

### AAPS Series

#### Features

- Qualified to AEC-Q200.
- Alloy powder Inductor.
- 100% lead (Pb)-free.
- Lowest DCR/uH, in this package size.
- Handles high transient current spikes without saturation.
- Ultra low buzz noise, due to composite construction.
- RoHS compliance.

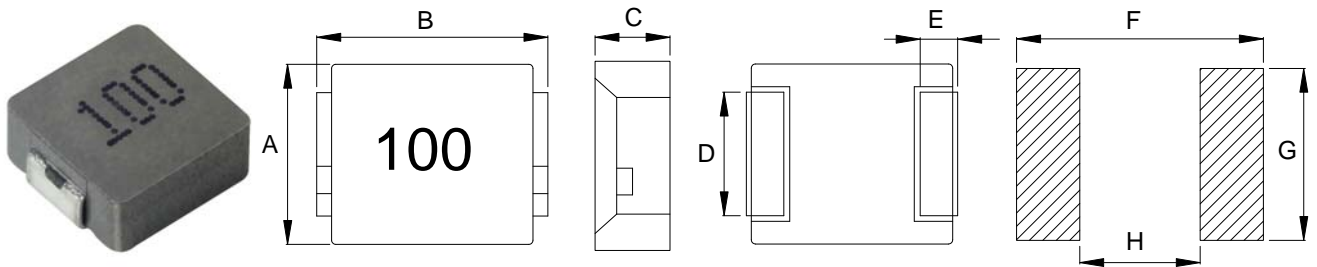
#### Applications

- Notebook/Desktop/Server applications.
- Low profile, high current power supplies.
- DC/DC converter for Field Programmable Gate Array(FPGA).

#### Test Equipment and Conditions

- All test data is referenced to 25°C ambient.
- Operating temperature range -55°C to +155°C.(Including self - temperature rise)
- DC current(Irms)that will cause an approximate  $\Delta T$  of 40°C.
- DC current(Isat)that will cause Lo to drop approximately 40%.
- Absolute maximum voltage 30VDC.

#### External Dimensions (Unit:m/m)



Type	A	B	C	D Typ.	E Typ.	F Typ.	G Typ.	H Typ.	Q'Ty/Reel
AAPS04A12	4.2±0.3	4.8Max	1.2Max	2.0	0.8	5.2	2.5	2.2	3000
AAPS04D20	4.0±0.3	4.8Max	2.0Max	1.5	0.8	5.2	2.5	2.2	3000
AAPS04A20	4.2±0.3	4.8Max	2.0Max	2.0	0.8	5.2	2.5	2.2	3000
AAPS05A15	5.2±0.3	5.8Max	1.5Max	2.2	1.2	5.0	2.5	2.2	3000
AAPS05A18	5.2±0.3	5.8Max	1.8Max	2.2	1.2	6.0	2.5	2.2	2000
AAPS05A30	5.2±0.3	5.8Max	3.0Max	2.2	1.2	6.0	2.5	2.2	2000
AAPS07A15	6.6±0.3	7.7Max	1.5Max	3.0	1.6	8.4	3.5	3.7	2000
AAPS07A18	6.6±0.3	7.7Max	1.8Max	3.0	1.6	8.4	3.5	3.7	1500
AAPS07A24	6.6±0.3	7.7Max	2.4Max	3.0	1.6	8.4	3.5	3.7	1500
AAPS07A30	6.6±0.3	7.7Max	3.0Max	3.0	1.6	8.4	3.5	3.7	1000
AAPS07A50	6.6±0.3	7.7Max	5.0Max	3.0	1.7	8.4	3.5	3.6	1000
AAPS07D54	7.2±0.3	8.2Max	5.4Max	3.0	2.0	9.0	3.5	2.6	500
AAPS10A30	10.0±0.5	11.5Max	3.0Max	3.0	2.0	13.6	4.1	5.4	1000
AAPS10A40	10.0±0.5	11.5Max	4.0Max	3.0	2.0	13.6	4.1	5.4	500
AAPS10A50	10.0±0.5	11.5Max	5.0Max	3.0	2.0	13.6	4.1	5.4	500
AAPS10D54	10.0±0.3	11.3Max	5.4Max	4.5	2.2	12.88	5.0	4.9	500
AAPS13A50	12.6±0.3	13.9Max	5.0Max	5.0	2.0	14.5	5.0	8.0	500
AAPS13A60	12.6±0.3	13.9Max	6.0Max	5.0	2.0	14.5	5.0	8.0	500
AAPS13A65	12.6±0.3	13.9Max	6.5Max	5.0	2.0	14.5	5.0	8.0	500
AAPS17A70	16.9±0.3	17.5Max	7.0Max	11.9	2.5	20.0	12.3	12.4	200

