

### FEATURES 特征

- Winding type realizes small size and low profile.  
绕线式设计实现小型化与低外形尺寸
- Prevention of common mode noise at high frequency.  
高频共模噪声抑制性能优异
- Excellent solderability.  
优异的焊接性能
- RoHS, Halogen Free and REACH Compliance.  
符合RoHS标准、无卤素且达到合规要求
- Operating Temp : -45°C~+85°C (Including self heating).  
工作温度范围:-45°C~+85°C(包括自身温度上升)



### APPLICATIONS 用途

- Multimedia system.  
多媒体系统
- Facsimiles, Modems, Household Appliances, etc.  
传真机、调制解调器、家用电器等

### PART NUMBERING 产品型号

APWB
4532
-
510
T
2

①
②
③
④
⑤

① Series Name	
APWB	Wire Wound Chip Ferrite Inductor

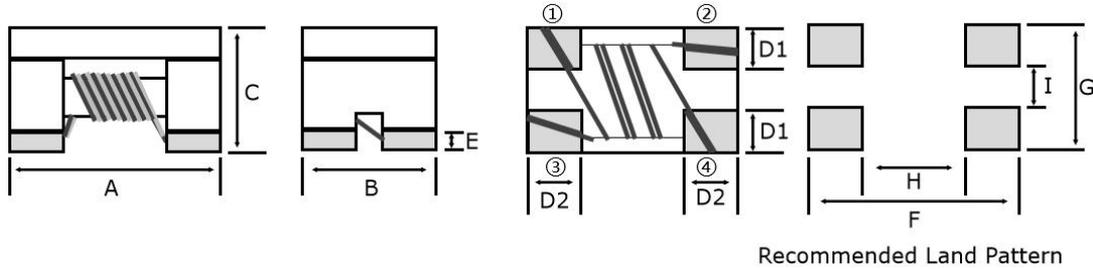
② External Dimensions	
	3225
	3416
	4532

③ Nominal Inductance	
Code (example)	Nominal Inductance [ $\mu$ H]
110	11
510	51
101	100

④ Packaging	
T	Tape & Reel

⑤ Number of Lines	
	2

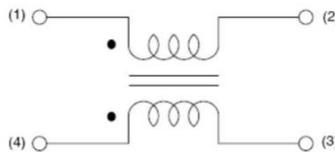
### DIMENSIONS & RECOMMENDED LAND PATTERN 尺寸及推荐焊盘



Unit: mm

Series	Dimensions				Recommended Land Pattern					
	A	B	C	E	D1	D2	F	G	I	H
					Typ.		Typ.			
APWB3225	3.2±0.2	2.5±0.2	2.50 Max	0.2 Typ.	0.9	0.8	4.0	2.8	0.6	1.6
APWB3416	3.4±0.2	1.6±0.2	2.0±0.2	0.2 Typ.	0.66	0.64	3.7	1.9	0.5	1.8
APWB4532	4.5±0.2	3.2±0.2	2.8±0.2	0.2 Typ.	1.2	1.0	4.8	3.8	0.7	2.4

### EQUIVALENT CIRCUIT 等效电路



### ELECTRICAL CHARACTERISTICS 特性规格表

#### ● APWB3225 Series

Part Number	Inductance	Rated Voltage	L Test Freq.	Heat Rating Current	DC Resistance	Insulation Resistance
				Max.	Max.	Min.
Unit	μH	Volts	KHz/V	mA	Ω	MΩ
Symbol	L (+50%/-30%)	VDC	Freq.	I <sub>rms</sub>	DCR	IR
APWB3225-110T2	11	50	100/0.1	300	0.4	10
APWB3225-220T2	22	50	100/0.1	250	0.5	10
APWB3225-510T2	51	50	100/0.1	200	0.7	10
APWB3225-101T2	100	50	100/0.1	150	1.5	10
APWB3225-201T2	200	50	100/0.1	70	4.8	10

