



PRODUCT IDENTIFICATION

JRPI	1004	M	-	4R7	M
Type	Size	Control		Inductance	Tol.

FEATURES

1. Magnetic metal 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)-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 .

Marking and Date code:

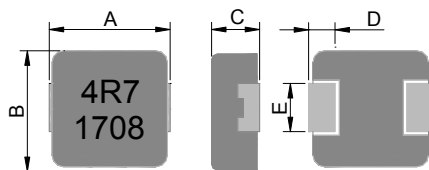
Marking ex:4.7(μH) → 4R7

Date code

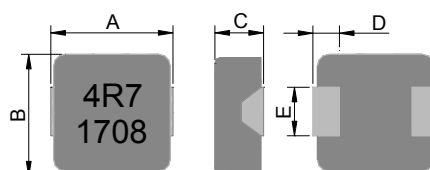
17 08 → year and weekly



DIMENSIONS (mm)



leadframe

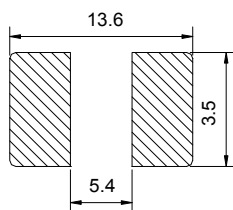


non-leadframe



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

Recommend PC Board Pattern



Note:

1. PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only.
3. Recommend solder paste thickness at 0.15mm and above.

Part No.	Size (mm)				
	A	B	C	D	E
JRPI 1004M	11.0 ± 0.5	10.0 ± 0.3	3.8 ± 0.2	2.3 ± 0.3	3.0 ± 0.3

SERIES LIST

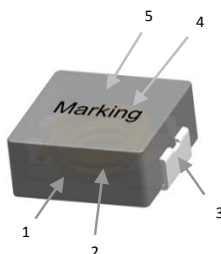
No.	Part No.	L	TOL.	RDC (mΩ)		Isat (A)	Irms (A)	Type
		(μH)	(%)	Typ.	Max.	Typ.	Typ.	
1	JRPI 1004M-R15N	0.15	±30	0.50	0.60	75.0	43.0	non-leadframe
2	JRPI 1004M-R22M	0.22	±20	0.80	1.00	60.0	35.0	non-leadframe
3	JRPI 1004M-R33M	0.33	±20	1.00	1.20	60.0	31.0	non-leadframe
4	JRPI 1004M-R36M	0.36	±20	1.05	1.20	60.0	31.0	non-leadframe
5	JRPI 1004M-R47M	0.47	±20	1.30	1.50	43.0	28.0	non-leadframe
6	JRPI 1004M-R56M	0.56	±20	1.60	1.80	40.0	25.0	non-leadframe
7	JRPI 1004M-R68M	0.68	±20	2.40	2.70	39.0	22.0	non-leadframe
8	JRPI 1004M-1R0M	1.00	±20	3.00	3.30	36.0	18.0	non-leadframe
9	JRPI 1004M-1R5M	1.50	±20	4.00	4.60	33.0	16.0	non-leadframe
10	JRPI 1004M-2R2M	2.20	±20	6.50	7.00	27.0	12.0	leadframe
11	JRPI 1004M-3R3M	3.30	±20	10.8	11.8	20.0	11.0	leadframe
12	JRPI 1004M-4R7M	4.70	±20	15.0	15.5	17.0	10.0	leadframe
13	JRPI 1004M-5R6M	5.60	±20	17.0	19.3	14.0	9.0	leadframe
14	JRPI 1004M-6R8M	6.80	±20	17.5	23.3	13.5	8.5	leadframe
15	JRPI 1004M-8R2M	8.20	±20	20.0	22.5	12.5	8.0	leadframe
16	JRPI 1004M-100M	10.0	±20	27.0	30.0	12.0	7.5	leadframe
17	JRPI 1004M-150M	15.0	±20	40.0	45.0	10.0	6.25	leadframe
18	JRPI 1004M-220M	22.0	±20	64.0	74.0	7.0	5.0	leadframe
19	JRPI 1004M-330M	33.0	±20	92.0	112	5.0	3.5	leadframe
20	JRPI 1004M-470M	47.0	±20	145	167	4.5	3.0	leadframe
21	JRPI 1004M-680M	68.0	±20	205	240	3.0	2.0	leadframe
22	JRPI 1004M-820M	82.0	±20	265	320	2.5	1.5	leadframe

