

组装式贴片功率电感—AMWPQ 系列 Assembled SMD Power Inductor—AMWPQ Series



工作温度：-40°C ~+125°C (含自温升)
Operating Temp：-40°C ~+125°C (Including self-heating)

特征 FEATURES

- ◆ 优异的温度特性
- ◆ 高可靠性, 满足 AEC-Q200 要求
- ◆ 无卤, 符合 RoHS 标准
- ◆ 结构简单, 便于组装
- ◆ 采用高饱和特性磁材, 高通流, 低损耗
- ◆ Excellent temperature stability
- ◆ High reliability, AEC-Q200 qualified
- ◆ Halogen free, RoHS compliant
- ◆ Simple assembled structure
- ◆ High saturation characteristic core for high saturation current and low loss

用途 APPLICATIONS

- ◆ 电机控制
- ◆ PFC 功率因素校正
- ◆ Vehicle motor control
- ◆ PFC Inductor

产品型号 PRODUCT IDENTIFICATION

1	2	3	4	5	6	7
AMWPQ	2818	L	4R7	K	P	□□□

1	分类 Type
AMWPQ	组装式贴片功率电感 Assembled SMD Power Inductor

3	特性类别 Feature Type
T	T Type material
L	L Type material
S	S Type material

5	感量精度 Inductance Tolerance
K	±10%
M	±20%

6	包装 Packing
P	Pallet
T	Taping
B	Bulk

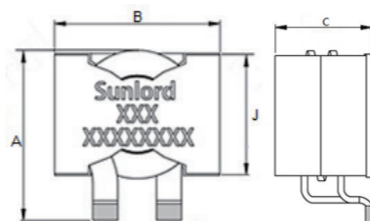
2	外形尺寸 (L×W) [mm] External Dimensions (L×W) [mm]
2815	25.5×27.0×15.5
2818	25.5×27.0×17.5
3316	33×33×16
2616	26.5×26.5×16.5

4	公称感量 Nominal Inductance
Example	Nominal Value
1R0	1.0μH
2R2	2.2μH
3R3	3.3μH
4R7	4.7μH
6R8	6.8μH
100	10μH
150	15μH
220	22μH
330	33μH

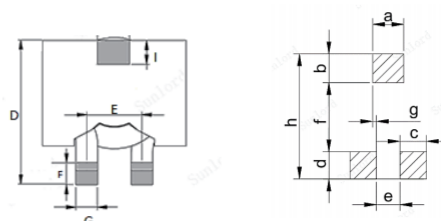
7	设计代码 Design Code
	Standard product is blank

外观尺寸 SHAPE AND DIMENSIONS

AMWPQ2815L&AMWPQ2818L



推荐焊盘 Recommended Land Pattern



单位 Unit: mm

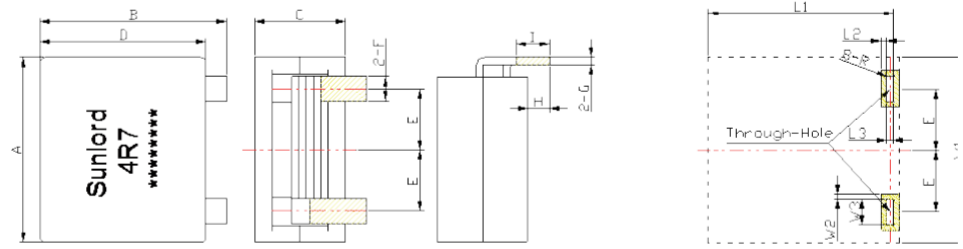
外观尺寸 SHAPE AND DIMENSIONS

系列 Series	A	B	C	D	E	F	G	H	I
AMWPQ2815L	25.5±1.0	27.0±1.0	15.5±0.5	24.4±0.5	10.4±0.3	3.8±0.5	4.0±0.3	5.0±0.3	4.4±0.3
系列 Series	J	a	b	c	d	e	f	g	h
AMWPQ2815L	19.5±1.0	6.5 ref	6.0 ref	5.8 ref	5.7 ref	4.6 ref	14.4 ref	0.95 ref	26.1 ref

系列 Series	A	B	C	D	E	F	G	H	I
AMWPQ2818L	25.5±1.0	27.0±1.0	17.5±0.5	24.4±0.5	10.4±0.3	3.8±0.5	4.0±0.3	5.0±0.3	4.4±0.3
系列 Series	J	a	b	c	d	e	f	g	h
AMWPQ2818L	19.5±1.0	6.5 ref	6.0 ref	5.8 ref	5.7 ref	4.6 ref	14.4 ref	0.95 ref	26.1 ref

AMWPQ3316T

推荐焊盘 Recommended Land Pattern

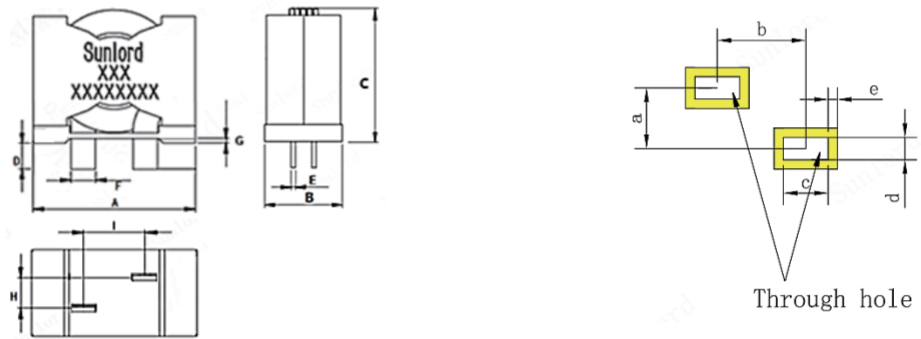


单位 Unit: mm

系列 Series	A	B	C	D	E	F	G	H
AMWPQ3316T	33±1.0	33±1.0	16±0.4	29.8 max	10.9±0.5	4.4+0.15/-0.4	1.25±0.15	3.5±0.5
系列 Series	I	L1	L2	L3	W1	W2	W3	R
AMWPQ3316T	4.0Min.	34.7ref	1.0ref	1.75±0.2	36ref	1.0ref	5.5±0.1	0.2ref