### Part Number Code

AAPS   04   A   12   M   R15  
 A        B        C        D        E        F

A: Series Name                      Molding Power Inductors  
 B: Dimensions(mm)                04: 4.2 x 4.8  
 C: Materials                         A Type  
 D: Thickness(mm)                 12: 1.2 Max  
 E: Tolerance                         M: ±20%  
 F: Inductance                        R15=0.15uH

### AAPS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current I <sub>rms</sub> (A)Typ.	Saturation Current I <sub>sat</sub> (A)Typ.
AAPS04A12MR15	0.15	8.9	7.57	15.16
AAPS04A12MR22	0.22	10.9	7.05	11.12
AAPS04A12MR33	0.33	18.8	6.55	8.48
AAPS04A12MR47	0.47	20.8	6.06	6.86
AAPS04A12MR68	0.68	35.5	4.74	6.06
AAPS04A12M1R0	1.0	46.5	4.55	5.55
AAPS04A12M1R5	1.5	74.3	3.28	4.05
AAPS04A12M2R2	2.2	82.7	2.77	3.54
AAPS04A12M4R7	4.7	193.0	1.82	2.83
AAPS04A20MR10	0.1	3.9	13.13	22.22
AAPS04A20MR22	0.22	6.5	9.6	12.62
AAPS04A20MR33	0.33	10.9	10.1	12.13
AAPS04A20MR47	0.47	13.8	7.55	9.59
AAPS04A20MR56	0.56	15.8	7.07	10.11
AAPS04A20MR68	0.68	17.8	7.07	9.1
AAPS04D20M1R0	1.0	26.7	6.05	7.07
AAPS04A20M1R2	1.2	26.8	6.06	7.07
AAPS04D20M1R5	1.5	45.5	5.05	6.05
AAPS04D20M2R2	2.2	57.5	4.55	5.05
AAPS04A20M3R3	3.3	86.5	3.35	4.05
AAPS04D20M4R7	4.7	104.0	2.82	3.03
AAPS04A20M6R8	6.8	173.0	2.42	2.52
AAPS04A20M100	10.0	279.0	1.61	2.22

