

### APS-F Series

#### Features

- High performance (Isat) realized by metal dust core.
- Low loss realized with low DCR
- 100% lead (Pb) free meet RoHS standard
- RoHS compliance.
- Halogen Free.

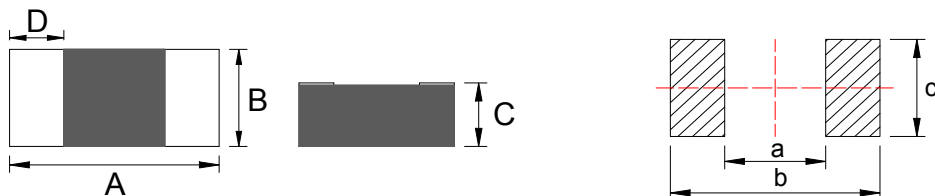
#### Applications

- DC/DC converter in portable device.
- Tablet pc , CPU V core, desktop etc.
- Switchs and servers.

#### Test Equipment and Conditions

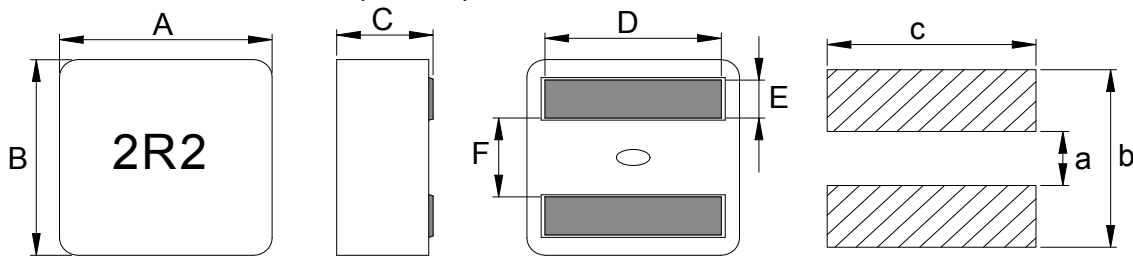
- All test data is referenced to 25°C ambient.
- Operating temperature range -40°C to +125°C.(Including self - temperature rise).
- DC current(Irms)that will cause an approximate $\Delta T$  of 40°C.
- DC current(Isat)that will cause L0 to drop approximately 40%.
- For APS25 size project ,absolute maximum voltage 20VDC;
- Above APS04 size project, absolute maximum voltage 55VDC.

#### External Dimensions (Unit:mm)



TYPE	A	B	C Max	D typ	E typ	F typ	a typ	b typ	c typ	Q'TY/Reel
APS201610	2.0±0.2	1.6±0.2	1.0	0.6	/	/	0.9	2.3	1.9	3000
APS252010	2.5±0.2	2.0±0.2	1.05	0.7	/	/	1.2	2.8	2.3	3000
APS252012	2.5±0.2	2.0±0.2	1.25	0.7	/	/	1.2	2.8	2.3	3000
APS322512	3.2±0.2	2.5±0.2	1.25	0.7	/	/	1.8	3.7	2.8	2000

