



FEATURES

1. Carbonyl powder inductor.
2. Compact design.
3. High current , low DCR , high efficiency.
4. Very low acoustic noise and very low leakage flux noise.
5. High reliability.
6. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
7. Operating temperature -40~+125°C
(Including self - temperature rise)

APPLICATIONS

Note PC power system , incl. IMVP-6
DC/DC converter .

PRODUCT IDENTIFICATION

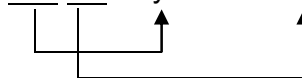
JRPI	0503	M	-	4R7	M
Type	Size	Control		Inductance	Tol.

Marking and Date code:

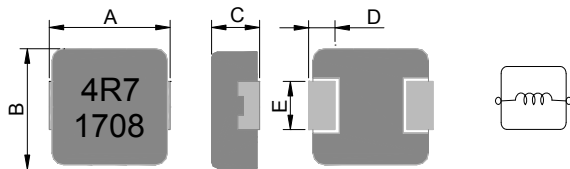
Marking ex:4.7(μH) → 4R7

Date code

17 08 → year and weekly

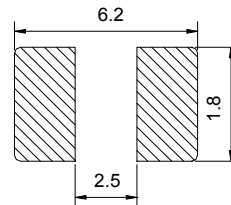


DIMENSIONS (mm)



leadframe

Recommend PC Board Pattern



Note:

1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.12mm and above.

印字:黑色4R7及D/C 1708 (17年,08週期)(依實際生產日期而定)

Part No.	Size (mm)				
	A	B	C	D	E
JRPI 0503M	5.7 ± 0.3	5.2 ± 0.2	2.8 ± 0.2	1.1 ± 0.3	1.5 ± 0.2

SERIES LIST

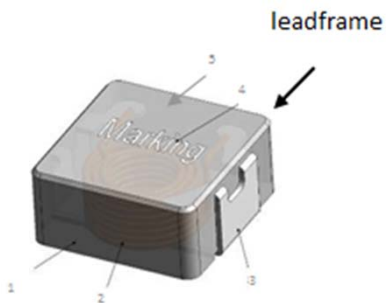
No.	Part No.	L	TOL.	RDC		Isat	Irms	Type
		(μH)	(%)	Typ.	Max.	(A) Typ.	(A) Typ.	
1	JRPI 0503M-R10N	0.10	±30	2.50	3.00	27.0	23.0	leadframe
2	JRPI 0503M-R20M	0.20	±20	2.60	3.20	25.0	16.0	leadframe
3	JRPI 0503M-R22M	0.22	±20	3.70	4.40	21.0	15.5	leadframe
4	JRPI 0503M-R33M	0.33	±20	4.30	5.00	18.0	14.0	leadframe
5	JRPI 0503M-R47M	0.47	±20	6.40	7.40	16.0	12.0	leadframe
6	JRPI 0503M-R56M	0.56	±20	8.00	10.0	15.0	10.0	leadframe

7	JRPI 0503M-R68M	0.68	±20	10.0	12.0	14.0	8.50	leadframe
8	JRPI 0503M-1R0M	1.00	±20	13.0	14.0	11.0	7.00	leadframe
9	JRPI 0503M-1R2M	1.20	±20	14.0	16.0	11.0	6.50	leadframe
10	JRPI 0503M-1R5M	1.50	±20	16.0	25.0	10.0	6.00	leadframe
11	JRPI 0503M-2R2M	2.20	±20	25.0	35.0	9.00	5.50	leadframe
12	JRPI 0503M-3R3M	3.30	±20	32.0	38.0	8.00	5.00	leadframe
13	JRPI 0503M-4R7M	4.70	±20	50.0	53.0	6.00	4.60	leadframe
14	JRPI 0503M-5R6M	5.60	±20	55.0	63.0	4.50	4.25	leadframe
15	JRPI 0503M-6R8M	6.80	±20	68.0	76.2	4.30	4.00	leadframe
16	JRPI 0503M-100M	10.0	±20	110	128	3.50	2.75	leadframe
17	JRPI 0503M-150M	15.0	±20	165	190	2.60	2.10	leadframe
18	JRPI 0503M-180M	18.0	±20	195	230	2.30	2.00	leadframe
19	JRPI 0503M-220M	22.0	±20	220	250	1.70	1.90	leadframe
20	JRPI 0503M-330M	33.0	±20	380	440	1.60	1.60	leadframe

