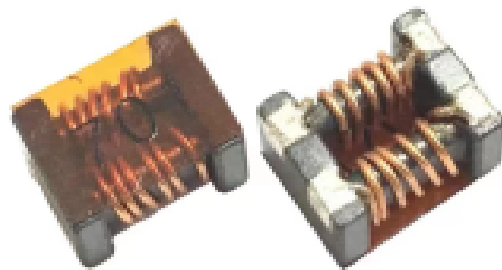




Common Mode Filters

For power line

DCM Series 100MHZ / 0.1V



DCM4520

[4.6*4.5*2.0]mm

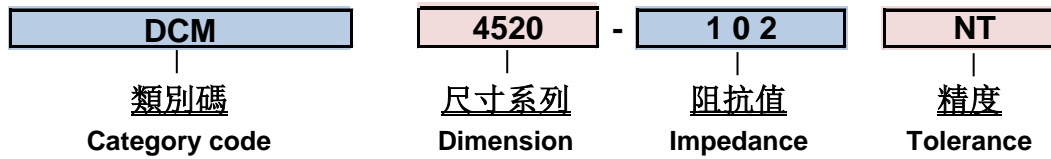
* Dimensions Code JIS[EIA]

特点:

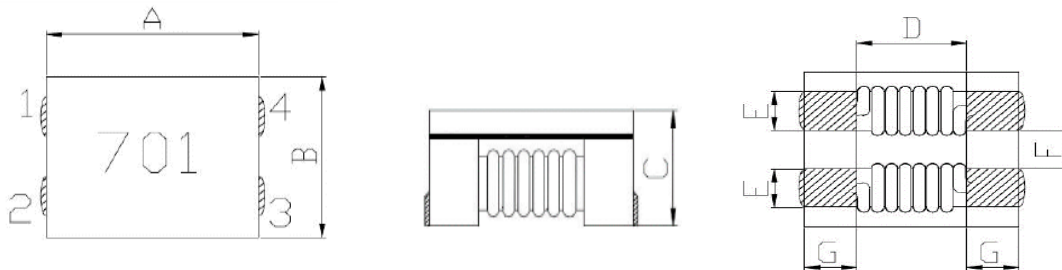
1. 特有方型闭磁路磁芯在保持特性的同时实现小型化, 适用于大电流的片式共模滤波器。
2. 低高度设计, 同时具备较高的共模阻抗, 能够大幅降低噪音。
3. 工作环温范围: $-25^{\circ}\text{C}\sim+100^{\circ}\text{C}$

用途:

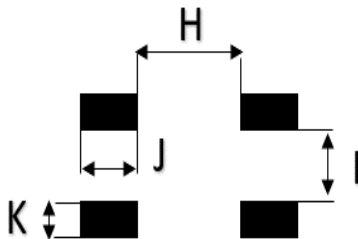
1. 用于应对所有电子设备的电源线噪音。
2. 用于应对笔记本电脑、文字处理机等较大型电子设备的适配器线、电池线的噪音。

型号的命名方法:

测量设备:

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

形状与尺寸:

推荐的焊盘尺寸

Recommended Land Pattern



4520系列	封装尺寸 Dimension
A	4.6 ± 0.5
B	4.5 ± 0.5
C	2.0 MAX
D	2.5 Typ
E	1.2 ± 0.2
F	0.85 Typ
G	1.2 ± 0.2
H	2.0 Typ
I	0.8 Typ
J	1.3 Typ
K	1.3 Typ