### ELECTRICAL CHARACTERISTICS 特性规格表

#### ● APWB3416 Series

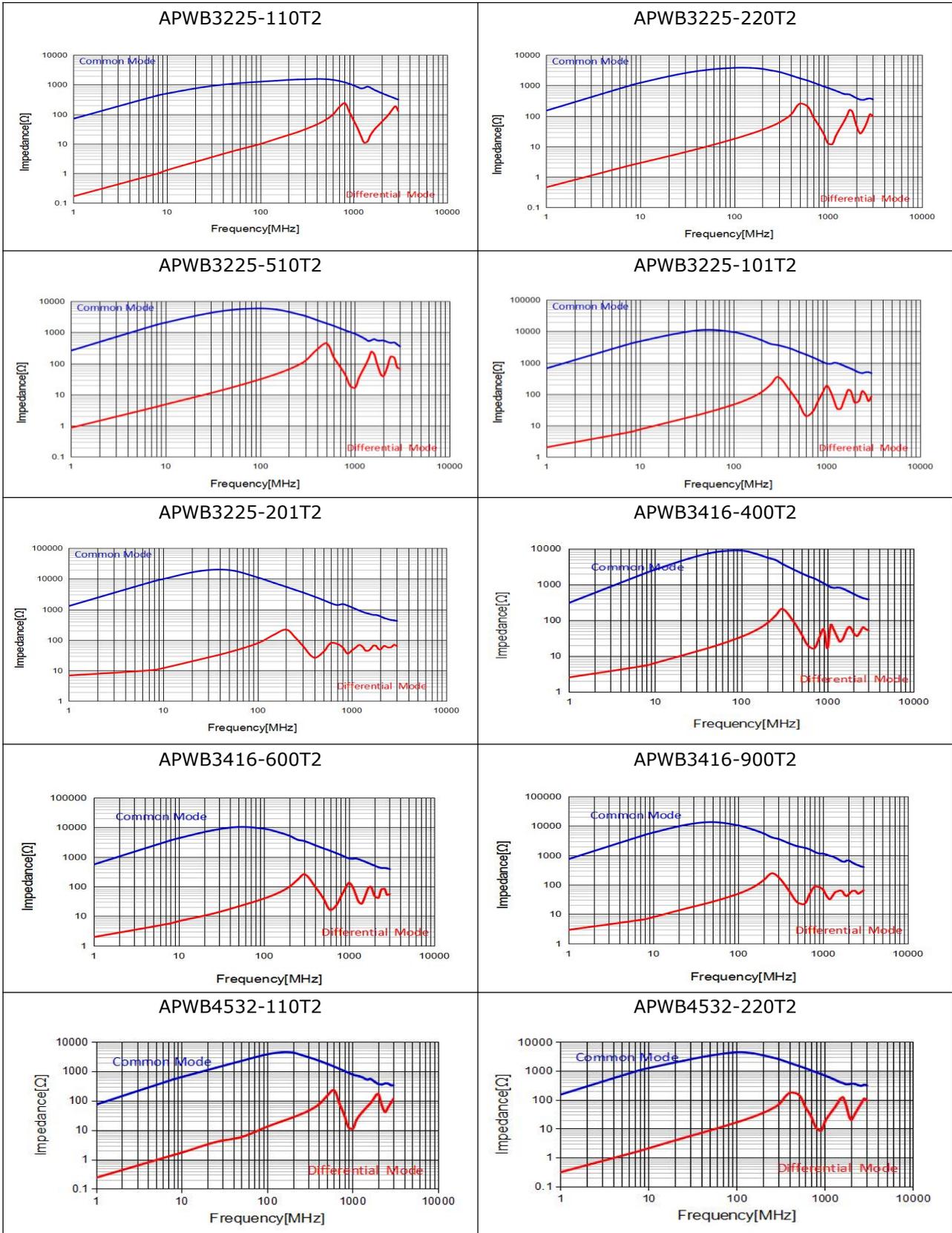
Part Number	Inductance	Rated Voltage	L Test Freq.	Heat Rating Current	DC Resistance	Insulation Resistance
				Max.	Max.	Min.
Unit	μH	Volts	KHz/V	mA	Ω	MΩ
Symbol	L (+50%/-30%)	VDC	Freq.	I <sub>rms</sub>	DCR	IR
APWB3416-400T2	40	50	100/0.1	100	2	10
APWB3416-600T2	60	50	100/0.1	200	1.7	10
APWB3416-900T2	90	50	100/0.1	100	2	10

