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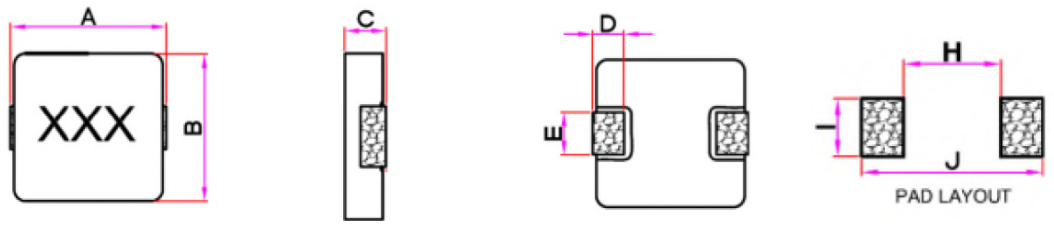
RoHS

Shielded SMT Power Inductor
SPI0603FW-1005FW Series

■ SHAPES AND DIMENSIONS



Unit: mm

P/N	A	B	C	D	E
SPI0603FW	7.0±0.3	6.6±0.2	2.8±0.2	1.6±0.3	3.0±0.3
SPI1004FW	11.5MAX	10.0±0.3	3.8±0.2	2.0±0.5	3.0±0.5
SPI1005FW	11.5MAX	10.0±0.3	4.8±0.2	2.0±0.5	3.0±0.5

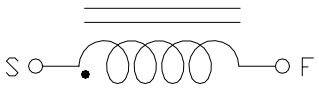
Recommend PAD Layout

H	I	J
3.7	3.5	8.4
5.4	4.1	13.6
5.4	4.1	13.6

Marking :

XXX = Inductance

Equivalent circuit



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■ PART NUMBER CODE

SPI	0603	FW	-	4R7	M	A
1	2	3		4	5	6

1. Series Name
2. Size Code
3. Type Code
4. Inductance(R=Decimal Point) Unit：μH ; 4R7 =4.7uH
5. Inductance tolerance: ”M”±20%
6. Soldering：A=Lead Free

■ ELECTRICAL CHARACTERISTICS

1. Test equipments

1.1. L : Wayne kerr 3260B LCR meter with Wayne kerr 3265B bias current source.

1.2. DCR: Milli-ohm Meter.

1.3. Operating temperature range from -55℃ to 125℃ (includes self-temperature rise).

* Equivalent measurement equipment may be used.

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2. Part Number and Characteristics Table

Part No.	Inductance L(uH)	DCR（mΩ）		Isat(A) Typ.	Irms(A) Typ.
		Typ.	Max.		
SPI0603FW-R22MA	0.22	2.5	3.0	34.0	24.0
SPI0603FW-R33MA	0.33	3.0	3.5	25.0	21.0
SPI0603FW-R47MA	0.47	3.5	4.1	20.0	18.0
SPI0603FW-R56MA	0.56	3.8	4.5	18.0	16.5
SPI0603FW-R68MA	0.68	4.5	5.3	17.0	16.0
SPI0603FW-R82MA	0.82	5.1	6.0	16.0	14.0
SPI0603FW-1R0MA	1.0	6.4	7.4	15.0	12.0
SPI0603FW-1R5MA	1.5	10.1	12.1	12.0	12.0
SPI0603FW-2R2MA	2.2	13.2	15.0	10.0	9.5
SPI0603FW-3R3MA	3.3	19.1	22.0	9.5	8.5
SPI0603FW-4R7MA	4.7	29.4	33.0	9.0	6.0
SPI0603FW-5R6MA	5.6	36.8	42.0	6.5	5.5
SPI0603FW-6R8MA	6.8	44.0	48.0	6.0	5.0
SPI0603FW-8R2MA	8.2	56.0	60.0	5.5	5.0
SPI0603FW-100MA	10	60.0	68.0	5.5	4.5
SPI0603FW-150MA	15	100	113	4.0	3.0
SPI0603FW-220MA	22	138	170	3.0	2.5
SPI0603FW-330MA	33	183	270	2.5	2.0
SPI0603FW-470MA	47	354	385	2.0	1.5

Note:

- All test data is referenced to 25°C ambient.
- Test Condition: 100KHz, 0.25 Vrms.
- Isat (Typ): DC current（A）that will cause L0 to drop approximately 30%.
- Irms (Typ): DC current（A）that will cause an approximate ΔT of 40℃.