Note:

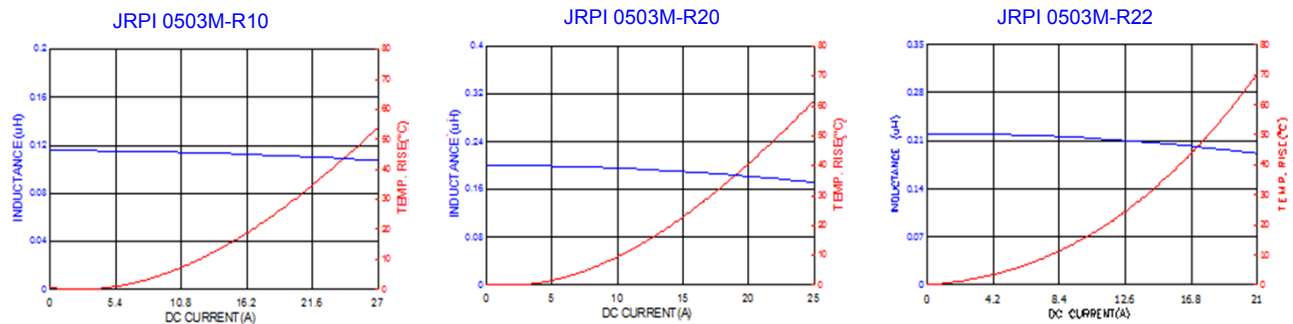
1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately $\Delta t 40^{\circ}\text{C}$.
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions.
Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Special inquiries besides the above common used types can be met on your requirement.

