

SMPI Series

Features

Carbonyl powder inductor
 Low loss realized with low DCR
 Very low acoustic noise and very low leakage flux noise
 Frequency up to 3 MHz
 High reliability.
 Halogen Free & ROHS compliant

Applications

Laptops and PCs
 Switch and servers
 Base stations
 DC/DC converters
 Battery powered devices
 SSD modules

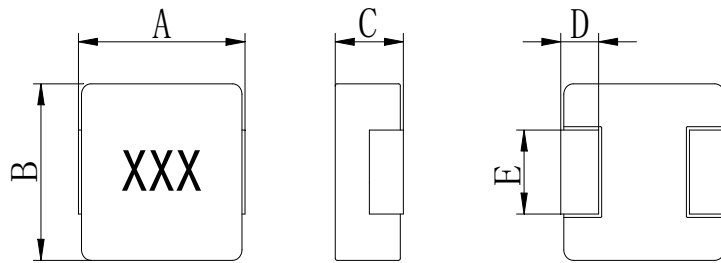
Product Identification

SMPI XXXX TL - XXXX
 For example: SMPI0630TL-4R7M

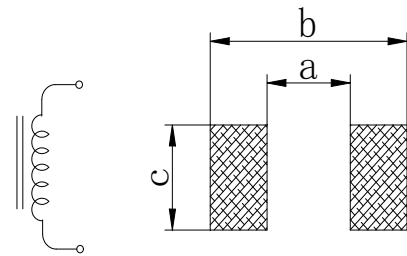
General Specifications

Test Frequency.....100KHz
 Test Voltage.....1.0V
 Parameters Test Temp.....20℃
 Operation Temp.....-40℃ to +125℃
 (Including temperature Rise)
 Storage Temp.....0~40℃
 Storage Humidity.....<70% RH
 Resistance to Soldering Heat.....260℃ for 10 sec
 Rated Current.....Ind. drops of 30% typ at Isat
 Temperature Rise.....40℃ typ. at Irms

Shape And Dimensions



Electrical Schematic & PAD Layout



Dimensions In mm

TYPE	A	B	C	D	E	a	b	c
	±0.3	±0.3	±0.2	Ref	Ref	Ref	Ref	Ref
0420	4.40±0.35	4.20	1.80	0.80	2.00	2.20	5.20	2.50
0520	5.70	5.20	1.80	1.20	2.00	2.20	6.00	2.50
0530	5.70	5.20	2.80	1.20	2.00	2.20	6.00	2.50
0618	7.30	6.60	1.60	1.60	3.00	3.70	8.40	3.50
0624	7.30	6.60	2.20	1.60	3.00	3.70	8.40	3.50
0630	7.30	6.60	2.80	1.60	3.00	3.70	8.40	3.50
0650	7.30	6.60	4.80	1.60	3.00	3.70	8.40	3.50
1030	11.0±0.5	10.0	2.80	2.00	3.00	5.40	13.6	4.10
1040	11.0±0.5	10.0	3.80	2.00	3.00	5.40	13.6	4.10
1235	13.5±0.5	12.6	3.30	2.00	See Remarks	8.00	14.2	5.00
1250	13.5±0.5	12.6	4.70	2.00	See Remarks	8.00	14.2	5.00
1260	13.5±0.5	12.6	5.70±0.3	2.00	See Remarks	8.00	14.2	5.00
1265	13.5±0.5	12.6	6.20±0.3	2.00	See Remarks	8.00	14.2	5.00
1770	17.5±0.5	17.0	7.00Max	2.50	12.0	11.2	18.2	12.8

Remarks:

series	E	Dimensions
1235	3.85 Ref	R47/R68/R82
	4.70 Ref	1R0/1R5/2R2/3R3/4R7
1250	3.85 Ref	R33/R47/R56/R68/R82/1R0/1R5
	4.70 Ref	2R2/3R3/4R7/6R8/8R2/100
1260	3.85 Ref	R47/R68/1R0/1R5
	4.70 Ref	2R2/3R3/4R7/6R8/8R2/100/150/220/330/470/680
1265	3.85 Ref	R47/R68/1R0/1R5
	4.70 Ref	2R2/3R3/4R7/6R8/8R2/100/150/220/330/470/680