## AAPS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
AAPS05A15MR47	0.47	12.6	10.0	15.0
AAPS05A15MR68	0.68	15.5	8.0	10.5
AAPS05A15M1R0	1.0	23.0	6.5	9.0
AAPS05A15M2R2	2.2	52.0	4.0	6.0
AAPS05A15M100	10.0	170.0	2.0	3.0
AAPS05A18MR47	0.47	8.9	10.6	15.65
AAPS05A18MR56	0.56	9.9	9.6	15.2
AAPS05A18M1R0	1.0	16.8	8.08	9.1
AAPS05A18M1R5	1.5	25.7	7.57	9.1
AAPS05A18M2R2	2.2	34.7	5.05	6.56
AAPS05A18M3R3	3.3	57.4	4.55	5.05
AAPS05A18M4R7	4.7	84.1	3.53	4.05
AAPS05A18M6R8	6.8	118.9	2.82	3.43
AAPS05A18M100	10.0	153.0	2.52	3.03
AAPS05A30MR10	0.1	2.9	25.3	33.4
AAPS05A30MR20	0.2	3.8	14.15	14.65
AAPS05A30MR47	0.47	8.1	11.12	12.15
AAPS05A30MR68	0.68	11.8	9.1	11.6
AAPS05A30M1R0	1.0	13.8	8.6	11.12
AAPS05A30M1R2	1.2	15.8	8.6	11.12
AAPS05A30M1R5	1.5	24.7	8.3	8.6
AAPS05A30M2R2	2.2	28.8	7.05	7.6
AAPS05A30M3R3	3.3	37.6	5.55	6.05
AAPS05A30M4R7	4.7	59.0	4.55	5.05
AAPS05A30M6R8	6.8	89.0	3.53	4.05
AAPS05A30M100	10.0	124.0	3.23	3.54
AAPS05A30M150	15.0	196.0	2.0	2.2
AAPS07A15MR47	0.47	8.5	16.0	10.0
AAPS07A15MR56	0.56	11.0	14.0	9.0
AAPS07A15MR68	0.68	12.0	12.0	8.5
AAPS07A15MR82	0.82	17.0	10.0	8.0
AAPS07A15M1R0	1.0	21.0	9.0	6.0

## AAPS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current I <sub>rms</sub> (A)Typ.	Saturation Current I <sub>sat</sub> (A)Typ.
AAPS07A15M2R2	2.2	54.0	7.0	3.8
AAPS07A15M3R3	3.3	63.0	5.5	3.5
AAPS07A15M4R7	4.7	85.0	5.0	3.2
AAPS07A15M6R8	6.8	135.0	4.0	2.5
AAPS07A15M100	10.0	175.0	3.0	2.0
AAPS07A18MR47	0.47	8.3	11.6	18.2
AAPS07A18MR68	0.68	11.9	9.6	17.2
AAPS07A18M1R0	1.0	15.5	8.6	14.15
AAPS07A18M1R5	1.5	25.7	8.08	12.12
AAPS07A18M2R2	2.2	34.6	7.05	8.1
AAPS07A18M3R3	3.3	49.0	4.55	6.55
AAPS07A18M4R7	4.7	61.0	4.05	5.05
AAPS07A18M6R8	6.8	108.0	3.03	4.55
AAPS07A24MR22	0.22	2.9	21.22	34.35
AAPS07A24MR33	0.33	4.0	18.18	24.75
AAPS07A24MR47	0.47	5.0	15.15	22.22
AAPS07A24MR56	0.56	6.4	13.15	17.2
AAPS07A24MR68	0.68	6.9	12.15	16.15
AAPS07A24M1R0	1.0	13.3	9.1	16.15
AAPS07A24M1R5	1.5	20.0	9.1	15.15
AAPS07A24M2R2	2.2	27.8	7.05	14.15
AAPS07A24M3R3	3.3	38.5	5.55	10.1
AAPS07A24M4R7	4.7	59.5	5.05	7.55
AAPS07A24M6R8	6.8	70.0	4.05	6.06
AAPS07A24M100	10.0	100.0	3.13	4.05
AAPS07A24M150	15.0	158.0	2.52	3.33
AAPS07A24M220	22.0	227.0	2.02	2.52
AAPS07A30MR10	0.1	1.7	35.0	43.0
AAPS07A30MR12	0.12	0.95	36.0	50.0
AAPS07A30MR15	0.15	2.3	26.0	41.0
AAPS07A30MR22	0.22	3.0	24.25	34.35
AAPS07A30MR24	0.24	3.0	23.23	26.26
AAPS07A30MR33	0.33	3.5	21.2	25.25