### External Dimensions (Unit:mm)



TYPE	A	B	C Max	D typ	E typ	F typ	a typ	b typ	c typ	Q'TY/Reel
APS0420	4.1±0.2	4.1±0.2	2.15	3.4	0.88±0.3	1.6±0.3	1.4	3.4	3.8	3000
APS0430	4.1±0.25	4.1±0.25	3.1	3.4	0.88±0.3	1.6±0.3	1.4	3.4	3.8	2000
APS0520	5.5±0.2	5.3±0.2	2.15	4.3	1.1±0.3	2.3±0.3	2.0	4.5	4.7	3000
APS0530	5.5±0.2	5.3±0.2	3.1	4.3	1.1±0.3	2.3±0.3	2.0	4.5	4.7	2000
APS0550	5.5±0.2	5.3±0.2	5.0	4.3	1.1±0.3	2.3±0.3	2.0	4.5	4.7	1500
APS0630	6.6±0.2	6.4±0.2	3.1	5.3	1.4±0.3	2.6±0.3	2.5	5.6	5.6	1000
APS0650	6.6±0.2	6.4±0.2	5.0	5.3	1.4±0.3	2.6±0.3	2.5	5.6	5.6	800
APS0660	6.6±0.2	6.4±0.2	6.0	5.3	1.4±0.3	2.6±0.3	2.5	5.6	5.6	750
APS0720	7.8±0.25	7.6±0.2	2.0	6.5	1.75±0.3	3.15±0.3	2.8	7.4	7.2	2000
APS0730	7.8±0.25	7.6±0.2	3.1	6.5	1.75±0.3	3.15±0.3	2.8	7.4	7.2	1500
APS0770	7.8±0.25	7.6±0.25	7.0	6.5	1.75±0.3	3.15±0.3	2.8	7.8	7.2	700
APS0880	8.9±0.3	8.5±0.3	8.0	7.0	1.8±0.2	3.5±0.3	2.7	8.0	7.8	450
APS1030	11.9±0.3	11.0±0.3	3.1	9.0	2.4±0.2	4.4±0.3	3.7	10.5	11.0	1000
APS1060	11.9±0.3	11.0±0.3	6.0	9.0	2.4±0.2	4.4±0.3	3.7	10.5	11.0	500
APS1010	11.9±0.3	11.0±0.3	10.0	9.0	2.4±0.2	4.2±0.3	3.7	10.5	11.0	300
APS1580	16.5±0.3	15.5±0.3	8.0	13.2	3.2±0.3	7.4±0.5	6.0	15.0	15.0	200
APS1510	16.5±0.3	15.5±0.3	10.0	13.2	3.2±0.3	7.4±0.5	6.0	15.0	15.0	150
APS1513	16.5±0.3	15.5±0.3	13.0	13.2	3.2±0.3	7.0±0.5	6.0	15.0	15.0	100

## 2. Part Number Code

<u>APS</u>	<u>201610</u>	<u>M</u>	<u>100</u>	<u>F</u>
Series Name	Dimensions: L*W*H	Tolerance 20%	Inductance	Materials

### APS-F Series

Part Number	Inductance (uH)±20%	Test Frequency	DC Resistance (mΩ) Max.	Heat Rating Current I <sub>rms</sub> (A)Typ.	Saturation Current I <sub>sat</sub> (A)Typ.
APS201610MR10F	0.1	1MHz/1V	12	6.5	9
APS201610MR15F	0.15	1MHz/1V	14	7.2	9.8
APS201610MR24F	0.24	1MHz/1V	17	6	9
APS201610MR33F	0.33	1MHz/1V	23	5.2	7
APS201610MR47F	0.47	1MHz/1V	25	5	6.8
APS201610MR56F	0.56	1MHz/1V	35	4.6	5.8
APS201610MR68F	0.68	1MHz/1V	40	4.4	5.6
APS201610M1R0F	1	1MHz/1V	48	3.6	4.5
APS201610M1R5F	1.5	1MHz/1V	100	2.8	4.1
APS201610M2R2F	2.2	1MHz/1V	130	2.3	3.6
APS201610M3R3F	3.3	1MHz/1V	250	1.9	3.2
APS252010MR22F	0.22	1MHz/1V	18	8.5	11.5
APS252010MR33F	0.33	1MHz/1V	20	7.5	7.8
APS252010MR47F	0.47	1MHz/1V	25	6.5	6.9
APS252010MR68F	0.68	1MHz/1V	40	5.2	6.7
APS252010M1R0F	1	1MHz/1V	52	4.2	5.3
APS252010M1R5F	1.5	1MHz/1V	85	3.2	3.8
APS252010M2R2F	2.2	1MHz/1V	110	3	3.6
APS252010M3R3F	3.3	1MHz/1V	170	2	2.6
APS252010M4R7F	4.7	1MHz/1V	262	1.9	2.5
APS252012MR10F	0.1	1MHz/1V	11	9	16
APS252012MR15F	0.15	1MHz/1V	12.8	8.8	15.5
APS252012MR22F	0.22	1MHz/1V	14	8.6	10
APS252012MR24F	0.24	1MHz/1V	15	8	9.3
APS252012MR33F	0.33	1MHz/1V	18	8.5	9.5
APS252012MR47F	0.47	1MHz/1V	20	5.2	9
APS252012MR68F	0.68	1MHz/1V	30	4.8	6.8
APS252012M1R0F	1	1MHz/1V	42	4.5	6.4
APS252012M1R5F	1.5	1MHz/1V	60	3.1	4.9
APS252012M2R2F	2.2	1MHz/1V	84	3	4
APS252012M3R3F	3.3	1MHz/1V	130	2.8	3.8
APS252012M4R7F	4.7	1MHz/1V	200	2.4	3.1
APS252012M100F	10	1MHz/1V	400	1.2	1.6
APS322512MR15F	0.15	1MHz/1V	12	8.9	13.4