電氣參數

Electrical Characteristics

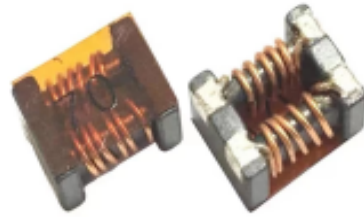
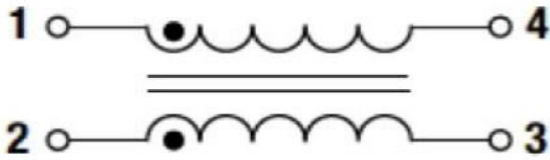
產品編碼 P/N	@ 25 °C Ambient Temperture						
	阻抗 (Z)		DCR	額定電流 (Rated Current)	額定电压 (Rated Voltage)	绝缘性 (IR)	表面印字 (Mark)
	Ω		mΩ	A	V	MΩ	
	Min	Typ	Max	Max	Max	Min	
DCM4520-900NT	60	90	35	2	50	10	900
DCM4520-151NT	90	150	40	1.9	50	10	151
DCM4520-231NT	180	230	45	1.8	50	10	231
DCM4520-301NT	200	300	45	1.7	50	10	301
DCM4520-421NT	300	420	50	1.5	50	10	401
DCM4520-701NT	500	700	59	1.4	50	10	701
DCM4520-901NT	650	900	68	1.3	50	10	901
DCM4520-102NT	800	1000	68	1.3	50	10	102
DCM4520-122NT	1000	1200	75	1.2	50	10	122
DCM4520-142NT	1200	1400	81	1.2	50	10	142

※溫度範圍：

1. 本產品的工作溫度範圍不包含自我發熱。包括自我發熱, 可以最大100°C為止的使用。
2. 在 85°C 環境下的使用期間, 在如表中所示的電流的範圍內, 請停止使用。
3. 保存溫度範圍以固定基板後為準。

電路結構

Connections



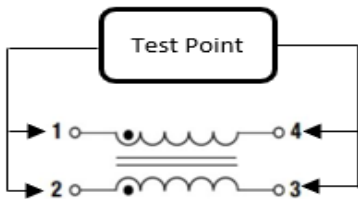
- ◎ 電感內置兩組線圈
Inductor Contents Two (2) Set(s) of Coil
- ◎ 電感使用不需要區分正負方向
DC/AC Current Shall Be Introduced By Any One of Two Pads