Standard Specifications

Stamp	Inductance (uH)	SMPI0420			SMPI0520			SMPI0530			SMPI0618		
		DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ
R22	0.22				5.50	25.0	15.0	4.40	21.0	15.5	3.00	26.0	16.0
R33	0.33	8.60	18.0	10.0	7.30	21.3	12.0	5.00	18.0	14.0	5.80	22.0	14.0
R47	0.47	14.0	12.0	8.00	8.60	18.0	11.5	7.40	16.0	12.0	7.40	18.0	12.0
R68	0.68	19.0	10.0	7.00	12.4	12.8	10.0	12.0	14.0	8.50	11.0	17.0	10.0
R82	0.82							13.0	12.5	8.00	14.0	15.5	8.50
1R0	1.00	27.0	8.50	5.00	20.0	13.7	7.00	14.0	11.0	7.00	17.0	14.0	7.00
1R5	1.50	42.0	7.00	4.50	30.5	9.80	5.50	25.0	10.0	6.00	25.2	13.0	6.00
2R2	2.20	61.0	6.00	4.00	50.0	9.00	4.20	35.0	9.00	5.50	35.0	11.0	6.00
3R3	3.30	76.0	4.00	3.50	76.0	7.30	3.30	38.0	8.00	5.00	46.0	9.00	5.00
4R7	4.70	105	3.50	2.60	116	5.00	2.80	53.0	6.00	4.60	76.0	7.00	4.00
5R6	5.60							63.0	4.50	4.25			
6R8	6.80	172	2.80	2.10	150	3.80	2.40	76.2	4.30	4.00	104	5.50	3.00
100	10.0	243	2.30	1.80	199	3.40	2.30	128	3.50	2.75	160	3.50	2.30
220	22.0				390	1.80	1.50						

Note: When ordering, please specify tolerance code. Tolerance: M=±20%, N=±30%

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Standard Specifications

Stamp	Inductance (uH)	SMPI0624			SMPI0630			SMPI0650			SMPI1030		
		DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ
R10	0.10				1.70	60.0	32.5						
R15	0.15				1.90	45.0	27.0						
R22	0.22	3.20	34.0	21.0	2.80	40.0	23.0	1.90	35.0	25.0			
R33	0.33	4.40	30.0	18.0	3.90	32.0	20.0	3.00	32.0	25.0			
R47	0.47	5.10	26.0	15.0	4.20	26.0	17.5	3.90	30.0	22.0			
R56	0.56				5.00	25.5	16.5						
R68	0.68	7.20	21.0	13.0	5.50	25.0	15.5	4.50	24.0	18.0			
R82	0.82	9.50	17.0	11.0	8.00	24.0	13.0						
1R0	1.00	13.5	16.0	10.0	10.0	22.0	11.0	6.50	20.0	15.0	6.00	20.0	15.0
1R5	1.50	20.0	15.0	9.00	15.0	18.0	9.00	9.00	16.5	12.0			
2R2	2.20	28.0	14.0	7.00	20.0	14.0	8.00	12.0	14.0	10.0			
3R3	3.30	39.0	10.0	6.00	30.0	13.5	6.00	20.9	12.0	8.00	16.0	14.0	9.00
4R7	4.70	50.0	9.00	5.50	40.0	10.0	5.50	30.8	10.0	6.50	22.5	13.0	7.00
5R6	5.60				48.0	9.00	5.00	49.0	9.00	6.00			
6R8	6.80	72.0	7.00	4.00	60.0	8.00	4.50	51.5	8.50	5.50			
8R2	8.20				68.0	7.50	4.00	63.0	8.00	5.00			
100	10.0	101	5.00	3.20	85.0	6.00	3.50	69.0	7.50	4.00	55.0	8.00	5.00
150	15.0				123	4.00	3.00	92.0	6.00	3.50			
220	22.0				190	3.50	2.00	170	5.50	2.50			
330	33.0				240	2.50	2.00	200	3.50	2.00			
470	47.0				363	2.00	1.75						