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Part Number	Inductance (uH)±20%	Test Frequency	DC Resistance (mΩ) Max.	Heat Rating Current I <sub>rms</sub> (A)Typ.	Saturation Current I <sub>sat</sub> (A)Typ.
APS322512MR22F	0.22	1MHz/1V	15	8.7	12.3
APS322512MR33F	0.33	1MHz/1V	16	8.3	11.5
APS322512MR47F	0.47	1MHz/1V	22	6.5	10
APS322512MR68F	0.68	1MHz/1V	26	5.5	6.8
APS322512M1R0F	1	1MHz/1V	32	4.6	6.5
APS322512M1R5F	1.5	1MHz/1V	48	4.2	4.8
APS322512M2R2F	2.2	1MHz/1V	68	3.3	4.5
APS322512M3R3F	3.3	1MHz/1V	108	2.6	3.4
APS322512M4R7F	4.7	1MHz/1V	157	2.2	3.1
APS322512M6R8F	6.8	1MHz/1V	220	1.5	2.5
APS0420MR10F	0.1	100KHz/0.1V	2.42	18	33
APS0420MR22F	0.22	100KHz/0.1V	4.6	16.8	18.8
APS0420MR36F	0.36	100KHz/0.1V	6.3	14.5	15
APS0420MR40F	0.4	100KHz/0.1V	7.73	14	13.5
APS0420MR47F	0.47	100KHz/0.1V	8.58	12.5	13
APS0420MR56F	0.56	100KHz/0.1V	9.3	12	12.6
APS0420MR60F	0.6	100KHz/0.1V	9.52	11.7	12.3
APS0420MR72F	0.72	100KHz/0.1V	11.6	10.5	10.6
APS0420M1R0F	1	100KHz/0.1V	14.6	9.6	8.8
APS0420M1R2F	1.2	100KHz/0.1V	17.9	9	7.8
APS0420M1R5F	1.5	100KHz/0.1V	23.5	7.6	7.4
APS0420M1R8F	1.8	100KHz/0.1V	28	7	7
APS0420M2R2F	2.2	100KHz/0.1V	38.7	5.6	6
APS0430MR75F	0.75	100KHz/0.1V	10.8	10	9
APS0430M1R0F	1	100KHz/0.1V	12.76	10	10
APS0430M2R2F	2.2	100KHz/0.1V	20.8	7.2	7
APS0430M3R3F	3.3	100KHz/0.1V	28.6	6.6	5.5
APS0430M4R7F	4.7	100KHz/0.1V	44.1	5.1	4.5
APS0430M6R8F	6.8	100KHz/0.1V	74.1	3.9	3.6
APS0520MR15F	0.15	100KHz/0.1V	4.6	18.8	27
APS0520MR16F	0.16	100KHz/0.1V	4.6	18.8	27
APS0520MR33F	0.33	100KHz/0.1V	7	14.4	24
APS0520MR47F	0.47	100KHz/0.1V	8.1	14.1	20
APS0520MR56F	0.56	100KHz/0.1V	9.5	13.9	16

