

### APS Series

#### Features

- 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.

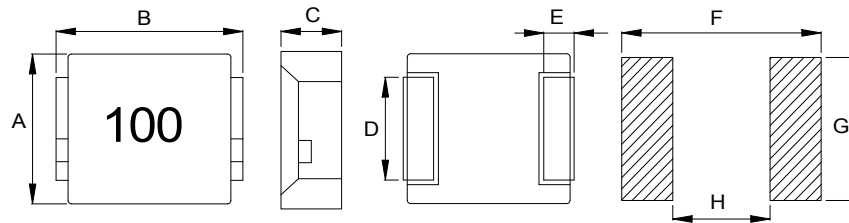
#### Applications

- 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 -40°C to +125°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
APS04A10	4.1±0.2	4.1±0.2	1.0Max	1.8	0.8	4.4	2.2	2.2	5000
APS04A12	4.2±0.3	4.8Max	1.2Max	2	0.8	5.2	2.5	2.2	3000
APS04D20	4.0±0.3	4.8Max	2.0Max	1.5	0.8	5.2	2.5	2.2	3000
APS04A20	4.2±0.3	4.8Max	2.0Max	2	0.8	5.2	2.5	2.2	3000
APS05A15	5.2±0.3	5.8Max	1.5Max	2.2	1.2	5	2.5	2.2	3000
APS05A18	5.2±0.3	5.8Max	1.8Max	2.2	1.2	6	2.5	2.2	2000
APS05A30	5.2±0.3	5.8Max	3.0Max	2.2	1.2	6	2.5	2.2	2000
APS06A10	6.1±0.3	6.1±0.3	1.0Max	4	1.75	7.5	4.5	2.8	3000
APS07A15	6.6±0.3	7.7Max	1.5Max	3	1.6	8.4	3.5	3.7	2000
APS07A18	6.6±0.3	7.7Max	1.8Max	3	1.6	8.4	3.5	3.7	1500
APS07A24	6.6±0.3	7.7Max	2.4Max	3	1.6	8.4	3.5	3.7	1500
APS07A30	6.6±0.3	7.7Max	3.0Max	3	1.6	8.4	3.5	3.7	1000
APS07A50	6.6±0.3	7.7Max	5.0Max	3	1.7	8.4	3.5	3.6	1000
APS07D54	7.2±0.3	8.2Max	5.4Max	3	2	9	3.5	2.6	500
APS08A40	8.2±0.3	9.2Max	4.0Max	5	1.4	9.5	5.5	4	800
APS10A20	10.0±0.5	11.5Max	2.0Max	3	2	13.6	4.1	5.4	1000
APS10A30	10.0±0.5	11.5Max	3.0Max	3	2	13.6	4.1	5.4	1000
APS10A40	10.0±0.5	11.5Max	4.0Max	3	2	13.6	4.1	5.4	500
APS10A50	10.0±0.5	11.5Max	5.0Max	3	2	13.6	4.1	5.4	500
APS10D54	10.0±0.3	11.3Max	5.4Max	4.5	2.2	12.88	5	4.9	500
APS13A50	12.6±0.3	13.9Max	5.0Max	5	2	14.5	5	8	500
APS13A60	12.6±0.3	13.9Max	6.0Max	5	2	14.5	5	8	500
APS13A65	12.6±0.3	13.9Max	6.5Max	5	2	14.5	5	8	500
APS17A70	16.9±0.3	17.5Max	7.0Max	11.9	2.5	20	12.3	12.4	200

### Part Number Code

<u>APS</u>	<u>07</u>	<u>A</u>	<u>30</u>	<u>M</u>	<u>100</u>
SeriesName	Dimensions: L*W	Materials	Dimensions: H	Tolerance ±20%	Inductance

