

绕线贴片功率电感—ASWPA 系列

Wire Wound SMD Power Inductor—ASWPA 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

- ◆ 磁性胶水涂敷结构极大减少了蜂鸣声
- ◆ 直接在磁芯上金属化电极, 抗跌落冲击强, 经久耐用
- ◆ 闭合磁路结构设计, 漏磁少, 抗 EMI 能力强
- ◆ 同等尺寸, 额定电流特性较传统电感高出 30% 以上
- ◆ AEC-Q200 认证
- ◆ Magnetic-resin shielded construction reduces buzz noise to ultra-low levels
- ◆ Metallization on ferrite core results in excellent shock resistance and damage-free durability
- ◆ Magnetically shielded construction reduce leakage and strong EMI resistance
- ◆ 30% higher current rating than conventional inductors of equal size
- ◆ AEC-Q200 verified

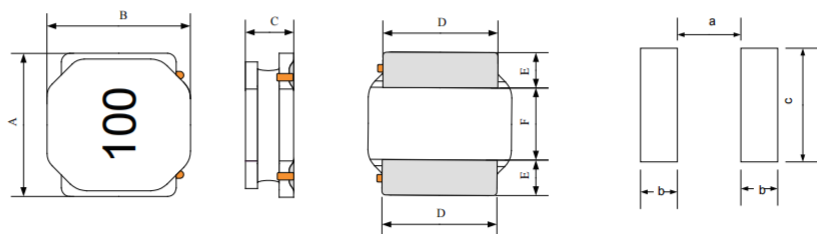
用途 APPLICATIONS

- ◆ 车载信息娱乐系统
- ◆ LED 灯
- ◆ 安全气囊
- ◆ ADAS
- ◆ Infotainment system
- ◆ LED lighting
- ◆ Airbag
- ◆ ADAS

产品型号 PRODUCT IDENTIFICATION

1	2	3	4	5	6	7
ASWPA	4035	S	1R0	M	T	□□□
1	外形尺寸 (L×W×H) [mm] External Dimensions (L×W×H) [mm]					
2	分类 Type					
3	特性类别 Feature Type					
4	公称电感量 Nominal Inductance					
5	感量精度 Inductance Tolerance					
6	包装 Packing					
7	设计代码 Design Code					

外观尺寸 SHAPE AND DIMENSIONS



推荐焊盘 Recommended PCB pattern

单位 Unit: mm

系列 Series	A	B	C	D(ref.)	E	a	b	c
ASWPA4035S	4.0±0.2	4.0±0.2	3.5±0.2	3.2±0.1	0.95±0.1	1.9Typ.	1.1Typ.	3.7Typ.
ASWPA6055S	6.0±0.2	6.0±0.2	5.5±0.2	4.9±0.2	1.55±0.2	2.8Typ.	1.7Typ.	5.7Typ.
ASWPA8050S	8.0±0.3	8.0±0.3	5.0±0.2	6.3±0.3	2.00±0.2	3.8Typ.	2.2Typ.	7.5Typ.

规格特性

SPECIFICATIONS

ASWPA4035S Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐振频率 Self-Resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@100KHz/1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
ASWPA4035SR47MT	0.47±20%	0.010	0.008	176	7.80	9.80	5.20	5.90
ASWPA4035SR68MT	0.68±20%	0.013	0.010	132	6.80	7.80	4.56	5.10
ASWPA4035S1R0MT	1.0±20%	0.024	0.020	121	6.30	6.90	3.85	4.50
ASWPA4035S1R2MT	1.2±20%	0.028	0.023	70	6.00	6.70	3.60	4.20
ASWPA4035S1R5MT	1.5±20%	0.030	0.025	60	5.20	6.10	3.30	3.90
ASWPA4035S1R8MT	1.8±20%	0.034	0.028	52	4.60	5.50	3.20	3.70
ASWPA4035S2R2MT	2.2±20%	0.040	0.033	52	4.30	4.80	3.00	3.50
ASWPA4035S3R3MT	3.3±20%	0.058	0.048	38	3.50	3.80	2.50	2.90
ASWPA4035S4R7MT	4.7±20%	0.082	0.068	31	3.00	3.20	2.10	2.45
ASWPA4035S6R8MT	6.8±20%	0.101	0.084	24	2.50	2.80	1.90	2.20
ASWPA4035S8R2MT	8.2±20%	0.112	0.093	26	2.10	2.40	1.80	2.10
ASWPA4035S100MT	10±20%	0.14	0.12	21	2.00	2.30	1.55	1.85
ASWPA4035S150MT	15±20%	0.23	0.19	16	1.60	1.80	1.25	1.45
ASWPA4035S220MT	22±20%	0.29	0.24	10	1.30	1.50	1.10	1.30
ASWPA4035S330MT	33±20%	0.42	0.35	10	1.10	1.30	0.90	1.05
ASWPA4035S470MT	47±20%	0.59	0.49	8.4	0.95	1.05	0.75	0.90
ASWPA4035S680MT	68±20%	1.09	0.91	7	0.75	0.85	0.55	0.65
ASWPA4035S101MT	100±20%	1.38	1.15	5.6	0.65	0.75	0.45	0.55
ASWPA4035S151MT	150±20%	2.28	1.90	4	0.50	0.55	0.35	0.45