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Part No.	Inductance L(uH)	DCR（mΩ）		Isat(A) Typ.	Irms(A) Typ.
		Typ.	Max.		
SPI1004FW-R15MA	0.15	0.52	0.65	75.0	45.0
SPI1004FW-R22MA	0.22	0.87	1.0	60.0	35.0
SPI1004FW-R30MA	0.30	0.95	1.1	45.0	35.0
SPI1004FW-R36MA	0.36	1.07	1.2	45.0	30.0
SPI1004FW-R47MA	0.47	1.56	1.7	40.0	30.0
SPI1004FW-R56MA	0.56	1.64	1.8	33.0	25.0
SPI1004FW-R68MA	0.68	2.1	2.4	30.0	23.0
SPI1004FW-R80MA	0.80	2.5	2.7	29.0	23.0
SPI1004FW-1R0MA	1.0	2.9	3.3	28.0	19.0
SPI1004FW-1R5MA	1.5	3.7	4.2	24.0	16.0
SPI1004FW-2R2MA	2.2	5.8	7.0	16.5	12.0
SPI1004FW-3R3MA	3.3	10.0	11.8	16.0	11.0
SPI1004FW-4R7MA	4.7	17.3	20.0	13.0	9.0
SPI1004FW-6R8MA	6.8	22.5	25.0	12.0	8.5
SPI1004FW-8R2MA	8.2	24.7	27.0	9.0	8.0
SPI1004FW-100MA	10	26.8	30.0	8.5	7.8
SPI1004FW-150MA	15	39.0	45.0	7.0	6.5
SPI1004FW-220MA	22	56.7	66.0	5.5	5.0
SPI1004FW-330MA	33	78.0	92.0	4.8	4.4
SPI1004FW-470MA	47	125	145	3.5	3.3
SPI1004FW-680MA	68	167	195	3.0	2.5
SPI1004FW-101MA	100	290	340	2.3	2.0

Note:

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- Test Condition: 100KHz, 0.25 Vrms.
- Isat (Typ): DC current（A）that will cause L0 to drop approximately 30%.
- Irms (Typ): DC current（A）that will cause an approximate ΔT of 40℃.

Part No.	Inductance L(uH)	DCR（mΩ）		Isat(A) Typ.	Irms(A) Typ.
		Typ.	Max.		
SPI1005FW-R22MA	0.22	0.68	0.8	65.0	37.0
SPI1005FW-1R0MA	1.0	2.6	3.0	30.0	23.0
SPI1005FW-1R5MA	1.5	3.2	3.8	25.0	21.0
SPI1005FW-2R2MA	2.2	4.5	6.0	19.0	15.0
SPI1005FW-3R3MA	3.3	8.4	10.0	16.0	13.0
SPI1005FW-4R7MA	4.7	12.5	14.0	15.0	11.0
SPI1005FW-5R6MA	5.6	14.5	17.0	14.0	9.5
SPI1005FW-6R8MA	6.8	16.4	18.5	14.0	9.0
SPI1005FW-100MA	10	23.5	28.0	10.0	8.0
SPI1005FW-150MA	15	34.7	42.0	7.5.0	6.5
SPI1005FW-220MA	22	45.0	50.0	6.0	5.5
SPI1005FW-330MA	33	73.4	86.0	5.2	4.8
SPI1005FW-470MA	47	115.4	127	4.5	3.7
SPI1005FW-101MA	100	267	290	2.8	2.1

Note:

- All test data is referenced to 25°C ambient.
- Test Condition: 100KHz, 0.25 Vrms.
- Isat (Typ): DC current（A）that will cause L0 to drop approximately 30%.
- Irms (Typ): DC current（A）that will cause an approximate ΔT of 40℃.

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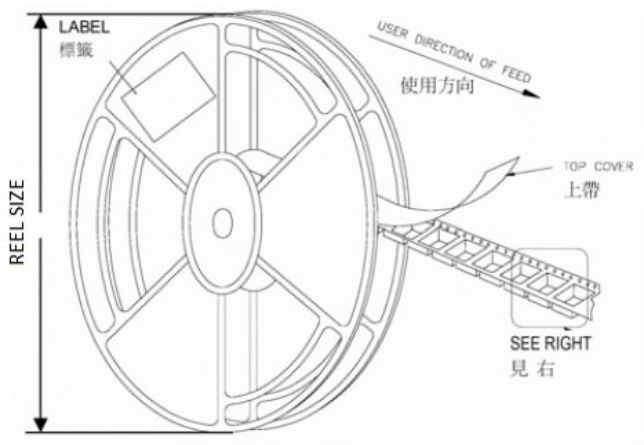
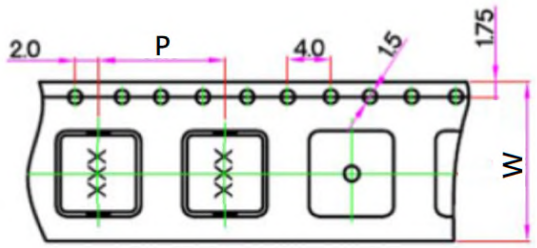
■ REEL DIMENSIONS AND PACKAGING QUANTITY





Unit: mm

TYPE	W	P	REEL SIZE	PCS / REEL
SPI0603FW	16	12	330 mm (13”)	1500
SPI1004FW	24	16	330 mm (13”)	500
SPI1005FW	24	16	330 mm (13”)	500

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