## AAPS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
AAPS07A30MR47	0.47	4.1	18.2	20.2
AAPS07A30MR56	0.56	4.3	16.65	18.2
AAPS07A30MR68	0.68	5.3	16.16	17.15
AAPS07A30MR82	0.82	5.9	14.14	16.15
AAPS07A30M1R0	1.0	7.3	12.12	15.15
AAPS07A30M1R5	1.5	12.0	12.12	14.15
AAPS07A30M2R2	2.2	14.8	9.6	10.1
AAPS07A30M3R3	3.3	21.8	8.55	9.55
AAPS07A30M4R7	4.7	32.5	6.06	9.0
AAPS07A30M6R8	6.8	47.5	5.05	6.05
AAPS07A30M8R2	8.2	59.5	5.05	6.05
AAPS07A30M100	10.0	66.3	4.55	5.55
AAPS07A30M150	15.0	113.0	3.03	4.55
AAPS07A30M220	22.0	170.0	2.5	3.03
AAPS07A30M330	33.0	270.0	2.02	2.52
AAPS07A30M470	47.0	385.0	1.50	2.00
AAPS07A50MR22	0.22	2.5	30.03	35.35
AAPS07A50MR47	0.47	4.8	20.02	21.21
AAPS07A50MR56	0.56	5.4	18.18	18.18
AAPS07A50MR68	0.68	5.9	16.16	16.16
AAPS07A50MR82	0.82	7.3	14.15	15.15
AAPS07A50M1R0	1.0	6.4	14.15	18.18
AAPS07A50M1R5	1.5	7.4	12.12	15.65
AAPS07A50M2R2	2.2	12.3	10.1	14.14
AAPS07A50M3R3	3.3	21.7	8.58	12.12
AAPS07A50M4R7	4.7	24.7	7.07	10.1
AAPS07A50M6R8	6.8	54.5	5.50	7.07
AAPS07A50M8R2	8.2	67.5	5.05	6.06
AAPS07A50M100	10.0	54.3	4.55	6.55
AAPS07A50M150	15.0	85.0	3.1	4.5
AAPS07A50M220	22.0	138.0	2.52	4.04
AAPS07A50M330	33.0	178.0	2.32	3.53
AAPS07A50M470	47.0	227.0	2.02	2.62

## AAPS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
AAPS07D54M1R5	1.5	7.3	11.4	16.3
AAPS07D54M2R2	2.2	11.4	9.7	14.8
AAPS07D54M3R3	3.3	15.4	8.0	13.5
AAPS07D54M4R7	4.7	20.9	7.0	13.1
AAPS07D54M6R8	6.8	26.6	6.1	10.2
AAPS07D54M8R2	8.2	31.9	5.6	9.0
AAPS07D54M100	10.0	38.0	5.2	8.0
AAPS07D54M150	15.0	66.0	3.8	6.9
AAPS07D54M220	22.0	93.5	3.3	6.3
AAPS07D54M330	33.0	127.6	3.2	4.9
AAPS07D54M470	47.0	171.6	2.4	4.1
AAPS07D54M560	56.0	209.3	2.2	3.3
AAPS07D54M680	68.0	255	2.0	2.8
AAPS07D54M101	100.0	348	1.8	2.4
AAPS10A30MR22	0.22	1.2	33.0	50.0
AAPS10A30MR22	0.22	1.2	33.0	50.0
AAPS10A30MR33	0.33	1.6	23.0	32.0
AAPS10A30MR36	0.36	1.6	23.0	28.0
AAPS10A30MR47	0.47	2.5	22.0	26.0
AAPS10A30MR82	0.82	3.7	18.0	23.0
AAPS10A30M1R0	1.0	6.0	15.0	21.0
AAPS10A30M2R2	2.2	9.0	11.0	14.0
AAPS10A30M3R3	3.3	16.0	9.0	12.0
AAPS10A30M4R7	4.7	24.0	7.0	10.0
AAPS10A30M8R2	8.2	45.0	5.0	7.0
AAPS10A30M100	10.0	50.0	4.0	7.0
AAPS10A30M330	33.0	160.0	2.5	4.0
AAPS10A40MR15	0.15	0.6	45.45	75.75
AAPS10A40MR22	0.22	1.0	35.35	60.6
AAPS10A40MR30	0.3	1.0	35.35	50.5
AAPS10A40MR36	0.36	1.2	30.3	50.5
AAPS10A40MR47	0.47	1.6	30.3	40.4
AAPS10A40MR56	0.56	1.7	25.25	33.33