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Part Number	Inductance (uH)±20%	Test Frequency	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS0520MR68F	0.68	100KHz/0.1V	10.2	13.4	14
APS0520MR80F	0.8	100KHz/0.1V	11.8	13	13.5
APS0520MR82F	0.82	100KHz/0.1V	12.7	12	13
APS0520M1R0F	1	100KHz/0.1V	13.8	10.5	12.8
APS0520M1R2F	1.2	100KHz/0.1V	16.3	9.4	12.2
APS0520M1R5F	1.5	100KHz/0.1V	18.7	8.8	11.7
APS0530MR15F	0.15	100KHz/0.1V	2.31	22.2	32.5
APS0530MR16F	0.16	100KHz/0.1V	2.33	22.2	32
APS0530MR33F	0.33	100KHz/0.1V	3.52	19.2	26
APS0530MR47F	0.47	100KHz/0.1V	4.13	18.4	24
APS0530MR56F	0.56	100KHz/0.1V	4.52	17.7	20.2
APS0530MR60F	0.6	100KHz/0.1V	4.52	17.7	20
APS0530MR80F	0.8	100KHz/0.1V	5.65	13.1	18
APS0530MR82F	0.82	100KHz/0.1V	5.78	12.9	17.6
APS0530M1R0F	1	100KHz/0.1V	7.6	12.2	14.3
APS0530M1R2F	1.2	100KHz/0.1V	9.7	11	13.5
APS0530M1R5F	1.5	100KHz/0.1V	11.2	10.5	12.5
APS0530M1R8F	1.8	100KHz/0.1V	12.7	10.1	11.3
APS0530M2R2F	2.2	100KHz/0.1V	14.5	9.7	9
APS0530M3R3F	3.3	100KHz/0.1V	23.1	8.1	8.7
APS0530M4R7F	4.7	100KHz/0.1V	36.3	5.9	7
APS0550M5R6F	5.6	100KHz/0.1V	24.2	7.2	7.2
APS0550M6R8F	6.8	100KHz/0.1V	28.6	6.4	6.6
APS0550M8R2F	8.2	100KHz/0.1V	32.5	6.1	6.1
APS0550M100F	10	100KHz/0.1V	43	5	5.4
APS0630MR18F	0.18	100KHz/0.1V	1.75	32	39
APS0630MR33F	0.33	100KHz/0.1V	2.5	25	30
APS0630MR56F	0.56	100KHz/0.1V	3.31	22	29
APS0630MR68F	0.68	100KHz/0.1V	5.17	20	25
APS0630M1R0F	1	100KHz/0.1V	6.05	18	23
APS0630M1R2F	1.2	100KHz/0.1V	7.4	16	22
APS0630M1R5F	1.5	100KHz/0.1V	9.13	15	20
APS0630M1R8F	1.8	100KHz/0.1V	10.2	14	18.2
APS0630M2R2F	2.2	100KHz/0.1V	12.2	10	15.9