#### ● APWB4532 Series

Part Number	Inductance	Rated Voltage	L Test Freq.	Heat Rating Current	DC Resistance	Insulation Resistance
				Max.	Max.	Min.
Unit	μH	Volts	KHz/V	mA	Ω	MΩ
Symbol	L (+50%/-30%)	VDC	Freq.	I <sub>rms</sub>	DCR	IR
APWB4532-110T2	11	50	100/0.1	360	0.6	10
APWB4532-220T2	22	50	100/0.1	310	1	10
APWB4532-510T2	51	50	100/0.1	230	1	10
APWB4532-101T2	100	50	100/0.1	200	2	10
APWB4532-201T2	200	50	100/0.1	100	4.5	10

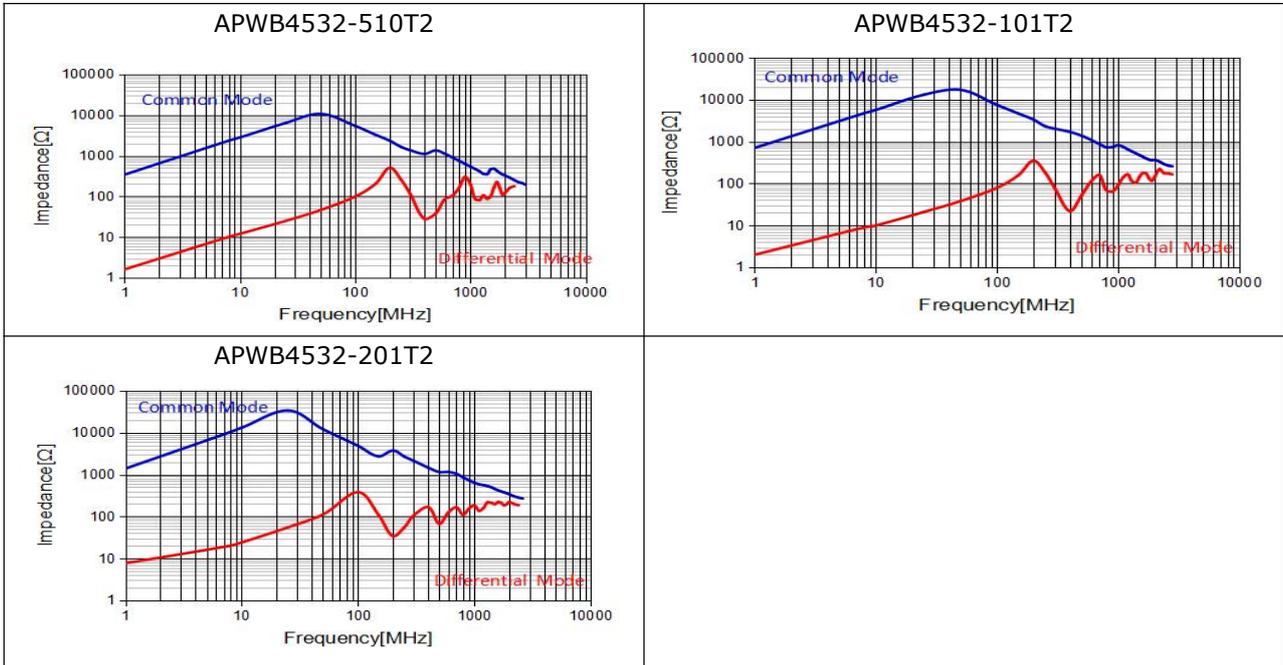
- Rating DC current: Temperature rise( $\Delta T$ ) is 40°C approximately at I<sub>rms</sub>.
- Storage temp.: -10°C ~ +40°C R.H.: 60% Max.
- Moisture sensitivity level (MSL) 1

CHARACTERISTICS(REFERENCE) 特征曲线



Specifications subject to change without notice. Please check our website for latest information.