### APS 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.
APS04A10M2R2	2.2	100	3.4	4.3
APS04A10M4R7	4.7	160	2.6	2.5
APS04A10M100	10	336	1.5	1.8
APS04A12MR15	0.15	8.9	7.57	15.16
APS04A12MR22	0.22	10.9	7.05	11.12
APS04A12MR33	0.33	18.8	6.55	8.48
APS04A12MR47	0.47	20.8	6.06	6.86
APS04A12MR68	0.68	35.5	4.74	6.06
APS04A12M1R0	1	46.5	4.55	5.55
APS04A12M1R5	1.5	74.3	3.28	4.05
APS04A12M2R2	2.2	82.7	2.77	3.54
APS04A12M4R7	4.7	193	1.82	2.83
APS04A20MR10	0.1	3.9	13.13	22.22
APS04A20MR22	0.22	6.5	9.6	12.62
APS04A20MR33	0.33	10.9	10.1	12.13
APS04A20MR47	0.47	13.8	7.55	9.59
APS04A20MR56	0.56	15.8	7.07	10.11
APS04A20MR68	0.68	17.8	7.07	9.1
APS04D20M1R0	1	26.7	6.05	7.07
APS04A20M1R2	1.2	26.8	6.06	7.07
APS04D20M1R5	1.5	45.5	5.05	6.05
APS04D20M2R2	2.2	57.5	4.55	5.05

### APS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS04A20M3R3	3.3	86.5	3.35	4.05
APS04D20M4R7	4.7	104	2.82	3.03
APS04A20M6R8	6.8	173	2.42	2.52
APS04A20M100	10	279	1.61	2.22
APS04A20M220	22	363	1.2	1.4
APS05A15MR47	0.47	12.6	10	15
APS05A15MR68	0.68	15.5	8	10.5
APS05A15M1R0	1	23	6.5	9
APS05A15M2R2	2.2	52	4	6
APS05A15M100	10	170	2	3
APS05A18MR47	0.47	8.9	10.6	15.65
APS05A18MR56	0.56	9.9	9.6	15.2
APS05A18M1R0	1	16.8	8.08	9.1
APS05A18M1R5	1.5	25.7	7.57	9.1
APS05A18M2R2	2.2	34.7	5.05	6.56
APS05A18M3R3	3.3	57.4	4.55	5.05
APS05A18M4R7	4.7	84.1	3.53	4.05
APS05A18M6R8	6.8	118.9	2.82	3.43
APS05A18M100	10	153	2.52	3.03
APS05A30MR10	0.1	2.9	25.3	33.4
APS05A30MR20	0.2	3.8	14.15	14.65
APS05A30MR47	0.47	8.1	11.12	12.15
APS05A30MR68	0.68	11.8	9.1	11.6
APS05A30M1R0	1	13.8	8.6	11.12
APS05A30M1R2	1.2	15.8	8.6	11.12
APS05A30M1R5	1.5	24.7	8.3	8.6
APS05A30M2R2	2.2	28.8	7.05	7.6
APS05A30M3R3	3.3	37.6	5.55	6.05
APS05A30M4R7	4.7	59	4.55	5.05
APS05A30M6R8	6.8	89	3.53	4.05

**APS Series**

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS05A30M100	10	124	3.23	3.54
APS05A30M150	15	196	2	2.2
APS05A30M220	22	248	1.7	2.3
APS06A10M4R7	4.7	172	2.2	2.8
APS06A10M6R8	6.8	197	2	2.5
APS06A10M100	10	310	1.6	2.1
APS07A15MR47	0.47	8.5	16	10
APS07A15MR56	0.56	11	14	9
APS07A15MR68	0.68	12	12	8.5
APS07A15MR82	0.82	17	10	8
APS07A15M1R0	1	21	9	6
APS07A15M2R2	2.2	54	7	3.8
APS07A15M3R3	3.3	63	5.5	3.5
APS07A15M4R7	4.7	85	5	3.2
APS07A15M6R8	6.8	135	4	2.5
APS07A15M100	10	175	3	2
APS07A18MR47	0.47	8.3	11.6	18.2
APS07A18MR68	0.68	11.9	9.6	17.2
APS07A18M1R0	1	15.5	8.6	14.15
APS07A18M1R5	1.5	25.7	8.08	12.12
APS07A18M2R2	2.2	34.6	7.05	8.1
APS07A18M3R3	3.3	49	4.55	6.55
APS07A18M4R7	4.7	61	4.05	5.05
APS07A18M6R8	6.8	108	3.03	4.55
APS07A24MR22	0.22	2.9	21.22	34.35
APS07A24MR33	0.33	4	18.18	24.75
APS07A24MR47	0.47	5	15.15	22.22
APS07A24MR56	0.56	6.4	13.15	17.2
APS07A24MR68	0.68	6.9	12.15	16.15
APS07A24M1R0	1	13.3	9.1	16.15

