-801-2	600	800	8	10	8000	125
DCM1211-102-2	750	1000	14	10	6000	125
DCM1211-152-2	1000	1500	16	10	5000	125
DCM1211-222-2	1400	2200	24	10	4000	125
DCM1211-252-2	2200	2500	35	10	1800	125
DCM1211-272-2	2300	2700	50	10	1500	125
DCM1211-302-2	2500	3000	90	10	1100	125
DCM1211-402-2	3300	4000	100	10	2000	125

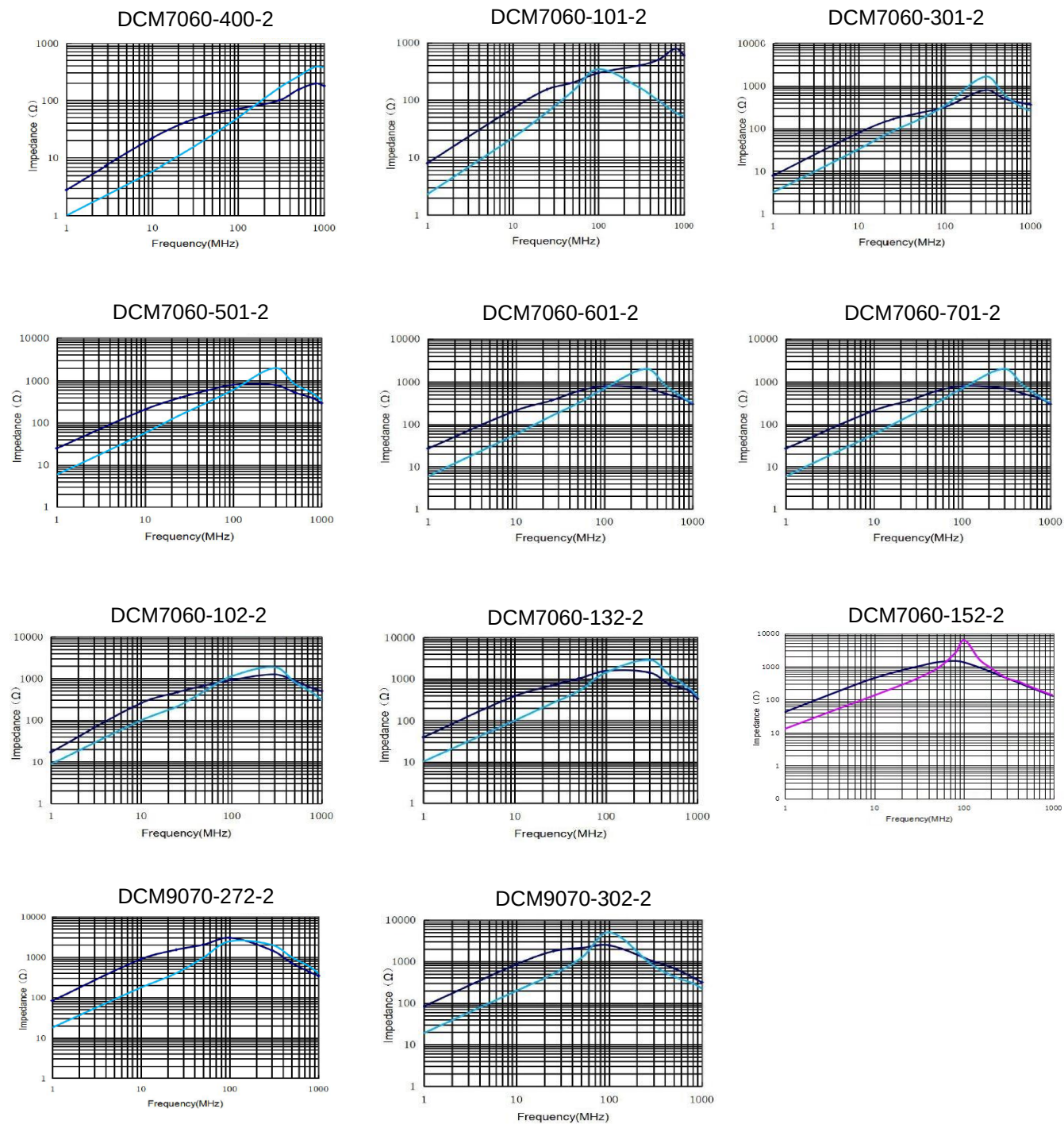
1513 Series

產品編碼 P/N	@ 25 °C Ambient Temperture					
	阻抗 Impedance		DCR	絕緣性 (IR)	額定電流 (Rated Current)	額定電壓 (Rated Voltage)