Note:

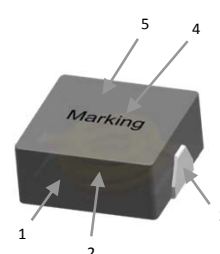
1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately ΔT of 40°C
5. The part temperature (ambient + temp rise) should not exceed 125°C 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. Irms Testing : Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.
7. Rated DC Current : The less value which is Irms or Isat

Materials

leadframe



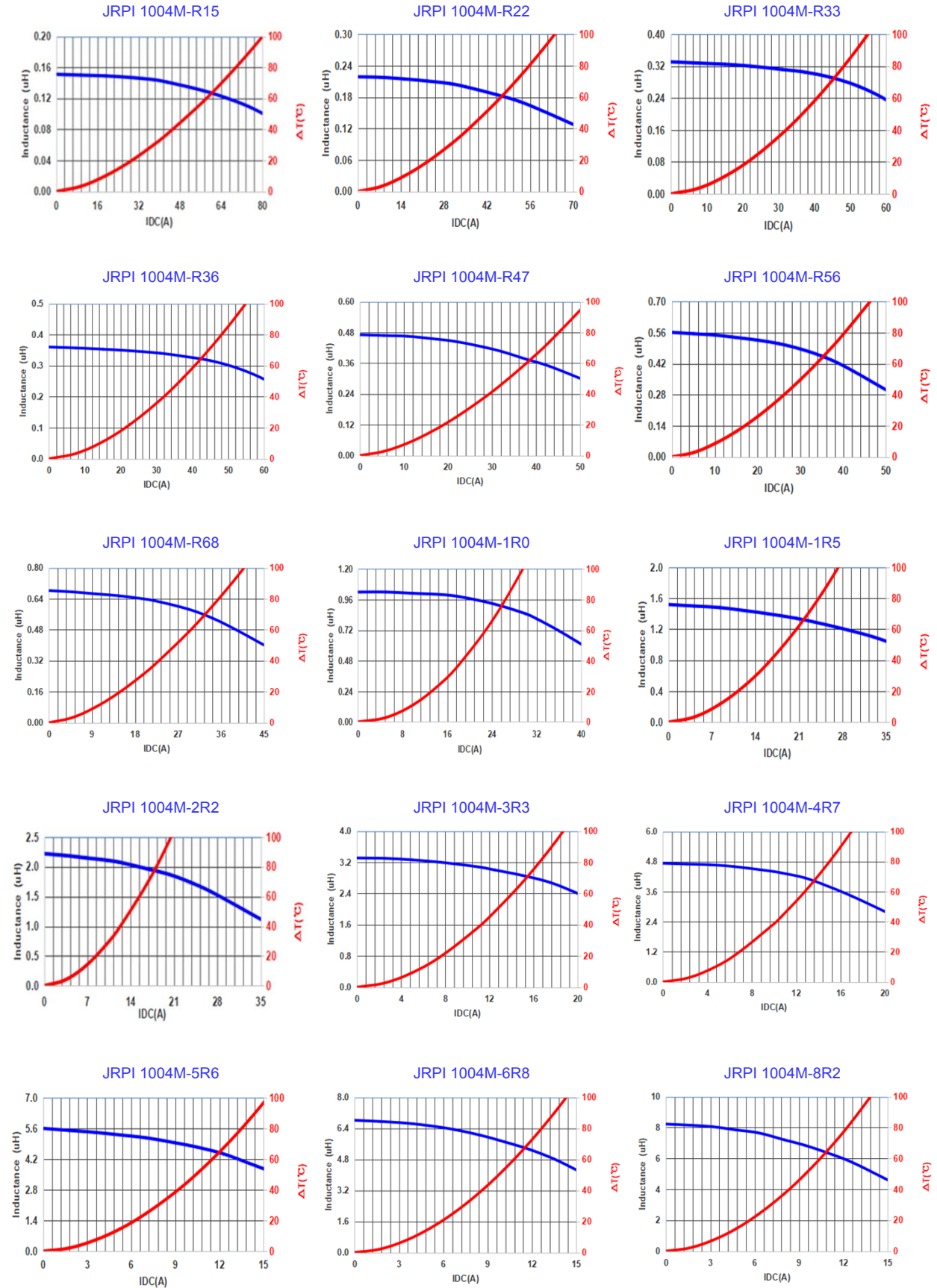
non-leadframe

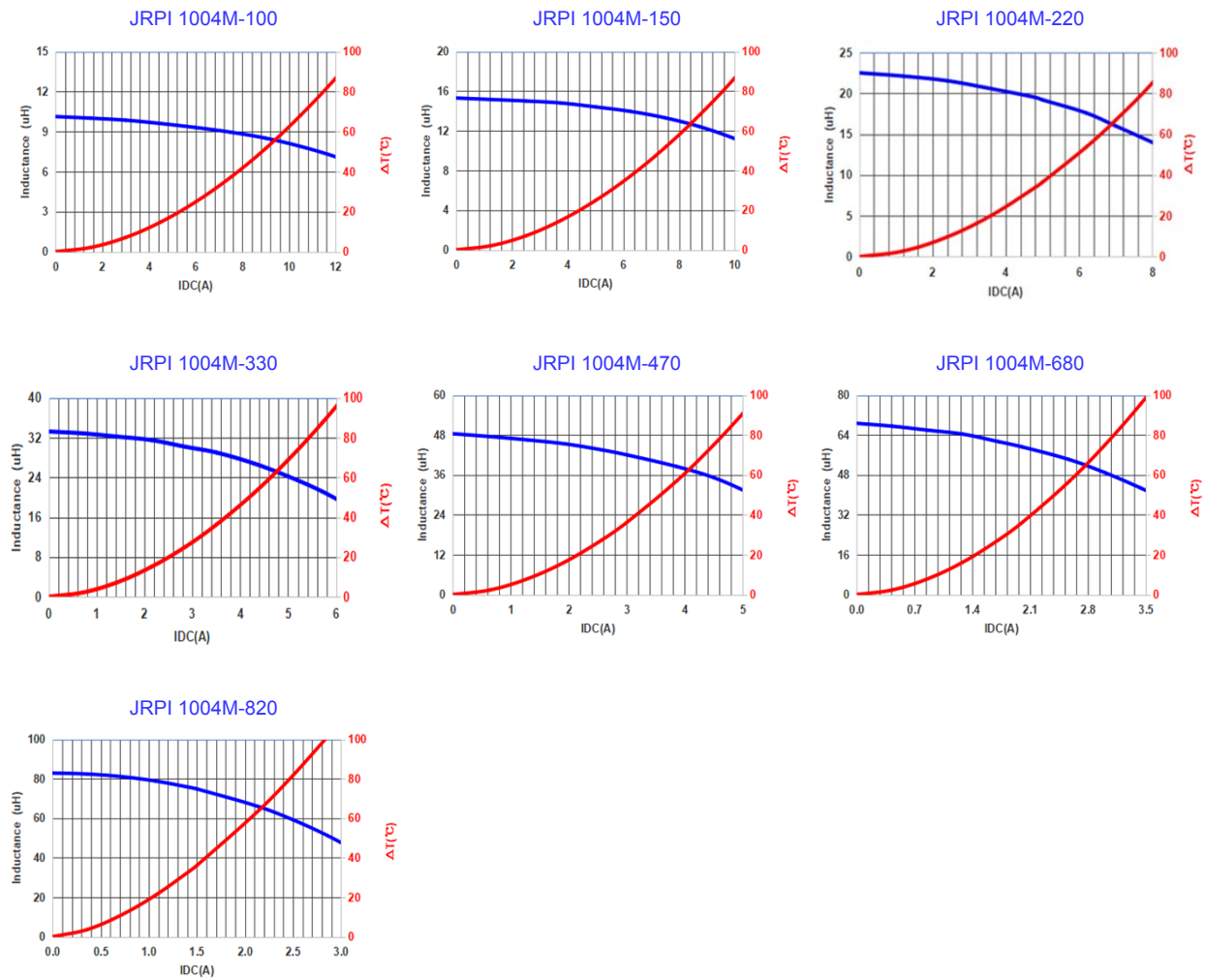


NO	Items	Materials
1	Core	Carbonyl Powder
2	Wire	Polyester Wire or equivalent
