

Wire Wound SMD Power Inductor-AMWPB Series



Operating Temp : -55°C ~+150°C (Including self-heating)

FEATURES

- ◆ High saturation current, low DC resistance
- ◆ Excellent temperature stability
- ◆ High reliability,
- ◆ AEC-Q200 verified

APPLICATIONS

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

PRODUCT IDENTIFICATION

1	2	3	4	5	6	7
AMWPB	6045	S	1R0	M	T	□□□

1	Type
AMWPB	Wire Wound SMD Power Inductor

2	External Dimensions(L×W×H) [mm]
6045	6.5×6.0×4.5
7045	7.4×7.0×4.5

3	Feature Type
S	Standard

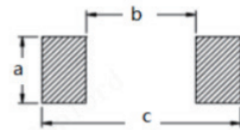
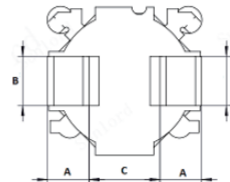
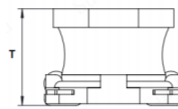
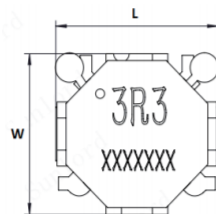
4	Nominal Inductance
Example	Nominal Value
1R0	1.0μH
100	10μH

5	Inductance Tolerance
M	±20%
N	±30%

6	Packing
T	Tape Carrier Package

7	Design Code
□□□	Standard product is blank

SHAPE AND DIMENSIONS



Recommended Land Pattern

Unit: mm

	L	W	T	A	B	C	a	b	c
AMWPB6045S	6.5±0.3	6.0±0.3	4.5±0.3	1.7±0.1	2.0±0.1	2.9 Typ.	2.2ref.	2.8ref.	7.0ref.
AMWPB7045S	7.4±0.3	7.0±0.3	4.5±0.3	2.0±0.1	2.0±0.1	3.4 Typ.	2.2ref.	3.3ref.	8.1ref.

SPECIFICATIONS AMWPB6045 Series

Part Number	Inductance		DC Resistance		Saturation Current		Heat Rating Current
	-	Test condition	Typ.	Max.	Typ.	Max.	Typ.
	μH		m Ω		A		A
Units	μH	Test condition	m Ω		A		A
Symbol	L		DCR		Isat		Irms
AMWPB6045S1R0MT	1.0 $\pm$ 20%	100KHz/1V	13	16	9.3	8.2	5.9
AMWPB6045S1R5MT	1.5 $\pm$ 20%	100KHz/1V	15	18	7.2	6.6	5.5
AMWPB6045S2R2MT	2.2 $\pm$ 20%	100KHz/1V	22	26	6.6	6.0	4.5
AMWPB6045S3R3MT	3.3 $\pm$ 20%	100KHz/1V	27	33	5.5	5.0	4.1
AMWPB6045S4R7MT	4.7 $\pm$ 20%	100KHz/1V	29	35	4.1	3.7	3.8
AMWPB6045S5R6MT	5.6 $\pm$ 20%	100KHz/1V	32	37	3.6	3.2	3.6
AMWPB6045S6R8MT	6.8 $\pm$ 20%	100KHz/1V	42	50	3.6	3.1	3.3
AMWPB6045S8R2MT	8.2 $\pm$ 20%	100KHz/1V	50	60	3.1	2.7	3.0
AMWPB6045S100MT	10 $\pm$ 20%	100KHz/1V	56	73	3.0	2.6	2.7

AMWPB7045S Series

Part Number	Inductance		DC Resistance		Saturation Current		Heat Rating Current
	-	Test condition	Typ.	Max.	Typ.	Max.	Typ.
	μH		m Ω		A		A
Units	μH	Test condition	m Ω		A		A
Symbol	L		DCR		Isat		Irms
AMWPB7045S1R0MT	1.0 $\pm$ 20%	100KHz/1V	12	14	10.1	9.2	6.2
AMWPB7045S1R5MT	1.5 $\pm$ 20%	100KHz/1V	14	17	9.0	8.1	5.7
AMWPB7045S2R2MT	2.2 $\pm$ 20%	100KHz/1V	16	19	6.9	6.2	5.3
AMWPB7045S3R3MT	3.3 $\pm$ 20%	100KHz/1V	21	25	5.4	4.9	4.7
AMWPB7045S4R7MT	4.7 $\pm$ 20%	100KHz/1V	26	31	4.6	4.0	4.3
AMWPB7045S5R6MT	5.6 $\pm$ 20%	100KHz/1V	28	33	4.1	3.8	4.1
AMWPB7045S6R8MT	6.8 $\pm$ 20%	100KHz/1V	38	45	4.0	3.6	3.5
AMWPB7045S8R2MT	8.2 $\pm$ 20%	100KHz/1V	42	50	3.7	3.4	3.3
AMWPB7045S100MT	10 $\pm$ 20%	100KHz/1V	48	57	3.3	2.9	3.1
AMWPB7045S150MT	15 $\pm$ 20%	100KHz/1V	65	78	2.8	2.5	2.4
AMWPB7045S220MT	22 $\pm$ 20%	100KHz/1V	85	102	2.2	1.7	2.0

Note: ※1: Rated current: Isat(Max.) or Irms(Typ.), 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) is approximate 40°C.

The part temperature (ambient + temp. rise) should not exceed 150 °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.