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Part Number	Inductance (uH)±20%	Test Frequency	DC Resistance (mΩ) Max.	Heat Rating Current I <sub>rms</sub> (A)Typ.	Saturation Current I <sub>sat</sub> (A)Typ.
APS0630M3R3F	3.3	100KHz/0.1V	20.8	8	12.2
APS0630M4R5F	4.5	100KHz/0.1V	25.3	7	10
APS0630M4R7F	4.7	100KHz/0.1V	26	6	9
APS0650MR82F	0.82	100KHz/0.1V	4.18	21	20
APS0650M1R0F	1	100KHz/0.1V	4.52	20	18
APS0650M1R2F	1.2	100KHz/0.1V	5.83	18	16
APS0650M1R5F	1.5	100KHz/0.1V	6.3	17	14.5
APS0650M1R8F	1.8	100KHz/0.1V	7.1	16	13.5
APS0650M2R2F	2.2	100KHz/0.1V	8.5	13	12
APS0650M3R3F	3.3	100KHz/0.1V	12.5	11	10
APS0650M4R3F	4.3	100KHz/0.1V	16.2	9	8.5
APS0650M4R7F	4.7	100KHz/0.1V	18.4	8.5	8
APS0650M5R6F	5.6	100KHz/0.1V	22	7	8.3
APS0650M6R8F	6.8	100KHz/0.1V	25.4	6.6	7
APS0650M8R2F	8.2	100KHz/0.1V	31.5	6.2	6.8
APS0660M1R0F	1	100KHz/0.1V	4.4	21	24
APS0660M1R5F	1.5	100KHz/0.1V	6.1	17.5	20
APS0660M2R2F	2.2	100KHz/0.1V	8.1	14	16.5
APS0660M3R3F	3.3	100KHz/0.1V	12.3	12	13
APS0660M4R7F	4.7	100KHz/0.1V	14.4	11	10.5
APS0660M5R6F	5.6	100KHz/0.1V	15.9	10	9.9
APS0660M6R8F	6.8	100KHz/0.1V	20.8	9	9.2
APS0660M8R2F	8.2	100KHz/0.1V	26.4	8	8.4
APS0660M100F	10	100KHz/0.1V	29.82	7	7.6
APS0660M150F	15	100KHz/0.1V	43.75	6	5.8
APS0660M220F	22	100KHz/0.1V	60.63	5	5.6
APS0720MR27F	0.27	100KHz/0.1V	3.5	21	35
APS0720MR31F	0.31	100KHz/0.1V	4.8	20	34
APS0720MR33F	0.33	100KHz/0.1V	4.8	19	34
APS0720MR47F	0.47	100KHz/0.1V	6.2	17	28
APS0720MR68F	0.68	100KHz/0.1V	9.2	13	25
APS0720M1R0F	1	100KHz/0.1V	10.8	11	23
APS0730M1R0F	1	100KHz/0.1V	5	21.8	28
APS0730M1R5F	1.5	100KHz/0.1V	8.25	15.3	23.5

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Part Number	Inductance (uH)±20%	Test Frequency	DC Resistance (mΩ) Max.	Heat Rating Current Irms (A)Typ.	Saturation Current Isat (A)Typ.
APS0730M2R2F	2.2	100KHz/0.1V	13.7	13	17
APS0730M2R7F	2.7	100KHz/0.1V	15.4	11.4	13.5
APS0730M3R3F	3.3	100KHz/0.1V	18	10	13
APS0730M4R7F	4.7	100KHz/0.1V	26.7	9	12.2
APS0730M5R6F	5.6	100KHz/0.1V	33.2	7.3	11.5
APS0730M6R8F	6.8	100KHz/0.1V	42.5	6.8	11
APS0730M8R2F	8.2	100KHz/0.1V	48.73	5.9	9
APS0770M3R3F	3.3	100KHz/0.1V	9.42	15.1	19.4
APS0770M4R7F	4.7	100KHz/0.1V	14.26	13.6	15.2
APS0770M6R8F	6.8	100KHz/0.1V	19.6	9.2	12.8
APS0880M1R8F	1.8	100KHz/0.1V	4	24	28
APS0880M2R2F	2.2	100KHz/0.1V	4.3	21.5	25
APS0880M3R3F	3.3	100KHz/0.1V	7.3	18	23
APS0880M4R7F	4.7	100KHz/0.1V	9.8	14.6	19
APS0880M6R8F	6.8	100KHz/0.1V	14.3	11.3	14.5
APS0880M100F	10	100KHz/0.1V	22.9	8.7	11
APS1030MR28F	0.28	100KHz/0.1V	1.6	35	65
APS1030MR56F	0.56	100KHz/0.1V	2.75	32	44
APS1030MR82F	0.82	100KHz/0.1V	4.1	25	38
APS1030MR90F	0.9	100KHz/0.1V	4.2	24	36
APS1030M1R0F	1	100KHz/0.1V	4.95	23	35
APS1030M1R5F	1.5	100KHz/0.1V	6.6	18	30
APS1060MR68F	0.68	100KHz/0.1V	1.5	34	55
APS1060M1R0F	1	100KHz/0.1V	2.32	28.5	48
APS1060M1R2F	1.2	100KHz/0.1V	2.64	26.5	45
APS1060M1R5F	1.5	100KHz/0.1V	3.3	24.5	40
APS1060M2R2F	2.2	100KHz/0.1V	4.84	20	35
APS1060M3R3F	3.3	100KHz/0.1V	7.7	16.8	28
APS1060M4R7F	4.7	100KHz/0.1V	10.72	14	25
APS1010M1R0F	1	100KHz/0.1V	1.2	40	50
APS1010M2R2F	2.2	100KHz/0.1V	2.8	32	34
APS1010M3R3F	3.3	100KHz/0.1V	4.1	25	27.4
APS1010M4R7F	4.7	100KHz/0.1V	5.7	24	25.4
APS1010M5R6F	5.6	100KHz/0.1V	7.2	21.2	23.6