3	Clip	100% Pb free solder(Ni+Sn---Plating)
4	Ink	Halogen-free ketone
5	paint	Epoxy resin

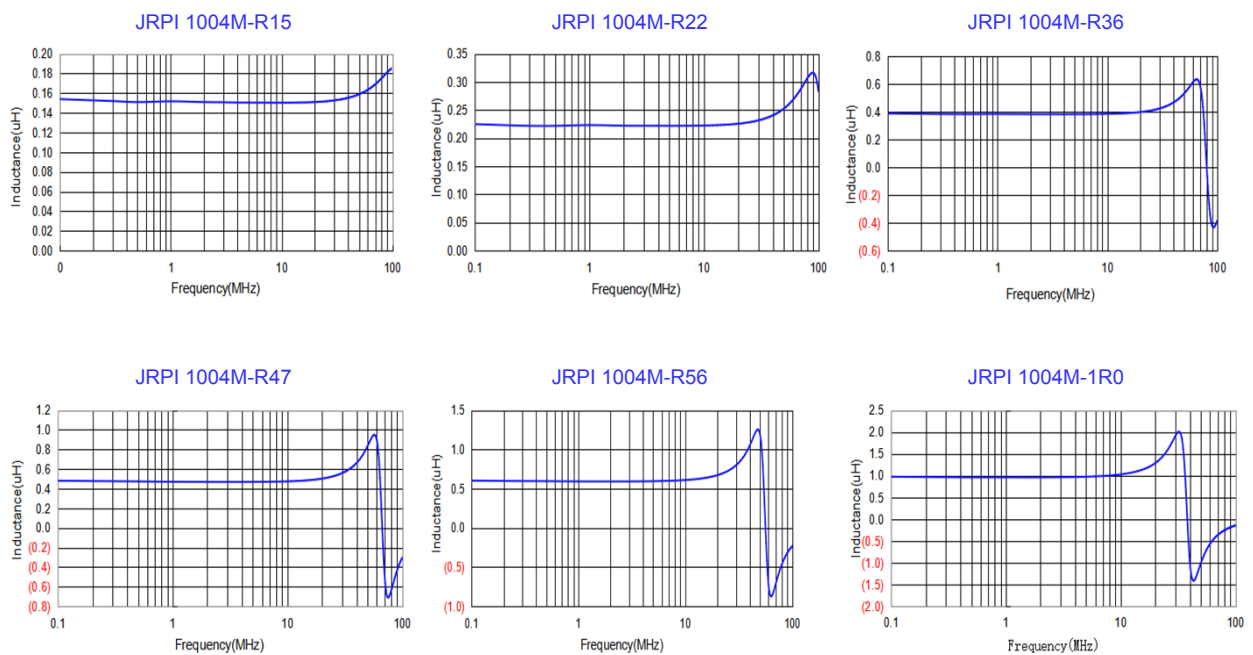
NO	Items	Materials
1	Core	Carbonyl Powder
2	Wire	Polyester Wire or equivalent
3	Solder	100% Pb free solder
4	Ink	Halogen-free ketone
5	paint	Epoxy resin