	Ω		m Ω	M Ω		
	Min	Typ	Max	Min	mA	V
DCM1513-301-2	200	300	6	10	13000	125
DCM1513-501-2	400	500	8	10	11000	125
DCM1513-551-2	450	550	5.5	10	10000	125
DCM1513-701-2	500	700	7	10	10000	125
DCM1513-102-2	800	1000	12	10	9000	125
DCM1513-152-2	1300	1500	35	10	8000	125
DCM1513-182-2	1800	2200	50	10	6000	125
DCM1513-302-2	2500	3000	75	10	4000	125

特性曲線

Performance Curves

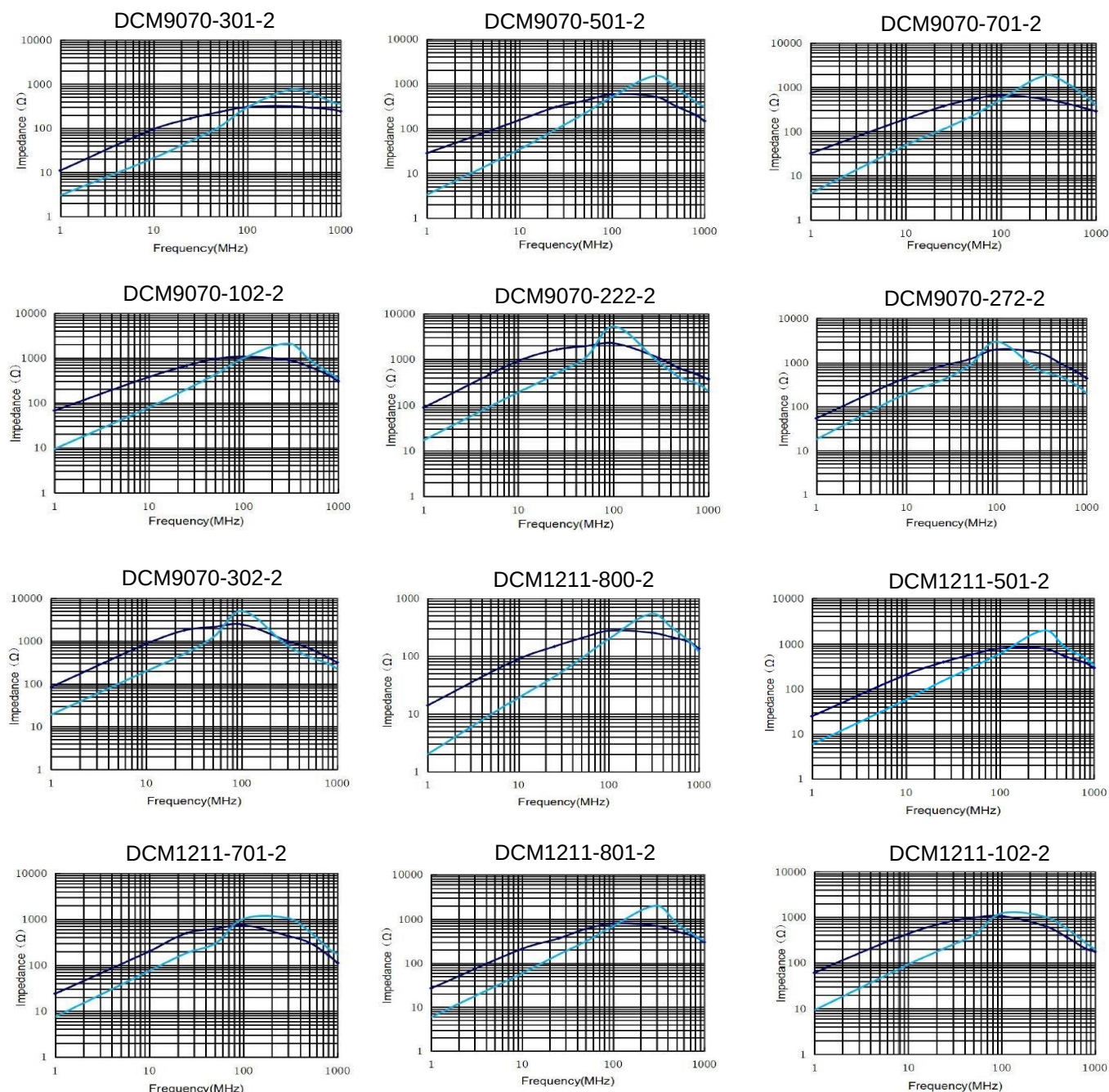
■ 差模特性 (Differential Mode)
 ■ 共模特性 (Common Mode)