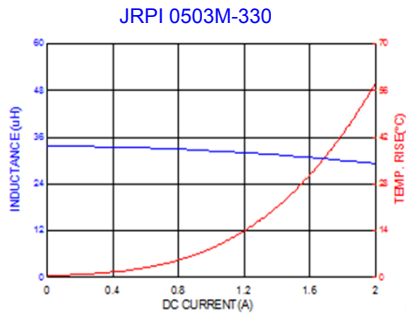
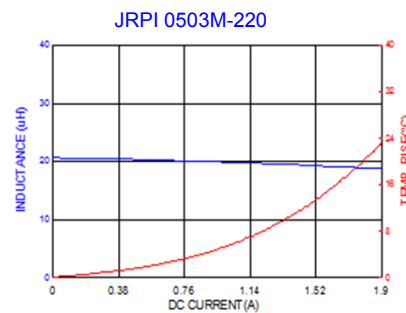
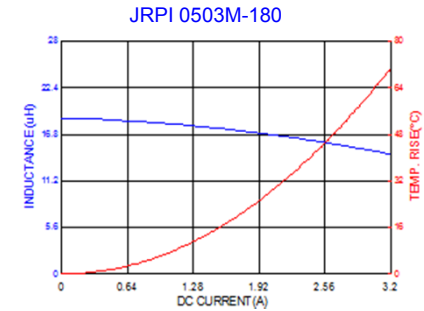
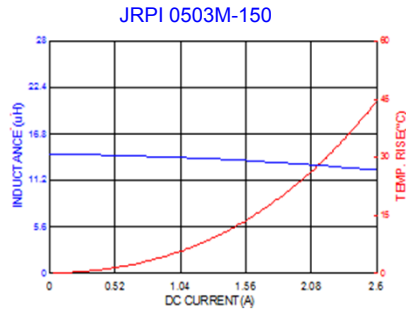
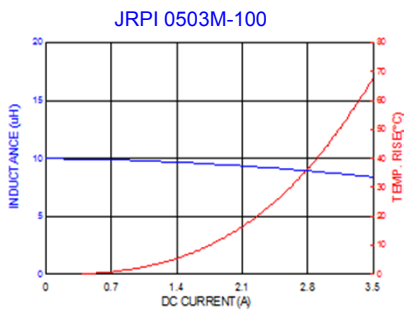
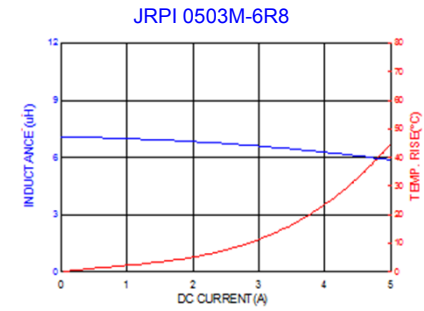
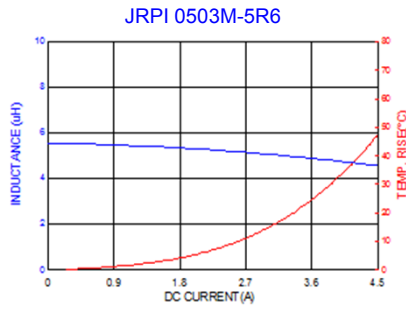
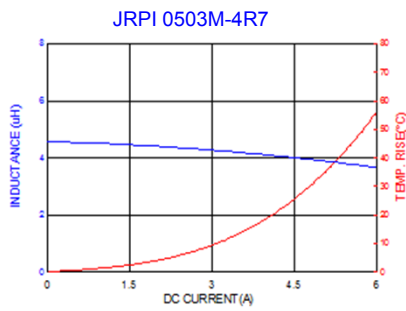
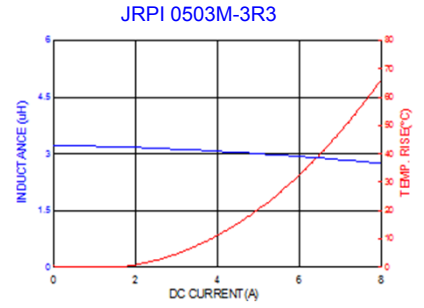
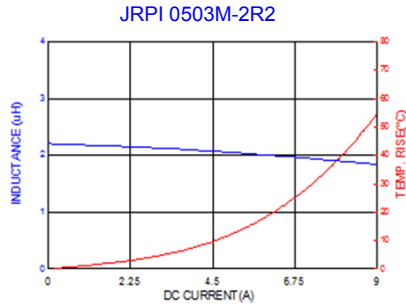
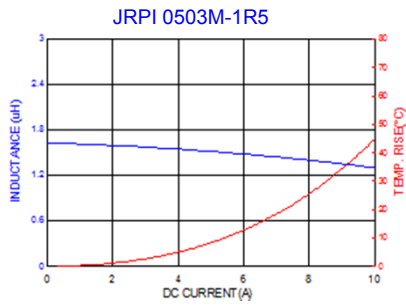
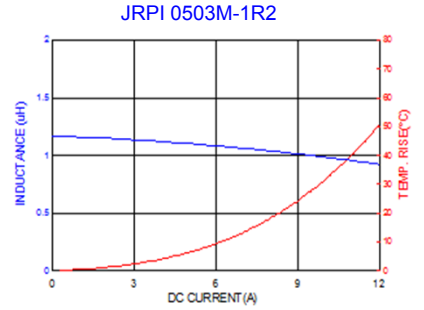
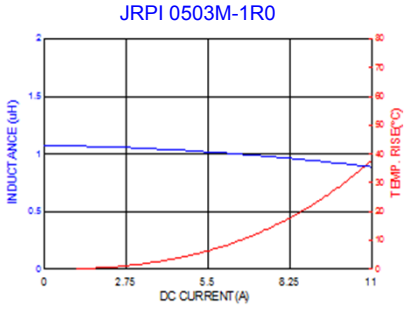
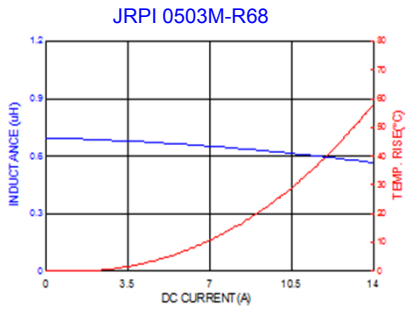
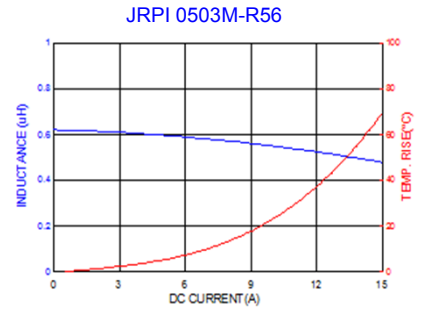
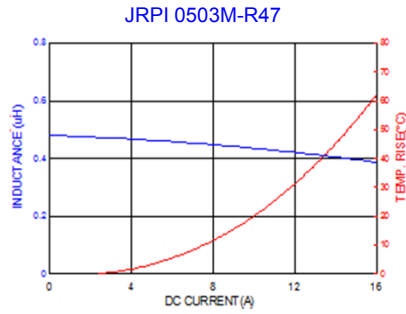
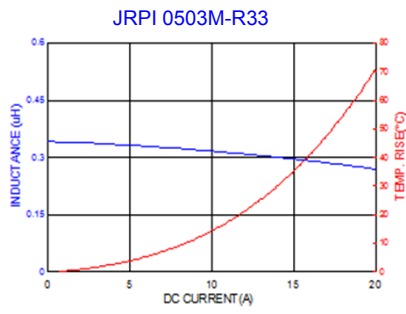
Materials