- ◎ 电感顶部使用激光蚀刻印字
Laser printing is used at the top of the inductor

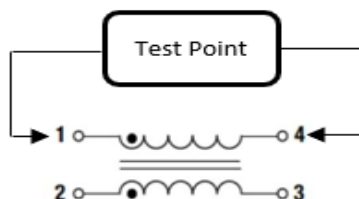
特性測試方式

Characteristic Test method

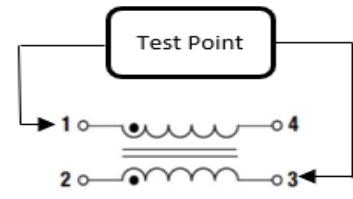
阻抗測試方法
Impedance test method



直流阻抗測試方法
DCR test method

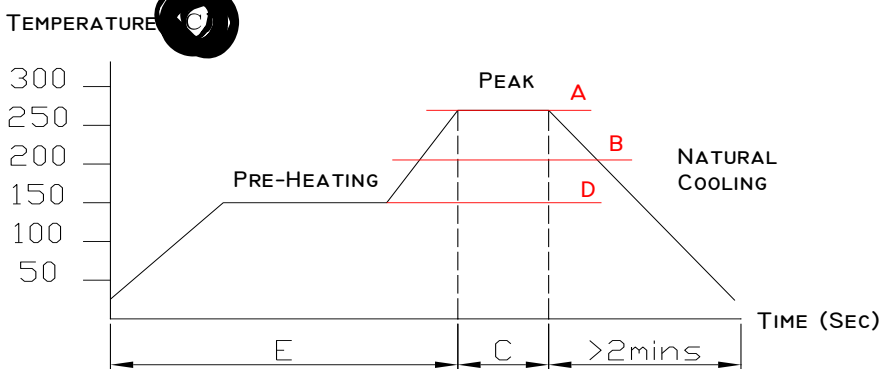


絕緣阻抗測試方法
Insulation resistance test method



焊接溫度（推荐）

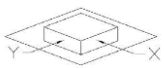
Recommended Soldering Temperature Graph



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

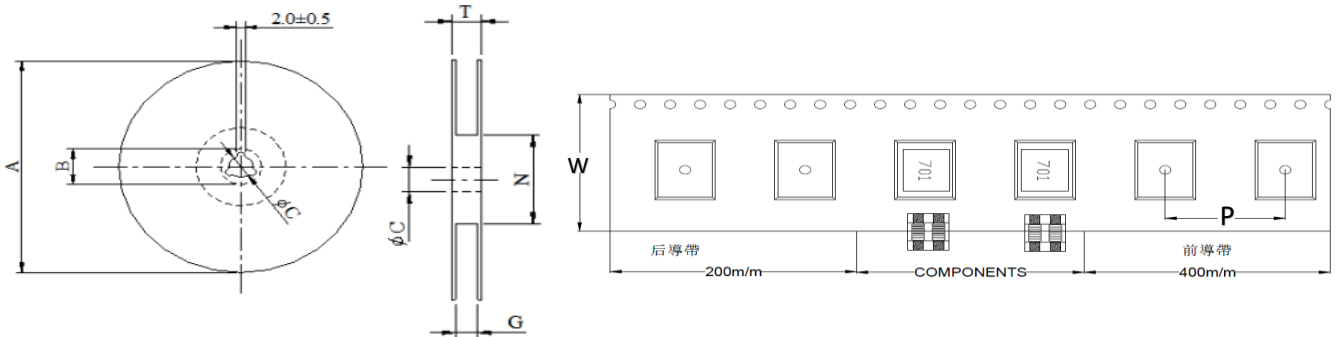
信賴性實驗

RELIABILITY TEST

Operating Temperature	30 to + 100 °C (Contain Heating coil)
Appearance Inspection	No external defects by visual inspection
Terminal Strength	After soldering , between copper plaet and terminals of coils , push in two directions of X , Y with standing 10N(1.02kg) for10+/-2 sec. Terminal should not peel off. (Refer to figure at right)
	
Heat endurance of reflow soldering	Refer to figure
Insulating resistance	Over 100 MΩ at 100V D.C . between wire and core .
Dielectric Strength	Apply at 0.5KV 3mA for 1 minute between wire and core .
Temperature characteristics	Inductance coefficient (0~2,000) × 10 / °C (- 30 ~ + 100 °C)
Humidity characteristics	Inductance deviation within ± 10% , after 96 hours in 90~95% relative humidity at 40 ± 2 °C and 1 hours drying under normal condition .
A test is made under the above mentioned condition , and it is kept for 2 hours in the normal	

載帶卷盤尺寸：(mm)

Packing Dimension



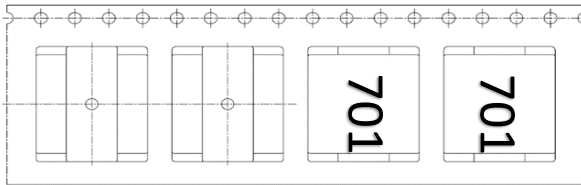
MPQ	A	B	C	Z	G	T	W	P
1000pcs/卷盤	180Typ	21 Typ	13 Typ	60Typ	18Typ	25Typ	16Typ	12Typ

載帶內產品排列方式：

Inductance Packing Method

首字對孔

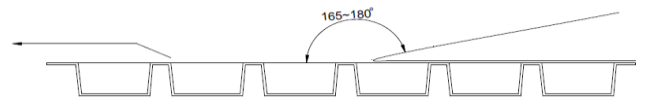
The first mark is on the side of the gear hole



載帶剝離力：

Typical Pulling Force

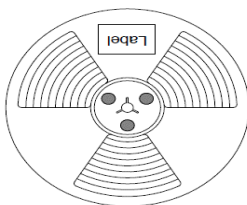
20~120 gf



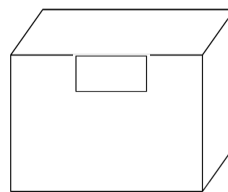
裝箱數量：

Package Quantity

1000pcs/卷盤
1000pcs/Reel



2000pcs/每盒
2000pcs/ Middle box



20000pcs/每箱
20000pcs/ Outer box

© 實際出貨過程，依據客戶需求狀況的不同，包裝數量會有變化，最終的包裝數量請參照實際出貨額包裝

In the actual delivery process, the package quantity will change according to the different customer demands. Please refer to the actual shipment quantity for the final package quantity



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°C，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°C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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