Typical Performance Curves

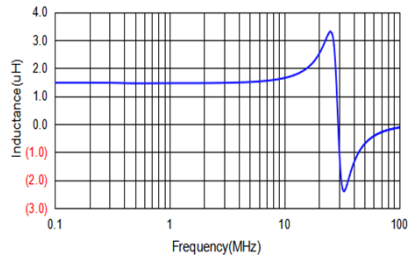




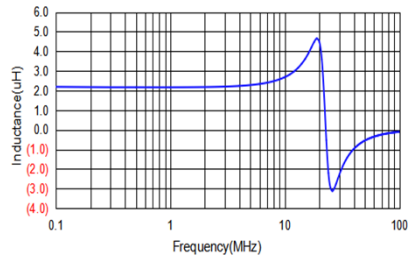
Inductance vs Frequency



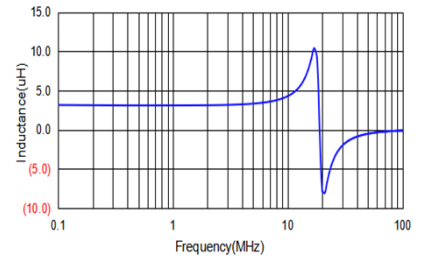
JRPI 1004M-1R5



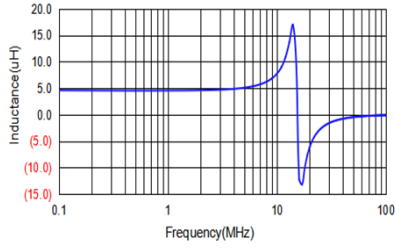
JRPI 1004M-2R2



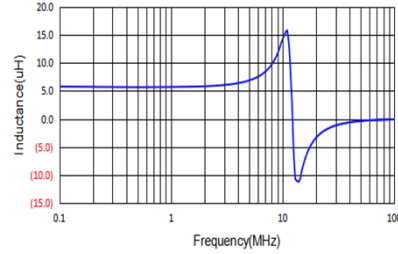
JRPI 1004M-3R3



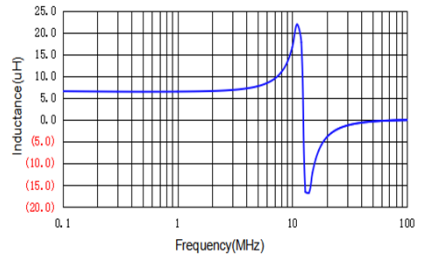
JRPI 1004M-4R7



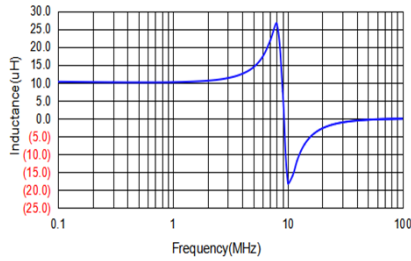
JRPI 1004M-5R6



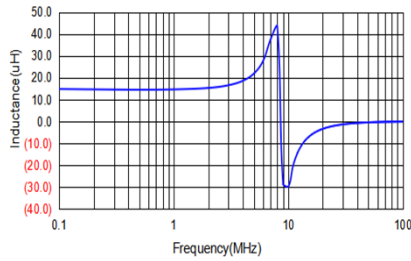
JRPI 1004M-6R8



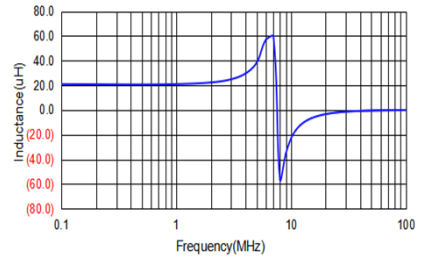
JRPI 1004M-100



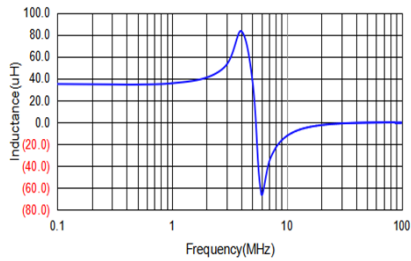
JRPI 1004M-150



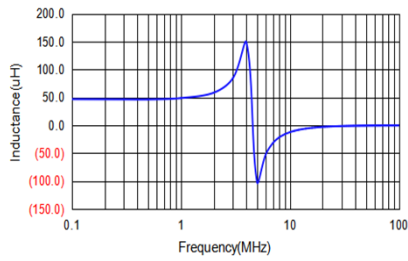
JRPI 1004M-220



JRPI 1004M-330