ASWPA6055S Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐振频率 Self-Resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@100KHz/1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
ASWPA6055S3R3MT	3.3±20%	0.026	0.022	32	5.50	6.00	3.95	4.60
ASWPA6055S4R7MT	4.7±20%	0.031	0.026	24	4.50	5.00	3.60	4.25
ASWPA6055S6R8MT	6.8±20%	0.034	0.028	20	3.90	4.30	3.50	4.10
ASWPA6055S8R2MT	8.2±20%	0.049	0.041	21	3.90	4.30	2.90	3.40
ASWPA6055S100MT	10±20%	0.054	0.045	15	3.30	3.70	2.70	3.20
ASWPA6055S150MT	15±20%	0.074	0.062	12	2.80	3.30	2.35	2.75
ASWPA6055S220MT	22±20%	0.100	0.083	10	2.30	2.60	2.00	2.35
ASWPA6055S330MT	33±20%	0.170	0.142	7.8	1.70	2.00	1.55	1.80
ASWPA6055S470MT	47±20%	0.252	0.210	6.4	1.50	1.70	1.25	1.50
ASWPA6055S680MT	68±20%	0.353	0.294	6.4	1.30	1.40	1.00	1.25
ASWPA6055S101MT	100±20%	0.434	0.362	4.2	1.00	1.10	0.95	1.10
ASWPA6055S121MT	120±20%	0.509	0.424	4.2	0.98	1.10	0.80	0.90
ASWPA6055S151MT	150±20%	0.686	0.572	4.2	0.80	0.90	0.75	0.90
ASWPA6055S221MT	220±20%	1.036	0.863	3.5	0.60	0.70	0.60	0.70
ASWPA6055S331MT	330±20%	1.603	1.336	2.8	0.55	0.65	0.50	0.60
ASWPA6055S471MT	470±20%	2.340	1.800	2.4	0.48	0.54	0.45	0.55

规格特性

SPECIFICATIONS

ASWPA8050S Series

型号 Part Number	电感量 Inductance	直流电阻 DC Resistance		自谐频率 Self-Resonant Frequency	饱和电流 Saturation Current		温升电流 Heat Rating Current	
	@100KHz/1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
单位 Units	μH	Ω		MHz	A		A	
符号 Symbol	L	DCR		S.R.F	Isat		Irms	
ASWPA8050S1R0MT	1.0±20%	0.010	0.008	99	15.0	16.0	6.30	7.20
ASWPA8050S1R5MT	1.5±20%	0.012	0.010	79	12.0	13.0	5.60	6.50
ASWPA8050S2R2MT	2.2±20%	0.014	0.012	59	10.0	11.0	5.20	5.80
ASWPA8050S3R3MT	3.3±20%	0.020	0.017	24	8.00	9.00	4.40	4.90
ASWPA8050S4R7MT	4.7±20%	0.023	0.019	23	6.60	7.50	4.10	4.60
ASWPA8050S6R8MT	6.8±20%	0.029	0.024	19	5.40	6.10	3.60	4.20
ASWPA8050S8R2MT	8.2±20%	0.035	0.029	18	4.70	5.60	3.40	3.80
ASWPA8050S100MT	10±20%	0.038	0.032	14	4.60	5.20	3.20	3.60
ASWPA8050S150MT	15±20%	0.061	0.051	13	3.90	4.50	2.40	2.70
ASWPA8050S220MT	22±20%	0.088	0.073	9	3.00	3.50	1.90	2.20
ASWPA8050S330MT	33±20%	0.122	0.102	7.6	2.60	3.00	1.80	2.00
ASWPA8050S470MT	47±20%	0.173	0.144	6.6	2.10	2.40	1.50	1.70
ASWPA8050S680MT	68±20%	0.252	0.210	5.4	1.70	2.00	1.25	1.45
ASWPA8050S101MT	100±20%	0.326	0.272	4.4	1.40	1.60	1.10	1.25
ASWPA8050S151MT	150±20%	0.480	0.400	3.2	1.20	1.40	0.85	1.00
ASWPA8050S221MT	220±20%	0.708	0.590	2.9	1.00	1.10	0.65	0.75
ASWPA8050S331MT	330±20%	1.044	0.870	2.3	0.80	0.90	0.60	0.65
ASWPA8050S471MT	470±20%	1.540	1.283	1.9	0.70	0.80	0.50	0.55

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;
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, 温升 (ΔT) 为 20°C。
对于 Typ. 值, 温升 (ΔT) 小于 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。

※ 如需在上述应用领域以外使用产品, 请务必与我司产品工程师进行确认。

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;

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) < 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.

※ If you use the product in other than the above application fields, please confirm with our product engineer.