



深 圳 市 富 爾 電 子 科 技 有 限 公 司

ADD:廣東省深圳市南山區後海工業七路8號

Tel/Fax:0755-21606613/21606608

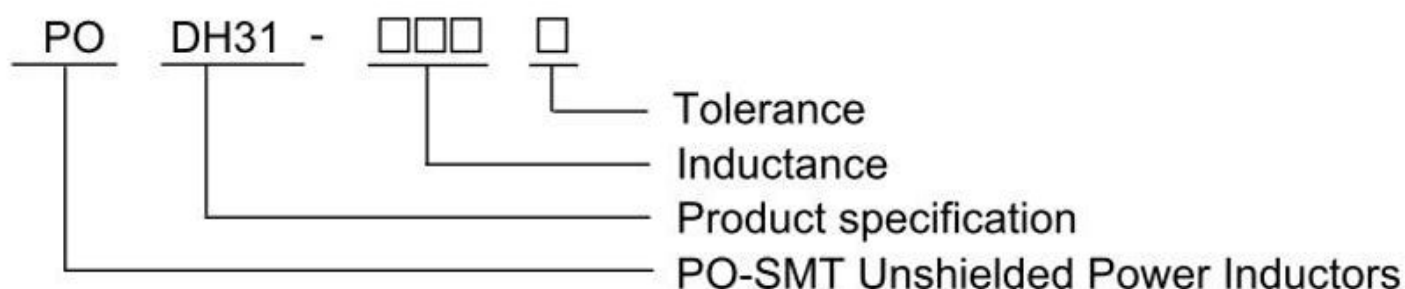
Http://www.frcoil.com

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## SMT Power Inductors - PODH31

### 產品型號

### PRODUCT IDENTIFICATION



#### Tolerance:

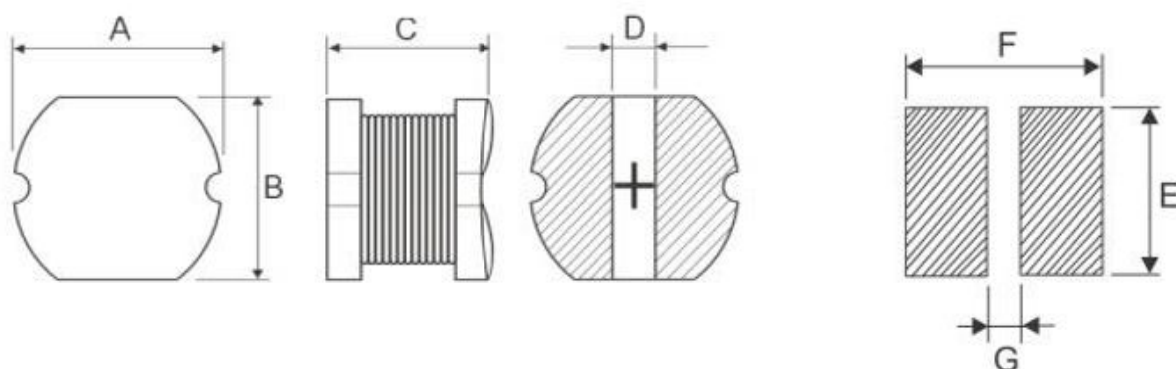
Code	Tolerance
102	1.0uH
103	10.0uH
104	100.0uH
105	1000.0uH
106	10000.0uH

#### Inductance:

Code	Tolerance
J	+/-5%
K	+/-10%
L	+/-15%
M	+/-20%
N	+/-30%

### 外觀尺寸

### SHAPE AND DIMENSIONS



Dimensions in mm

A	B	C	D(Typ.)	E	F	G
3.5 ± 0.3	3.0 ± 0.3	1.1 ± 0.3	1.0	3.3	4.5	1.1



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### 規格特性

### SPECIFICATIONS

Part number.	INDUCTANCE ( $\mu$ H)	Tolerance ( $\pm$ %)	DCR ( $\Omega$ ) Max	IDC (A) Max	Test frequency
PODH31-102M	1.0	20	0.083	1.40	100KHz/1.0V
PODH31-122M	1.2	20	0.099	1.24	100KHz/1.0V
PODH31-152M	1.5	20	0.128	1.06	100KHz/1.0V
PODH31-182M	1.8	20	0.145	0.96	100KHz/1.0V
PODH31-222M	2.2	20	0.194	0.88	100KHz/1.0V
PODH31-272M	2.7	20	0.225	0.80	100KHz/1.0V
PODH31-332M	3.3	20	0.270	0.79	100KHz/1.0V
PODH31-392M	3.9	20	0.321	0.68	100KHz/1.0V
PODH31-472M	4.7	20	0.376	0.66	100KHz/1.0V
PODH31-562M	5.6	20	0.393	0.61	100KHz/1.0V
PODH31-682M	6.8	20	0.485	0.56	100KHz/1.0V
PODH31-822M	8.2	20	0.628	0.50	100KHz/1.0V
PODH31-103M	10	20	0.809	0.45	100KHz/1.0V
PODH31-123M	12	20	0.901	0.40	100KHz/1.0V
PODH31-153M	15	20	1.063	0.37	100KHz/1.0V
PODH31-183M	18	20	1.231	0.34	100KHz/1.0V
PODH31-223M	22	20	1.750	0.31	100KHz/1.0V
PODH31-273M	27	20	2.113	0.28	100KHz/1.0V
PODH31-333M	33	20	2.888	0.24	100KHz/1.0V
PODH31-393M	39	20	3.100	0.23	100KHz/1.0V
PODH31-473M	47	20	3.513	0.21	100KHz/1.0V
PODH31-563M	56	20	3.950	0.20	100KHz/1.0V
PODH31-683M	68	20	5.688	0.18	100KHz/1.0V
PODH31-823M	82	20	6.575	0.15	100KHz/1.0V
PODH31-104K	100	10	7.700	0.14	100KHz/1.0V