### APS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS07A24M1R5	1.5	20	9.1	15.15
APS07A24M2R2	2.2	27.8	7.05	14.15
APS07A24M3R3	3.3	38.5	5.55	10.1
APS07A24M4R7	4.7	59.5	5.05	7.55
APS07A24M6R8	6.8	70	4.05	6.06
APS07A24M100	10	100	3.13	4.05
APS07A24M150	15	158	2.52	3.33
APS07A24M220	22	227	2.02	2.52
APS07A30MR10	0.1	1.7	35	43
APS07A30MR12	0.12	0.95	36	50
APS07A30MR15	0.15	2.3	26	41
APS07A30MR22	0.22	3	24.25	34.35
APS07A30MR24	0.24	3	23.23	26.26
APS07A30MR33	0.33	3.5	21.2	25.25
APS07A30MR47	0.47	4.1	18.2	20.2
APS07A30MR56	0.56	4.3	16.65	18.2
APS07A30MR68	0.68	5.3	16.16	17.15
APS07A30MR82	0.82	5.9	14.14	16.15
APS07A30M1R0	1	7.3	12.12	15.15
APS07A30M1R5	1.5	12	12.12	14.15
APS07A30M2R2	2.2	14.8	9.6	10.1
APS07A30M3R3	3.3	21.8	8.55	9.55
APS07A30M4R7	4.7	32.5	6.06	9
APS07A30M6R8	6.8	47.5	5.05	6.05
APS07A30M8R2	8.2	59.5	5.05	6.05
APS07A30M100	10	66.3	4.55	5.55
APS07A30M150	15	113	3.03	4.55
APS07A30M220	22	170	2.5	3.03
APS07A30M330	33	270	2.02	2.52
APS07A30M470	47	385	1.5	2

### APS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS07A50MR22	0.22	2.5	30.03	35.35
APS07A50MR47	0.47	4.8	20.02	21.21
APS07A50MR56	0.56	5.4	18.18	18.18
APS07A50MR68	0.68	5.9	16.16	16.16
APS07A50MR82	0.82	7.3	14.15	15.15
APS07A50M1R0	1	6.4	14.15	18.18
APS07A50M1R5	1.5	7.4	12.12	15.65
APS07A50M2R2	2.2	12.3	10.1	14.14
APS07A50M3R3	3.3	21.7	8.58	12.12
APS07A50M4R7	4.7	24.7	7.07	10.1
APS07A50M6R8	6.8	54.5	5.5	7.07
APS07A50M8R2	8.2	67.5	5.05	6.06
APS07A50M100	10	54.3	4.55	6.55
APS07A50M150	15	85	3.1	4.5
APS07A50M220	22	138	2.52	4.04
APS07A50M330	33	178	2.32	3.53
APS07A50M470	47	227	2.02	2.62
APS07A50M680	68	438	1.2	1.7
APS07A50M101	100	680	0.7	1
APS07D54M330	33.0	127.6	3.2	4.9
APS07D54M470	47.0	171.6	2.4	4.1
APS07D54M560	56.0	209.3	2.2	3.3
APS07D54M680	68.0	255	2.0	2.8
APS07D54M101	100.0	348	1.8	2.4
APS08A40MR22	0.22	1.8	36	60
APS08A40MR33	0.33	2.4	30	45
APS08A40MR47	0.47	2.8	28	42
APS08A40MR56	0.56	3.2	24	26
APS08A40MR68	0.68	3.8	23	24
APS08A40MR82	0.82	4.4	21	21