## AAPS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
AAPS10A40MR68	0.68	2.3	23.23	30.3
AAPS10A40MR80	0.8	2.6	23.23	29.3
AAPS10A40M1R0	1.0	3.2	19.2	28.28
AAPS10A40M1R5	1.5	4.1	16.15	26.25
AAPS10A40M2R2	2.2	6.9	12.12	18.18
AAPS10A40M3R3	3.3	11.6	11.1	16.15
AAPS10A40M4R7	4.7	19.9	9.1	15.15
AAPS10A40M5R6	5.6	22.0	8.5	12.0
AAPS10A40M6R8	6.8	24.7	8.58	12.12
AAPS10A40M8R2	8.2	26.5	8.08	9.1
AAPS10A40M100	10.0	29.7	7.87	8.6
AAPS10A40M150	15.0	44.5	6.55	7.07
AAPS10A40M220	22.0	65.3	5.05	5.55
AAPS10A40M330	33.0	91.0	4.44	5.05
AAPS10A40M470	47.0	143.0	3.33	3.53
AAPS10A40M680	68.0	193.0	2.52	3.03
AAPS10A50MR22	0.22	0.8	37.0	65.0
AAPS10A50M1R0	1.0	2.8	23.5	30.0
AAPS10A50M2R2	2.2	6.0	15.5	19.0
AAPS10A50M3R3	3.3	9.8	14.0	16.0
AAPS10A50M4R7	4.7	14.0	11.0	15.0
AAPS10A50M5R6	5.6	17.0	9.7	14.0
AAPS10A50M6R8	6.8	18.5	9.2	14.0
AAPS10A50M100	10.0	28.0	8.2	10.0
AAPS10A50M150	15.0	42.0	6.5	7.5
AAPS10A50M220	22.0	50.0	5.5	6.0
AAPS10A50M330	33.0	86.0	4.8	5.2
AAPS10A50M470	47.0	127.0	3.7	4.5
AAPS10A50M101	100.0	290.0	2.1	2.8
AAPS10D54MR68	0.68	2.22	32.0	46.0
AAPS10D54M1R0	1.0	2.76	30.0	37.0
AAPS10D54M1R5	1.5	4.2	24.8	26.8
AAPS10D54M2R2	2.2	4.9	23.0	25.0