特性曲線

Performance Curves

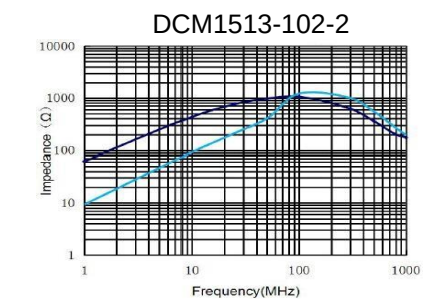
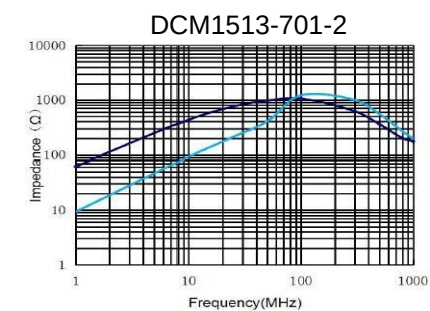
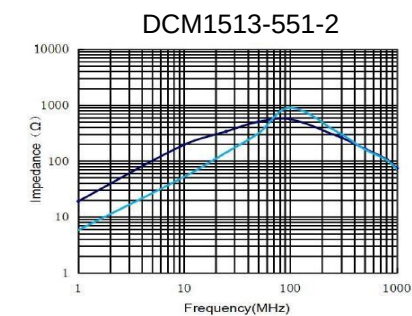
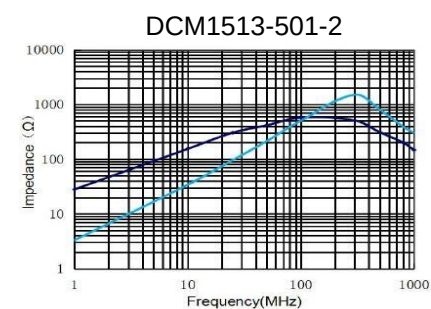
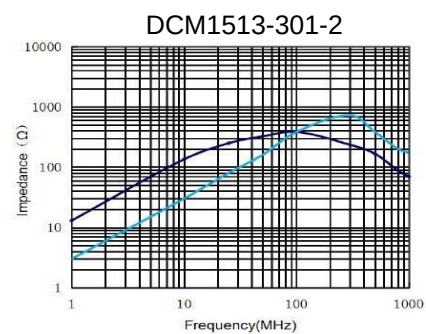
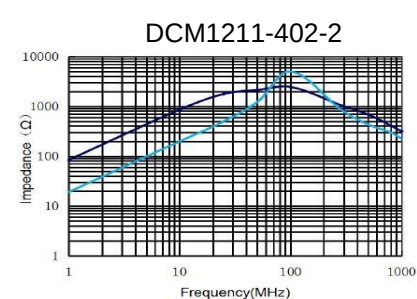
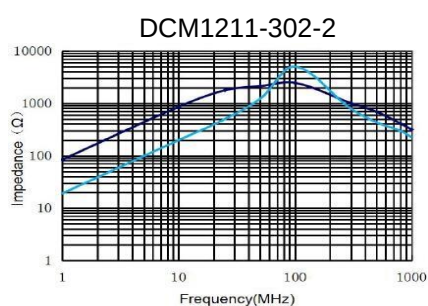
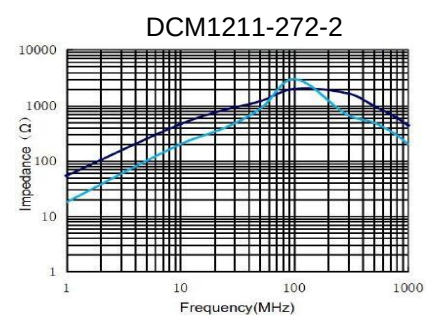
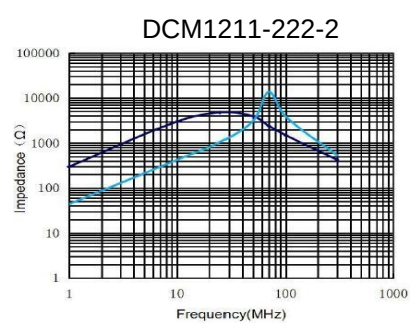
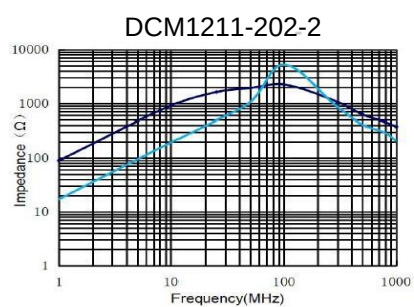
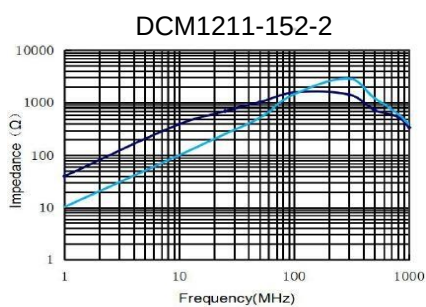
差模特性 (Differential Mode) 共模特性 (Common Mode)