CHARACTERISTICS(REFERENCE) 特征曲线

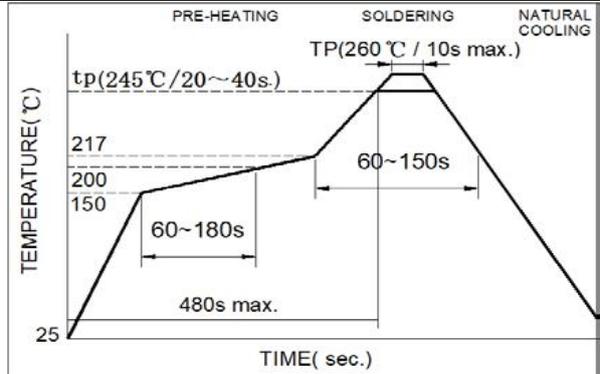


### RECOMMENDED SOLDERING TECHNOLOGIES 回流焊建议

#### Re-flow Soldering (Lead Free)

- ◆ Preheat circuit and products to 150°C.
- ◆ 260°C tip temperature (max).
- ◆ Reflow times: no more than 2 times.
- ◆ Solder paste thickness: the best 0.08mm is ,but max is 0.1mm.

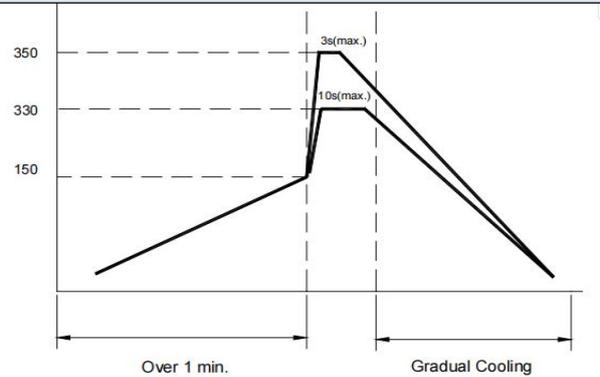
Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.



#### Hand Soldering

- ◆ Use a 20 watt soldering iron with tip diameter of 1.0mm.
- ◆ Limit soldering time to 3 sec.

Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.

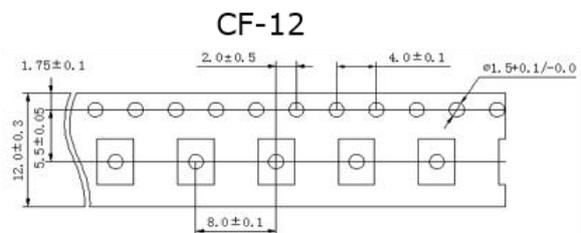
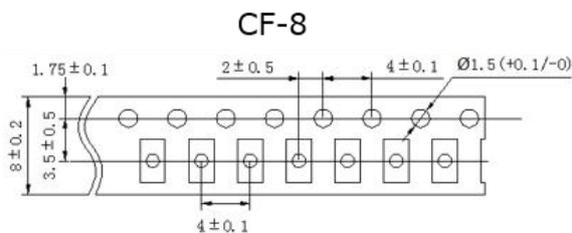
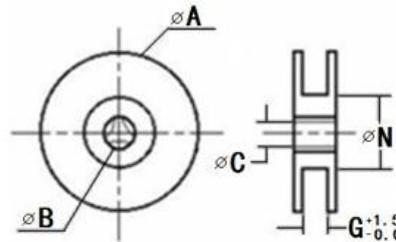
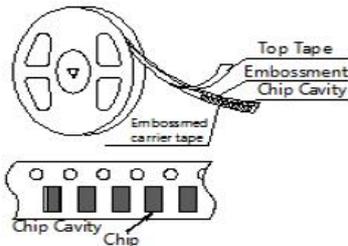


### PACKAGING 包装

- Packaging (unit:mm)