### APS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS08A40M1R0	1	4.62	19	19
APS08A40M1R5	1.5	7.6	17	17
APS08A40M1R8	1.8	11	15	15
APS08A40M2R2	2.2	11.4	14	14
APS08A40M3R3	3.3	15	12	12.5
APS08A40M4R7	4.7	26.5	9.5	11.5
APS08A40M5R6	5.6	30	9	11
APS08A40M6R8	6.8	36.8	8	9
APS08A40M8R2	8.2	46	7	8.7
APS08A40M100	10	59	6.5	8
APS08A40M150	15	71	5.4	5.5
APS08A40M220	22	113	4.8	5
APS08A40M330	33	156	3.5	3.5
APS08A40M470	47	225	2.9	3.1
APS10A20M4R7	4.7	50	5	8
APS10A20M100	10	70	4	5
APS10A30MR22	0.22	1.2	33	50
APS10A30MR33	0.33	1.6	23	32
APS10A30MR36	0.36	1.6	23	28
APS10A30MR47	0.47	2.5	22	26
APS10A30MR82	0.82	3.7	18	23
APS10A30M1R0	1	6	15	21
APS10A30M2R2	2.2	9	11	14
APS10A30M3R3	3.3	16	9	12
APS10A30M4R7	4.7	24	7	10
APS10A30M8R2	8.2	45	5	7
APS10A30M100	10	50	4	7
APS10A30M330	33	160	2.5	4
APS10A40MR15	0.15	0.6	45.45	75.75
APS10A40MR22	0.22	1	35.35	60.6

### APS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS10A40MR30	0.3	1	35.35	50.5
APS10A40MR36	0.36	1.2	30.3	50.5
APS10A40MR47	0.47	1.6	30.3	40.4
APS10A40MR56	0.56	1.7	25.25	33.33
APS10A40MR68	0.68	2.3	23.23	30.3
APS10A40MR80	0.8	2.6	23.23	29.3
APS10A40M1R0	1	3.2	19.2	28.28
APS10A40M1R5	1.5	4.1	16.15	26.25
APS10A40M2R2	2.2	6.9	12.12	18.18
APS10A40M3R3	3.3	11.6	11.1	16.15
APS10A40M4R7	4.7	19.9	9.1	15.15
APS10A40M5R6	5.6	22	8.5	12
APS10A40M6R8	6.8	24.7	8.58	12.12
APS10A40M8R2	8.2	26.5	8.08	9.1
APS10A40M100	10	29.7	7.87	8.6
APS10A40M150	15	44.5	6.55	7.07
APS10A40M220	22	65.3	5.05	5.55
APS10A40M330	33	91	4.44	5.05
APS10A40M470	47	143	3.33	3.53
APS10A40M680	68	193	2.52	3.03
APS10A40M101	100	340	2.2	2.3
APS10A50MR22	0.22	0.8	37	65
APS10A50M1R0	1	2.8	23.5	30
APS10A50M2R2	2.2	6	15.5	19
APS10A50M3R3	3.3	9.8	14	16
APS10A50M4R7	4.7	14	11	15
APS10A50M5R6	5.6	17	9.7	14
APS10A50M6R8	6.8	18.5	9.2	14
APS10A50M100	10	28	8.2	10
APS10A50M150	15	42	6.5	7.5