特性曲線

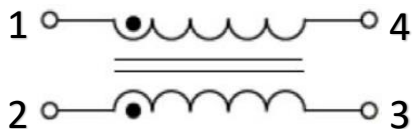
Performance Curves

差模特性 (Differential Mode) 共模特性 (Common Mode)



電路結構

Connections



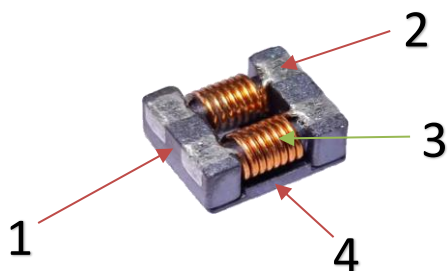
- ◎ 電感內置兩組線圈
Inductor Contents two (2) Set(s) of Coil



- ◎ 電感頂部使用噴碼印字標識
Mark color: white

內部構造

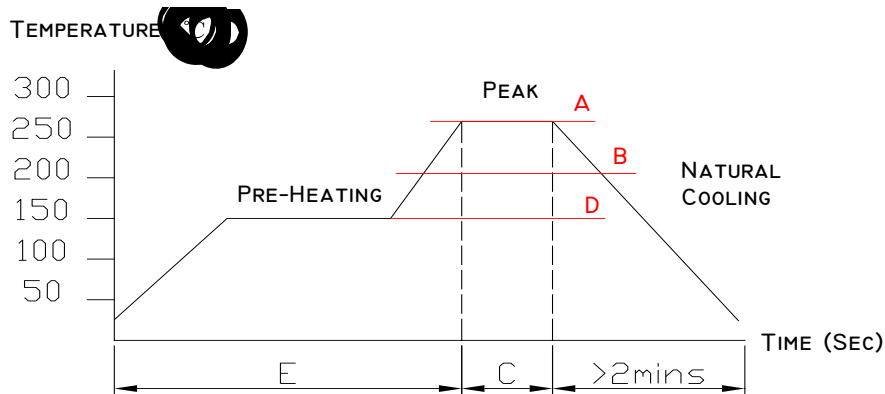
Internal Structure



- 1: 磁芯 / Core
2: 電極 / Electrode
3: 線圈 / Coil
4: 頂蓋 / Base

焊接溫度（推薦）

Recommended Soldering Temperature Graph



A	260°C
B	230°C
C	10 Sec
D	150°C
E	60~240 Sec

机械可靠性测试

Mechanical Reliability

實驗名稱 ITEM	試驗要求 Specification & Requirement	試驗方法 Method Used
可焊性實驗 Solderability	The surface of terminal/pin tested shall be covered with new solder by 95%	Solder heat proof: Preheating: 180 ±10℃ 90 seconds Soldering: 255 ±5℃ for 3 ±1 sec
機械衝擊 Shock	Inductance change within ± 5% Without mechanical damage	Drop down with 981m/s ² (100G) shock Attitude upon a rubber block method shock testing machinem, 3 tests.