NO	Items	Materials
1	Core	Carbonyl Powder
2	Wire	Polyester Wire or equivalent
3	Solder	100% Pb free solder(Ni+Sn---Plating)
4	Ink	Halogen-free ketone
5	paint	Epoxy resin

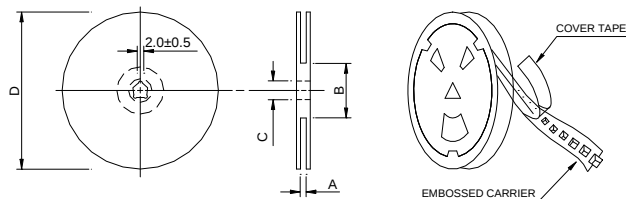
TYPICAL PERFORMANCE CURVES





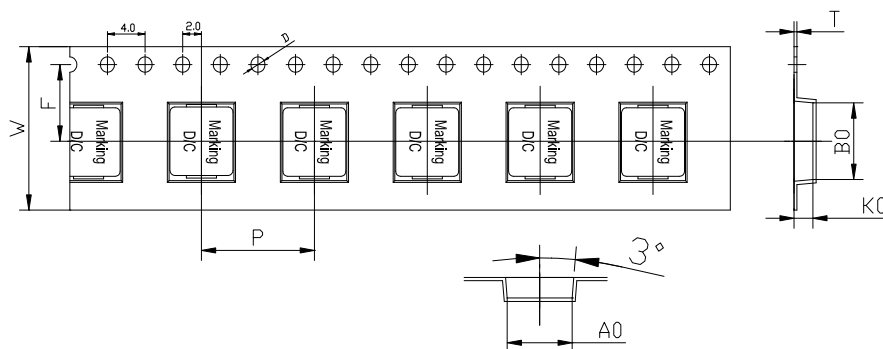
Packaging Information

• Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x16mm	16.4+2/-0	100±2	13+0.5/-0.2	330

• Tape Dimension

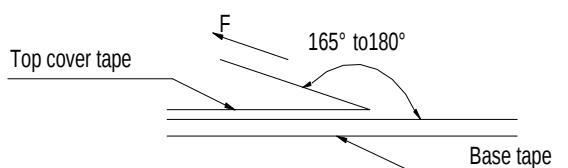


Ao(mm)	Bo(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)	D(mm)
5.5±0.1	6.2±0.1	3.3±0.1	8.0±0.1	12.0±0.3	5.5±0.1	0.35±0.05	1.5±0.1

• Packaging Quantity

Size	Reel	Inner box	Carton
JRPI 0503M	2000	4000	16000

• Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions (referenced ANSI/EIA-481-C-2003 of 4.11 standard)

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

■ Application Notice

- Storage Conditions(component level)

To maintain the solderability of terminal electrodes:

1. Products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40°C and 60% RH.
3. Recommended products should be used within 12 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

- Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.