AMWPQ2616S

推荐焊盘 Recommended Land Pattern



单位 Unit: mm

系列 Series	A	B	C	D	E	F	G	H	I
AMWPQ2616S	26.5±1.0	16.5±1.0	22.3±1.0	4±0.5	1.6±0.3	4.0±0.3	1.0±0.2	6.5±0.5	9.5±0.5
系列 Series	a	b	c	d	e				
AMWPQ2616S	6.5±0.5	9.5±0.5	4.8 ref	2.4 ref	1.0 ref				

规格特性

SPECIFICATIONS

AMWPQ2815L Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@0.1MHz/0.1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		A		A	
符号 Symbol	L	DCR		Isat		Irms	
AMWPQ2815L1R5KP	1.5±10%	1.90	1.60	100.0	>100.0	34	42
AMWPQ2815L2R2KP	2.2±10%	1.90	1.60	82.0	85.0	34	42
AMWPQ2815L3R3KP	3.3±10%	1.90	1.60	48.0	57.0	34	42
AMWPQ2815L4R7KP	4.7±10%	1.90	1.60	33.0	39.0	34	42
AMWPQ2815L6R8KP	6.8±10%	1.90	1.60	22.0	28.0	34	42
AMWPQ2815L100KP	10±10%	1.90	1.60	13.0	17.6	34	42
AMWPQ2815L150KP	15±10%	1.90	1.60	7.5	11.0	34	42
AMWPQ2815L220KP	22±10%	1.90	1.60	4.5	6.8	34	42
AMWPQ2815L330KP	33±10%	1.90	1.60	2.0	3.3	34	42

AMWPQ2818L Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@0.1MHz/0.1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		A		A	
符号 Symbol	L	DCR		Isat		Irms	
AMWPQ2818L3R3KP	3.3±10%	2.50	2.20	76	85	36	45
AMWPQ2818L4R7KP	4.7±10%	2.50	2.20	55	62	36	45
AMWPQ2818L6R8KP	6.8±10%	2.50	2.20	40	45	36	45
AMWPQ2818L100KP	10±10%	2.50	2.20	28	32	36	45
AMWPQ2818L150KP	15±10%	2.50	2.20	18	22	36	45
AMWPQ2818L220KP	22±10%	2.50	2.20	12	15	36	45
AMWPQ2818L330KP	33±10%	2.50	2.20	7.0	9.6	36	45

AMWPQ3316T Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@0.1MHz/0.1V	Typ.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ	A	A	A	A
符号 Symbol	L	DCR	Isat(-30%)		Irms	
AMWPQ3316T3R3KP	3.3±10%	1.2±10%	100	>100	50	53
AMWPQ3316T4R7KP	4.7±10%	1.2±10%	70	73	50	53

AMWPQ2616S Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@0.1MHz/0.1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
单位 Units	μH	mΩ		A		A	
符号 Symbol	L	DCR		Isat(-20%)		Irms	
AMWPQ2616S1R0KP	1.0±10%	0.90	0.70	95	120	60	75
AMWPQ2616S2R2KP	2.2±10%	0.90	0.70	71	80	60	75

注：※1:额定电流: Isat(Max.) 或 Irms(Max.), 以较小数据为准。

※2:饱和电流: Max. 值: 电感比初始电感量下降小于 30% 时, 所对应的直流电流的大小 (AMWPQ2815L, AMWPQ2818L 和 AMWPQ3316T 系列); AMWPQ2616S 系列的变化电感量为下降小于 30%。
Typ. 值: 电感比初始电感量下降大约 30% 时, 所对应的直流电流的大小。

※3:温升电流: 温度从 20°C 环境温度上升 (ΔT) 时, 所对应的直流电流的大小。

对于 Max. 值, ΔT < 40°C;

对于 Typ. 值, ΔT 约是 40°C。

在最坏的操作条件下, 零件温度 (环境温度 + 温升) 不应超过 125°C。电路设计、元件放置、PCB 走线尺寸和厚度、气流和其他冷却规定都会影响零件温度。应在最终应用中验证零件温度。

Note: ※1:Rated current: Isat(Max.) or Irms(Max.), whichever is smaller.

※2:Saturation Current:

Max.Value, DC current at which the inductance drops less than 30% from its value without Current that is including AMWPQ2815L, AMWPQ2818L and AMWPQ3316T series, only AMWPQ2616S series is 20%;

Typ.Value, DC current at which the inductance drops approximate 30% from its value without current.

※3:Heat Rating Current:DC current that causes the temperature rise (ΔT) from 20°C ambient;

For Max.Value,temperature rise (ΔT) is 20°C.

For Typ.Value, temperature rise (ΔT) is approximate 40°C.

The part temperature (ambient + temp. rise) should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.