Noe: When ordering, please specify tolerance code. Tolerance: M=±20%, N=±30%

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Standard Specifications

Stamp	Inductance (uH)	SMPI1040			SMPI1235			SMPI1250			SMPI1260		
		DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ
R22	0.22	1.00	60.0	35.0									
R33	0.33							0.90	80.0	42.0			
R36	0.36	1.20	60.0	31.0									
R45	0.45	1.50	45.0	29.0									
R47	0.47	1.50	43.0	28.0	2.00	55.0	32.0	1.10	65.0	38.0	1.30	64.0	38.0
R56	0.56	1.80	40.0	25.0				1.50	55.0	36.0			
R68	0.68	2.70	39.0	22.0	2.50	49.0	28.0	1.70	54.0	34.0	1.70	57.0	33.0
R82	0.82				3.00	44.0	25.0	2.10	52.0	31.0			
1R0	1.00	3.30	36.0	18.0	3.50	40.0	24.0	2.50	50.0	29.0	2.40	53.0	29.0
1R5	1.50	4.60	33.0	16.0	5.50	35.0	19.0	3.30	48.0	27.0	3.20	50.0	26.0
2R2	2.20	7.00	27.0	12.0	8.00	29.0	16.0	5.50	32.0	20.0	4.70	43.0	21.0
3R3	3.30	11.8	20.0	11.0	12.0	27.0	12.0	9.20	32.0	15.0	7.10	35.0	17.0
4R7	4.70	15.5	17.0	10.0	18.0	22.0	9.00	15.0	27.0	12.0	11.5	30.0	16.0
5R6	5.60	19.3	14.0	9.00				16.5	22.0	11.5			
6R8	6.80	23.3	13.5	8.50				18.5	21.0	11.0	13.8	25.0	15.0
8R2	8.20							22.5	18.0	9.50	16.0	23.0	11.0
100	10.0	30.0	12.0	7.50				25.5	16.0	9.00	20.7	21.0	11.0
150	15.0	45.0	10.0	6.25							29.0	16.0	9.00
220	22.0	74.0	7.00	5.00							39.5	14.0	8.00
330	33.0	112	5.00	3.50							75.0	12.0	6.00
470	47.0	167	4.50	3.00							90.0	11.0	5.50
680	68.0										140	9.00	5.00

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Standard Specifications

Stamp	Inductance (uH)	SMPI1265			SMPI1770		
		DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ	DCR (mΩ) Max	Isat (A) Typ	Irms (A) Typ
R47	0.47	1.20	63.0	41.0			
R68	0.68	1.50	55.0	35.0			
1R0	1.00	2.30	48.0	30.0	2.00	60.0	52.0
1R5	1.50	3.00	45.0	27.0	2.50	52.0	47.0
2R2	2.20	4.20	37.0	22.0	2.70	47.0	43.5
3R3	3.30	6.80	30.0	18.0	3.90	45.0	28.0
4R7	4.70	8.40	28.0	13.5	5.50	41.0	25.0
6R8	6.80	11.5	18.0	11.5	9.20	32.0	19.0
8R2	8.20	15.5	16.0	10.5			
100	10.0	16.5	15.5	10.0	13.0	24.0	16.5
150	15.0	28.0	13.0	9.00	20.5	23.0	12.5
220	22.0	37.0	12.0	9.00	26.5	18.0	12.0
330	33.0	58.0	11.0	8.00	44.0	15.0	10.7
470	47.0	90.0	9.50	6.50	55.0	9.50	8.70
680	68.0	130	7.80	4.80	80.0	8.00	7.00
101	100				118	6.50	5.30

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