振動實驗 Vibration	Inductance change within ± 5% Without mechanical damage	Vibration frequency: 10Hz to 55Hz to 10Hz 60 seconds cycle Vibration time: 2 hours

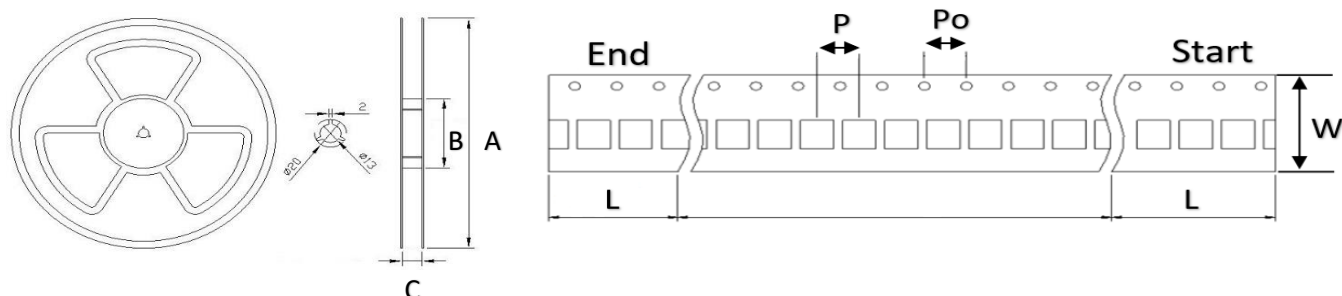
老化测试

Aging Reliability

實驗名稱 ITEM	試驗要求 Specification & Requirement	試驗方法 Method Used
冷熱衝擊 Thermal Shock	Inductance change within ± 5% Without mechanical damage	-40℃, (30 mins) -> room temp. (5 mins) -> 125℃, (30 mins) -> room temp. (5 mins) 100 cycles
耐熱性 Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 85℃ ambient Duration: 500 hrs
耐濕性 Humidity Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 60℃ ambient Humidity: 90~95% Duration: 500 hrs
低溫存儲實驗 Low Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. -40 ±2 ℃ for total 500 +4/-0 hours
高溫存儲實驗 High Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. 125 ±2 ℃ for total 500 +4/-0 hours

載帶卷盤尺寸 : (mm)