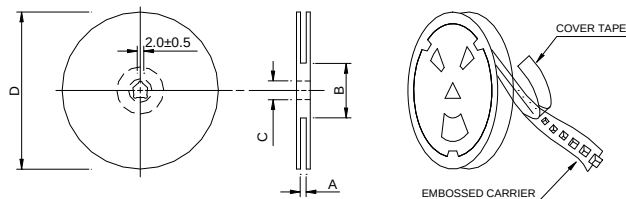


JRPI 1004M-470



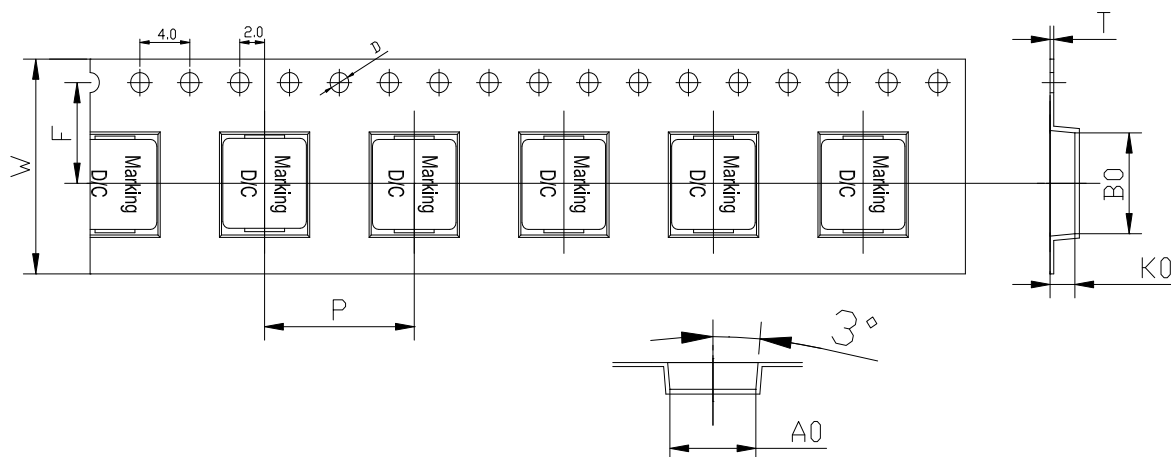
Packaging Information

• Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x24mm	24.4+2/-0	100±2	13+0.5/-0.2	330

• Tape Dimension



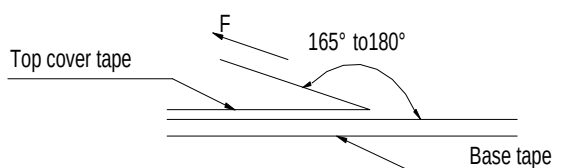
Ao(mm)	Bo(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)	D(mm)
10.4±0.1	11.6±0.1	4.5±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05	1.5±0.1

• Packaging Quantity

Size	Reel	Inner box	Carton
JRPI 1004M	500	1000	4000

• 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-D-2008 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-020E 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.