

## Wire Wound SMD Power Inductor –ASWPA Series



Operating Temp : -40°C ~+125°C (Including self-heating)

### FEATURES

- ◆ 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

### APPLICATIONS

- ◆ Infotainment system
- ◆ LED lighting
- ◆ Airbag
- ◆ ADAS

### PRODUCT IDENTIFICATION

1	2	3	4	5	6	7
ASWPA	4035	S	1R0	M	T	□□□

1	Type
ASWPA	Wire Wound SMD Power Inductor

2	External Dimensions(L×W×H) [mm]
4035	4.0×4.0×3.5
6055	6.0×6.0×5.5
8050	8.0×8.0×5.0

3	Feature Type
S	Standard

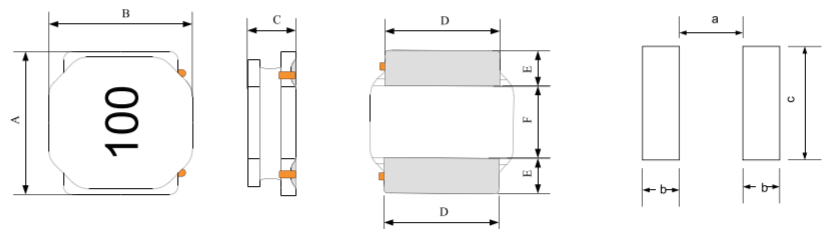
4	Nominal Inductance
Example	Nominal Value
1R0	1.0μH
100	10μH

5	Inductance Tolerance
M	±20%
N	±30%

6	Packing
T	Tape Carrier Package

7	Design Code
□□□	Standard product is blank

### SHAPE AND DIMENSIONS



Unit: mm

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.

## SPECIFICATIONS ASWPA4035S Series

Part Number	Inductance	DC Resistance		Self-Resonant Frequency	Saturation Current		Heat Rating Current	
	@100KHz/1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		MHz	A		A	
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

Part Number	Inductance	DC Resistance		Self-Resonant Frequency	Saturation Current		Heat Rating Current	
	@100KHz/1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		MHz	A		A	
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

## SPECIFICATIONS ASWPA8050S Series

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

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 ( $\Delta$ T) from 20°C ambient;

For Max.Value,temperature rise ( $\Delta$ T) is 20°C.

For Typ.Value, temperature rise( $\Delta$ T) < 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.

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