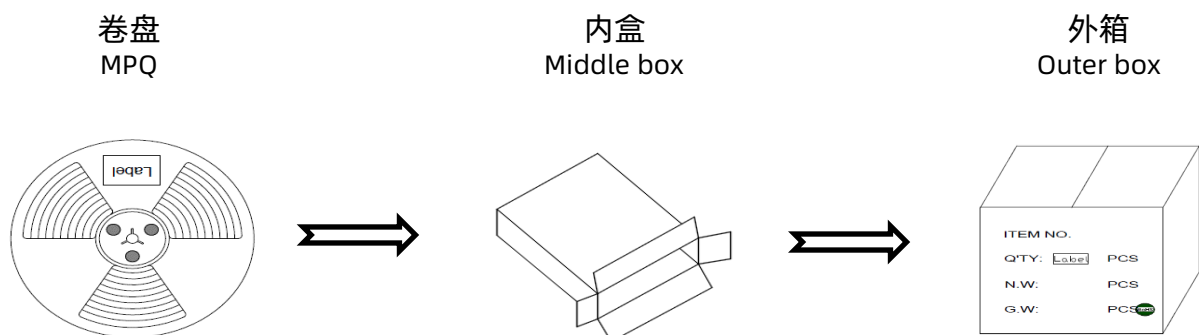
Packing Dimension



系列 Series	A	B	C	W	P	Po	L
7060	330	100	16.5	16	12	4.0	前後預留大約30空格
9070	330	100	16.5	16	12	4.0	前後預留大約30空格
1211	330	100	24.5	24	16	4.0	前後預留大約30空格
1513	330	100	24.5	24	20	4.0	前後預留大約30空格

裝箱數量:

Package Quantity



系列 Series	卷盤 MPQ	內盒 Middle box	外箱 Outer box
7060	1500pcs	4500pcs	13500pcs
9070	700pcs	1400pcs	4800pcs
1211	500pcs	1000pcs	4000pcs
1513	400pcs	800pcs	3200pcs



注意事項

使用本產品時，請注意以下事項

- ◎ 產品保存期限為12個月，保存條件：溫度5~40℃，濕度10~75%RH以內，超過保存期限可能會使產品端子電極發生氧化。
- ◎ 請勿在極端環境下使用和保存（高鹽，強酸，強鹼，強輻射等）。
- ◎ 產品焊接前，請進行預熱；預熱溫度與焊接溫度之間溫差建議控制在150℃以內。
- ◎ 產品焊接後需重新拆卸焊接修正時，請遵循規格書規定的條件範圍；過高的加熱溫度以及反復的拆卸可能會導致產品失效。
- ◎ 產品請勿接觸清洗劑，酒精等液體，這會侵蝕產品本體，從而導致產品失效。
- ◎ 產品焊接到線路板後，請注意不可因線路板整體變形或局部變形而施加給電感剩餘應力，這可能會導致電感發生破裂，脫落，以致失效。
- ◎ 產品通電後溫度會隨電流的增大而上升，設計時請務必考慮留有餘量。
- ◎ 過高的靜電會對產品產生永久性損害，請注意靜電防護。
- ◎ 產品通電過程請勿觸摸產品任何部位，防止觸電。
- ◎ 本產品作為磁性產品，設計時請務必考慮周邊元器件與本產品可能產生的相互影響。
- ◎ 本產品適用於一般電子設備，如：AV設備，通信設備，家電產品，娛樂設備，電腦設備，個人設備，辦公設備，計測設備，工業機器人等。且該一般電子設備需在常規的操作和使用方法環境下使用。
對於需要高度安全性和可靠性的，或者因本產品失效造成設備故障，誤操作，運轉不良等危及到人的生命身體及財產安全，以及對社會產生較大不良影響的特殊用途，設計使用前務必同本公司溝通，設計使用者如在未取得我司書面同意狀況下使用造成任何後果，我司不予承擔。特殊用途包含但不限定如下清單：
 - 1 軍用設備
 - 2 運輸設備（汽車，軌道交通產品，船舶等）
 - 3 航空，航太設備
 - 4 發電控制設備
 - 5 核動力相關設備
 - 6 爆炸引燃控制設備
 - 7 交通控制設備
 - 8 關係到國防安全的設備
 - 9 其他被認定為特殊用途的設備

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