**APS Series**

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS10A50M220	22	50	5.5	6
APS10A50M330	33	86	4.8	5.2
APS10A50M470	47	127	3.7	4.5
APS10A50M101	100	290	2.1	2.8
APS10D54MR68	0.68	2.22	32.0	46.0
APS10D54M1R0	1.0	2.76	30.0	37.0
APS10D54M1R5	1.5	4.2	24.8	26.8
APS10D54M2R2	2.2	4.9	23.0	25.0
APS10D54M3R3	3.3	7.4	18.7	19.0
APS10D54M6R8	6.8	14.0	12.0	13.3
APS10D54M100	10.0	24.2	8.7	12.7
APS10D54M150	15.0	31.3	7.6	9.2
APS10D54M220	22.0	50.0	6.0	8.8
APS10D54M330	33.0	75.3	4.8	7.6
APS10D54M470	47.0	103.0	4.1	4.9
APS10D54M680	68.0	152.0	3.3	4.2
APS10D54M101	100.0	234.0	2.8	3.5
APS13A50MR22	0.22	0.7	50.5	75.75
APS13A50MR36	0.36	0.8	42.4	50.5
APS13A50MR47	0.47	1.1	38.38	48.5
APS13A50MR68	0.68	1.5	33.33	46.46
APS13A50MR82	0.82	1.6	30.3	39.39
APS13A50M1R0	1	2.2	26.26	35.35
APS13A50M1R5	1.5	3.1	23.23	33.33
APS13A50M2R2	2.2	4.9	15.15	24.25
APS13A50M3R3	3.3	6.9	14.15	22.23
APS13A50M4R7	4.7	8.9	13.13	21.2
APS13A50M6R8	6.8	17.9	12.12	16.16
APS13A50M100	10	21.8	9.1	12.12
APS13A50M220	22	57.4	4.55	6.56

### APS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS13A50M330	33	83	3.53	6.05
APS13A50M470	47	128	3.03	5.05
APS13A60M1R0	1	2.1	28	31
APS13A60M1R5	1.5	2.7	16	28
APS13A60M2R2	2.2	2.7	16	22
APS13A60M3R3	3.3	6.8	17.5	25
APS13A60M4R7	4.7	9.9	15.15	24.24
APS13A60M5R6	5.6	10.9	13.13	22.73
APS13A60M6R8	6.8	13.3	12.12	19.19
APS13A60M7R8	7.8	14.4	11.61	18.18
APS13A60M8R2	8.2	15.8	11.11	13.63
APS13A60M100	10	20.4	10.1	12.62
APS13A60M120	12	22.7	9.1	10.1
APS13A60M150	15	28.7	8.58	9.1
APS13A60M180	18	34.6	7.57	8.08
APS13A60M220	22	39	7.07	7.57
APS13A60M270	27	55.4	6.06	6.56
APS13A60M330	33	74.3	5.55	6.06
APS13A60M470	47	89.1	5.05	5.55
APS13A60M680	68	138.6	4.04	4.54
APS13A60M101	100	198	3.03	3.53
APS13A60M121	120	232.6	2.02	3.23
APS13A60M151	150	346.5	1.52	2.72
APS13A65M1R0	1	1.8	33	45
APS13A65M2R2	2.2	4.2	21	28
APS13A65M4R7	4.7	8.5	16	24.5
APS13A65M5R6	5.6	10.5	14	23
APS13A65M6R8	6.8	12	13	19.3
APS13A65M8R2	8.2	14	12	16
APS13A65M100	10	16.5	11	15

### APS Series

Part Number	Inductance (uH) @100KHz/1V	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS13A65M150	15	26	9.5	11
APS13A65M220	22	36	8	9
APS13A65M330	33	65	6.5	8
APS13A65M470	47	70	5.5	6.8
APS13A65M680	68	120	4.8	5.2
APS13A65M820	82	135	4	4.5
APS13A65M101	100	170	3.5	4
APS17A70M1R0	1	1.5	42.5	50
APS17A70M1R5	1.5	2.2	33	40
APS17A70M2R2	2.2	2.5	29.3	34.34
APS17A70M3R3	3.3	2.9	24.7	27.27
APS17A70M4R7	4.7	4.67	16.2	24.24
APS17A70M6R8	6.8	7.5	14.1	22.22
APS17A70M8R2	8.2	8.6	12.6	20.2
APS17A70M100	10	9.9	11	18.2
APS17A70M150	15	17.3	10.1	14.65
APS17A70M200	20	21.6	9.6	12.12
APS17A70M220	22	22.7	8.1	11.11
APS17A70M330	33	36.6	7	10.1
APS17A70M470	47	46.5	6	7.57
APS17A70M680	68	84.2	5.6	6.56
APS17A70M101	100	128.7	4.1	4.55