#### NOTE:

1. Inductance is Measured by LCR-Meter 4284A(HP) or equivalent.
2. DC Resistance is Measured by HP4338B Milliohms meter or equivalent.
3. Rated current is measured by LCR-meter 3260B(WK) & DC Bias 3265B(WK).
4. Rated current: Value obtained when current flows and the temperature has risen to 40°C or when DC current flows and the initial value of inductance has fallen by 35%, whichever is smaller.
5. Operating temperature -55°C ~ +125°C.



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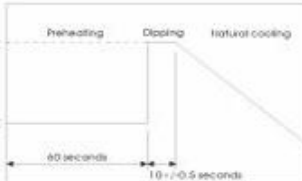

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## SMT Power Inductors - PODH31

### 電氣特性

### TYPICAL ELECTRICAL CHARACTERISTICS

Reliability and Test Conditions (可靠性測試條件)

ITEM	Performance	Test Condition
Operating Temperature 操作溫度	-55℃ ~ 125℃	10Pcs Passed
Storage temperature 儲存溫度	-40℃ ~ +85℃	10Pcs Passed
Rated Current 額定電流	Refer to standard electrical characteristics list. 參考標準特性規格表	10Pcs Passed
Temperature Rise Test 溫升測試	40℃ max.(Δt) 40度最大	10Pcs Passed
Electrical Performance Test		
Solder Heat Resistance 耐焊錫熱	Appearance: No significant abnormality. Inductance change: Within ±20%. 外觀: 無顯著異常 電感值: 變異值在初始值20%之內	Preheat: 150℃, 60sec. Solder: H63A solder temperature: 260±5℃ Flux for lead free: rosin Dip time: 10±0.5sec. 預熱: 150℃, 60sec. 錫爐溫度: 260±5℃ 時間: 10±0.5sec. 助焊劑: rosin 
Solderability Test 端面焊錫性	More than 90% of the terminal electrode should be covered with solder. 端電極之錫覆蓋面達90%以上	Preheat: 125±25℃, 60sec. Solder: H63A solder temperature: 230±5℃ Flux for lead free: rosin Dip time: 4±1sec. 預熱: 125±25℃, 60sec. 錫爐溫度: 230±5℃ 時間: 4±1sec. 助焊劑: rosin 
High Temperature Resistance Test 高溫放置測試	Appearance: no damage. Inductance: within ±20% of initial value. No disconnection or short circuit. 外觀不能破損 電感值: 變異值在初始值20%之內 電性無短路或斷線	Temperature: 85±2℃. Applied current: rated current. Duration: 500 hrs.
Humidity Resistance Test 高濕放置測試	Appearance: no damage. Inductance: within ±20% of initial value. No disconnection or short circuit. 外觀不能破損 電感值: 變異值在初始值20%之內 電性無短路或斷線	Temperature: 40±2℃. Applied current: rated current. Duration: 500 hrs. Humidity: 90~95%





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## SMT Power Inductors - PODH31

### 電氣特性

### TYPICAL ELECTRICAL CHARACTERISTICS

Reliability and Test Conditions ( 可靠性測試條件 )

ITEM	Performance	Test Condition															
Thermal shock 熱衝擊試驗	Appearance: no damage. Inductance: within±20%of initial value. No disconnection or short circuit. 外觀不能破損 電感值：變異值在初始值20%之內。 電性無短路或斷線	Condition for 1 cycle Step1:-25±2℃ · 30±3 min. Step2:Room temperature within 15 min. Step3:+85±5℃ · 30±3 min. Step4: Room temperature within 15 min. Number of cycles: 50 <table border="1"> <thead> <tr> <th>Phase</th><th>Temperature(℃)</th><th>Time(min)</th></tr> </thead> <tbody> <tr> <td>1</td><td>-25±2℃</td><td>30±3</td></tr> <tr> <td>2</td><td>Room Temp.</td><td>15</td></tr> <tr> <td>3</td><td>+85±2℃</td><td>30±3</td></tr> <tr> <td>4</td><td>Room Temp.</td><td>15</td></tr> </tbody> </table>	Phase	Temperature(℃)	Time(min)	1	-25±2℃	30±3	2	Room Temp.	15	3	+85±2℃	30±3	4	Room Temp.	15
Phase	Temperature(℃)	Time(min)															
1	-25±2℃	30±3															
2	Room Temp.	15															
3	+85±2℃	30±3															
4	Room Temp.	15															
Humidity Resistance 高濕測試	Appearance: no damage. Inductance: within±20%of initial value. No disconnection or short circuit. 外觀不能破損 電感值：變異值在初始值20%之內。 電性無短路或斷線	Humidity:90~95%RH. Temperature:40±5℃. Applied current:rated current. Duration:500±12hrs. Measured at room temperature after placing for 2 to 3hrs. 濕度:90~95%RH. 溫度:40±5℃. 須加電流:額定電流. 放置時間:500±12hrs.															