## AAPS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
AAPS10D54M3R3	3.3	7.4	18.7	19.0
AAPS10D54M6R8	6.8	14.0	12.0	13.3
AAPS10D54M100	10.0	24.2	8.7	12.7
AAPS10D54M150	15.0	31.3	7.6	9.2
AAPS10D54M220	22.0	50.0	6.0	8.8
AAPS10D54M330	33.0	75.3	4.8	7.6
AAPS10D54M470	47.0	103.0	4.1	4.9
AAPS10D54M680	68.0	152.0	3.3	4.2
AAPS10D54M101	100.0	234.0	2.8	3.5
AAPS13A50MR22	0.22	0.7	50.5	75.75
AAPS13A50MR36	0.36	0.8	42.4	50.5
AAPS13A50MR47	0.47	1.1	38.38	48.5
AAPS13A50MR68	0.68	1.5	33.33	46.46
AAPS13A50MR82	0.82	1.6	30.3	39.39
AAPS13A50M1R0	1.0	2.2	26.26	35.35
AAPS13A50M1R5	1.5	3.1	23.23	33.33
AAPS13A50M2R2	2.2	4.9	15.15	24.25
AAPS13A50M3R3	3.3	6.9	14.15	22.23
AAPS13A50M4R7	4.7	8.9	13.13	21.2
AAPS13A50M6R8	6.8	17.9	12.12	16.16
AAPS13A50M100	10.0	21.8	9.10	12.12
AAPS13A50M220	22.0	57.4	4.55	6.56
AAPS13A50M330	33.0	83.0	3.53	6.05
AAPS13A50M470	47.0	128.0	3.03	5.05
AAPS13A60M1R0	1.0	2.1	28.0	31.0
AAPS13A60M1R5	1.5	2.7	16.0	28.0
AAPS13A60M2R2	2.2	2.7	16.0	22.0
AAPS13A60M3R3	3.3	6.8	17.5	25.0
AAPS13A60M4R7	4.7	9.9	15.15	24.24
AAPS13A60M5R6	5.6	10.9	13.13	22.73
AAPS13A60M6R8	6.8	13.3	12.12	19.19
AAPS13A60M7R8	7.8	14.4	11.61	18.18
AAPS13A60M8R2	8.2	15.8	11.11	13.63



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Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
AAPS13A60M100	10.0	20.4	10.1	12.62
AAPS13A60M120	12.0	22.7	9.1	10.1
AAPS13A60M150	15.0	28.7	8.58	9.1
AAPS13A60M180	18.0	34.6	7.57	8.08
AAPS13A60M220	22.0	39.0	7.07	7.57
AAPS13A60M270	27.0	55.4	6.06	6.56
AAPS13A60M330	33.0	74.3	5.55	6.06
AAPS13A60M470	47.0	89.1	5.05	5.55
AAPS13A60M680	68.0	138.6	4.04	4.54
AAPS13A60M101	100.0	198.0	3.03	3.53
AAPS13A60M121	120.0	232.6	2.02	3.23
AAPS13A65M1R0	1.0	1.8	33.0	45.0
AAPS13A65M2R2	2.2	4.2	21.0	28.0
AAPS13A65M4R7	4.7	8.5	16.0	24.5
AAPS13A65M5R6	5.6	10.5	14.0	23.0
AAPS13A65M6R8	6.8	12.0	13.0	19.3
AAPS13A65M8R2	8.2	14.0	12.0	16.0
AAPS13A65M100	10.0	16.5	11.0	15.0
AAPS13A65M150	15.0	26.0	9.5	11.0
AAPS13A65M220	22.0	36.0	8.0	9.0
AAPS13A65M330	33.0	65.0	6.5	8.0
AAPS13A65M470	47.0	70.0	5.5	6.8
AAPS13A65M680	68.0	120.0	4.8	5.2
AAPS13A65M820	82.0	135.0	4.0	4.5
AAPS13A65M101	100.0	170.0	3.5	4.0
AAPS17A70M1R0	1.0	1.5	42.5	50.0
AAPS17A70M1R5	1.5	2.2	33.0	40.0
AAPS17A70M2R2	2.2	2.5	29.3	34.34
AAPS17A70M3R3	3.3	2.9	24.7	27.27
AAPS17A70M4R7	4.7	4.67	16.2	24.24
AAPS17A70M6R8	6.8	7.5	14.1	22.22
AAPS17A70M8R2	8.2	8.6	12.6	20.2
AAPS17A70M100	10.0	9.9	11.0	18.2

### AAPS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
AAPS17A70M150	15.0	17.3	10.1	14.65
AAPS17A70M200	20.0	21.6	9.6	12.12
AAPS17A70M220	22.0	22.7	8.1	11.11
AAPS17A70M330	33.0	36.6	7.0	10.1
AAPS17A70M470	47.0	46.5	6.0	7.57
AAPS17A70M680	68.0	84.2	5.6	6.56
AAPS17A70M101	100.0	128.7	4.10	4.55

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