Product Series	Quantity / Reel
APWB3225	1000Pcs
APWB3416	2000Pcs
APWB4532	500Pcs

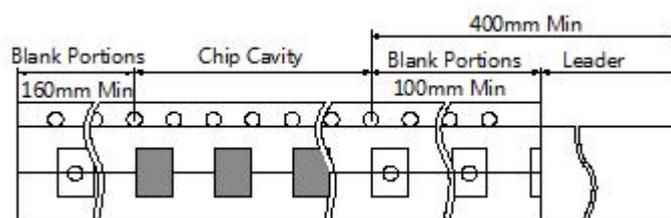
- Taping Drawings



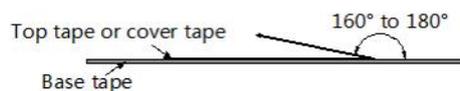
- Reel Dimensions(unit:mm)

Tape		A	B	C	N	G
APWB3225	CF-12	178±2.0	22±2.0	13.0±1.0	60±1.0	12
APWB3416	CF-8	178±2.0	22±2.0	13.0±1.0	60±1.0	8
APWB4532	CF-12	178±2.0	22±2.0	13.0±1.0	60±1.0	12

- Leader and Blank Portion



- Peeling off Force:0.05 to 0.7N in the direction show below.



## PRECAUTIONS ON USE 使用注意事项

### ● Precautions on Use.

- 1.Always wear static control bands to protect against ESD.
- 2.Any devices used (soldering iron, measuring instruments) should be properly grounded.
- 3.Use non-magnetic tweezers when handing the chips.
- 4.Pre-heating when soldering, and refer to the recommended condition specified in specification.
- 5.Don't apply current in excess of the rated current value. It may cause damage to components due to over-current.
- 6.Keep clear of anything that may generate magnetic fields such as speakers, coils.
- 7.When soldering, the electrical characteristics (such as impedance) may be varied due to hot energy and mechanical stress.
- 8.When coating products with resin, the relatively high resin curing stress may change the electrical characteristics. For exterior coating,select resin carefully so that electrical and mechanical performance of the product is not affected. Before using, please evaluate reliability with the product mounted in your application set.
- 9.When mount chips with adhesive in preliminary assembly, do appropriate check before the soldering stage, i.e., the size of land pattern, type of adhesive, amount applied, hardening of the adhesive on proper usage and amounts of adhesive to use.
- 10.Mounting density: Add special attention to radiating heat of products when mounting other components nearby. The excessive heat by other products may cause deterioration at joint of this product with substrate.
- 11.Since some products are constructed like an open magnetic circuit, narrow spacing between components may cause magnetic coupling.
- 12.Please do not give the product any excessive mechanical shocks in transportation.
- 13.Please do not touch wires by sharp terminals such as tweezers to avoid causing any damage to wires.
- 14.Please do not add any shock and power to the soldered product to avoid causing any damage to chip body.
- 15.Please do not touch the electrodes by naked hand as the solderability of the external electrodes may deteriorate by grease or oil on the skin.
- 16.Please do not use the brush to clean product or its surroundings. If you use the brush to clean product or its surroundings on PCB,copper wire may be broke, causing the product open.
- 17.When the peripheral components are repaired, the product should be protected and avoid heating.

**SAFETY REMINDERS 注意事项****SAFETY REMINDERS**

The Company shall not guarantee the suitability, performance, or quality for the following applications that require a high level of safety and reliability, or where equipment failure, malfunction, or abnormal operation may cause damage to human life, physical well-being, or property, and may have significant social impacts (hereinafter referred to as "specific applications"). If you intend to use this product in the application scenarios listed below, or if you have special requirements exceeding the scope or conditions specified in each product catalog, please contact us.

- (1) Aerospace/aviation equipment
- (2) Transportation equipment (cars, electric trains, ships, etc.)
- (3) Medical equipment
- (4) Power-generation control equipment
- (5) Atomic energy-related equipment
- (6) Seabed equipment
- (7) Transportation control equipment
- (8) Public information-processing equipment
- (9) Military equipment
- (10) Electric heating apparatus, burning equipment
- (11) Disaster prevention/crime prevention equipment
- (12) Safety equipment
- (13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.