### 卷盤包裝

### REEL PACKAGING

#### Taping for automatic insertion of SMT coils.

##### Surface mount devices/adjustable & fixed

This ever expanding assortment of product and unsurpassed quality control,not only give you acomponent tha tfunctionally performs,but just as importantly,allows the use of a variety of p;acement and soldering equipment necessary for the FLEXIBLE MANUF ACTURING PLANT required in today's competitive world.

Varlous packaging schemes are available.In addition to bulk,tape and reel and magazine,methods are offered for high volume Ins ertion equ ipment.The folio wing chart lists the packaging details for FRE's SMD coils

#### 自動插入編帶的表面貼裝線圈

##### 表面貼裝設備/可調整型和固定型

它可以擴展到產品分類和非常突出的質量控制。不只是給你一各構成方面的優良的性能表現，而且最重要的，允許在當今這個競爭世界中要求的靈活製造廠使用多樣化的放置和焊接設備。

可以使用多樣的包裝方案。提供批量散裝和卷盤包裝共大量入設備使用。以下圖表為富爾的SMD線圈羅列包裝 細節：

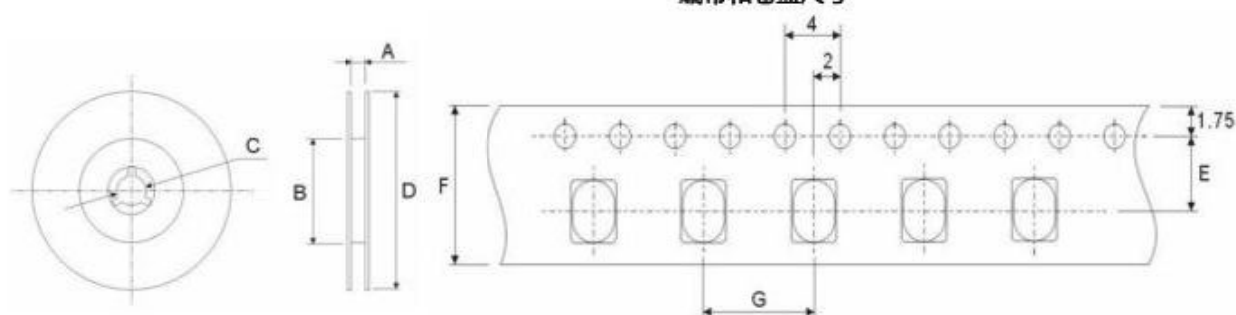
## SMT Power Inductors - PODH31

### 卷盤包裝

### REEL PACKAGING

Tape and reel dimensions

編帶和卷盤尺寸



(1)There are at least 10 blank spaces(80mm each)at both ends of the tape which do not include the coils

(2)The protective tape should not cover the holes nor be shifted to the sides.Further the tape should not be removed during transportation.

(3)The coils. are positio ned with the bonding surface facing bottom of the pocket.

#### 注意

(1) 在沒有包括線圈的編帶的每個末端至少有10個空綫間(每個80毫米)。

(2)保護袋不能覆蓋洞口或者移動到側面。而且，運輸過程中,帶子不能移動

(3)線圈設置在焊接表面對著袋子底部

### 表面貼裝型,卷盤/編帶列表 SURFACE MOUNTING TYPE,REEL/TAPE LIST

TYPE	Pcs/Reel	Tape and Reel Dimension						
		A	B	C	D	E	F	G
PODH31	2500	12.5	60	13± 0.2	178	5.5	12	8

### 注意事項

### PRECAUTIONS

1.During storage,the products must be kept in an environment away form excessive high temperatures,high humidity,dust and no xious gases which may affect solderability.

2.Terminals should not be handled with fingers.This is to prevent deterioration in solderability.

3.Products should not be dropped on the flo or. This is to prevent damage to the products.

1.在儲存階段,產品必須保持遠離過熱的溫度,過高的濕度灰塵和有害氣體等可能影響可焊性效果的環境。

2.接線端不能用手指直接處理。這是為了防止降低可焊性

3.產品不能掉在地板上。這是為了防止損壞鐵氧體芯