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Part Number	Inductance (uH)±20%	Test Frequency	DC Resistance (mΩ) Max.	Heat Rating Current I <sub>rms</sub> (A)Typ.	Saturation Current I <sub>sat</sub> (A)Typ.
APS1010M6R8F	6.8	100KHz/0.1V	8.9	18.5	21.8
APS1010M8R2F	8.2	100KHz/0.1V	12.4	17.1	18.3
APS1010M100F	10	100KHz/0.1V	13.8	15.5	17.5
APS1010M150F	15	100KHz/0.1V	19.3	13.8	15.5
APS1580M2R0F	2	100KHz/0.1V	2.2	40	52
APS1580M2R2F	2.2	100KHz/0.1V	2.5	37	49
APS1580M3R0F	3	100KHz/0.1V	3	34.5	41
APS1580M4R2F	4.2	100KHz/0.1V	4.7	27	33
APS1580M4R7F	4.7	100KHz/0.1V	5.2	26.5	32
APS1580M5R3F	5.3	100KHz/0.1V	5.3	26	31
APS1580M6R2F	6.2	100KHz/0.1V	6.5	23	31
APS1580M7R2F	7.2	100KHz/0.1V	7.2	21	29
APS1580M8R2F	8.2	100KHz/0.1V	7.9	19	25
APS1510M4R7F	4.7	100KHz/0.1V	3.8	29	39
APS1510M5R6F	5.6	100KHz/0.1V	4.2	28	37
APS1510M6R8F	6.8	100KHz/0.1V	4.6	26	36
APS1510M8R2F	8.2	100KHz/0.1V	7.2	24	30
APS1510M100F	10	100KHz/0.1V	8.6	22	26.5
APS1510M150F	15	100KHz/0.1V	11.5	18	23
APS1510M220F	22	100KHz/0.1V	15.8	14	18.7
APS1510M330F	33	100KHz/0.1V	20	12	16.7
APS1513M4R7F	4.7	100KHz/0.1V	3.3	31	44
APS1513M5R6F	5.6	100KHz/0.1V	3.9	29	40
APS1513M6R8F	6.8	100KHz/0.1V	4.2	27	37
APS1513M8R2F	8.2	100KHz/0.1V	5.74	26	33
APS1513M100F	10	100KHz/0.1V	7	25	30
APS1513M150F	15	100KHz/0.1V	7.5	22	25.5
APS1513M220F	22	100KHz/0.1V	13.86	17	22
APS1513M330F	33	100KHz/0.1V	22.2	14	19