



## SMDFSR SERIES

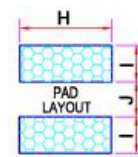
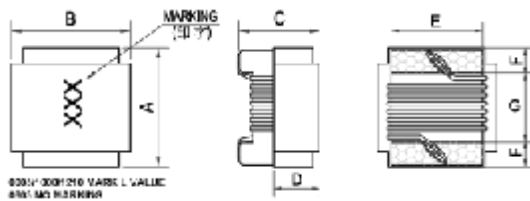
MINIATURE SMD CHIP INDUCTORS

### Applications :

- XDSL/CATV/Wireless Lan /Cable Modem for single Line and other small-sized general electronic applications.



### Shape and Dimensions (Dimensions are in mm) :



Item	A Max.	B Max.	C Max.	D	E	F	G
0603	1.80	1.12	1.02	0.38	0.76	0.33	0.86
0805	2.29	1.73	1.52	0.51	1.27	0.51	1.02
1008	2.92	2.79	2.10	0.51	2.03	0.51	1.52

Item	H	I	J
0603	1.02	0.64	0.64
0805	1.78	1.02	0.76
1008	2.54	1.02	1.27

### Features :

- Miniature SMD wire wound chip inductors ~~have been~~ designed especially for the need of ~~today's~~ small-sized applications.
  - The SMDFSR series is recommended for single line application.
  - Resin-coated surface enables excellent mounting.
  - Their ferrite core inductors have lower DCR and higher Current ratings.
- The inductance values from 0.047 to 10uH.

### Characteristics :

- Rated Current : The current when temperature of coil increase up to max.  $\Delta T=20^{\circ}\text{C}$ . ( $T_a=20^{\circ}\text{C}$ )
- Operating temp:  $-25^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ .

### Product Identification :

**SMD F S R 0805 - 1R0 J**  
 (1) (2) (3) (4) (5) (6) (7)

- (1) Type : Surface Mount Devices.
- (2) Material F: Ferrite core.
- (3) Terminal S : with Silver wraparound.
- (4) Packaging R : Tape and Reel.
- (5) Dimension.
- (6) Inductance : **1R0** for 1.0 uH.
- (7) Inductance tolerance :  
**J:±5%;K:±10%;M:±20%.**

### Test equipments :

- L&Q&SRF: Agilent E4991A RF Impedance analyzer with Agilent 16197A test fixture.
- DCR: Milli-ohm meter.
- Electrical specifications at  $25^{\circ}\text{C}$ .

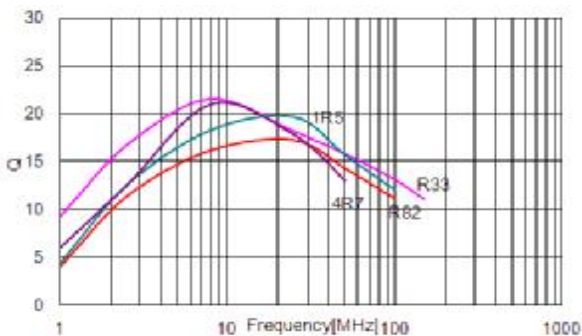


### I SMDFSR0603E series

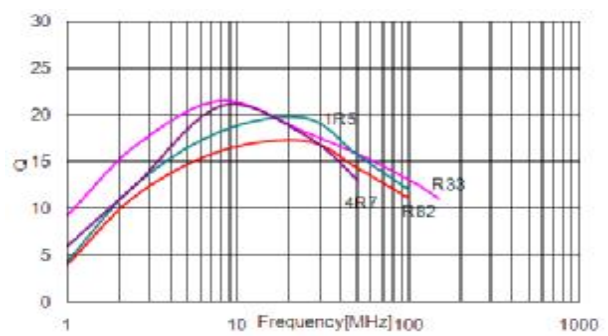
Part No.	L (uH)	Tole. (±%)	Q Ref.	Test Freq. (MHz) L&Q	SRF (MHz) Min.	DCR (Ω) Max.	Rated Current (mA) Max.	Color code
SMDFSR0603E-47N□	0.047	5, 10	17	7.9	1700	0.075	1500	BLK
SMDFSR0603E-72N□	0.072	5, 10	17	7.9	1700	0.12	1500	BRN
SMDFSR0603E-R10□	0.10	5, 10	17	7.9	1650	0.13	1500	RED
SMDFSR0603E-R12□	0.12	5, 10	17	7.9	1400	0.15	1500	ORN
SMDFSR0603E-R15□	0.15	5, 10	17	7.9	1350	0.15	1450	YEL
SMDFSR0603E-R18□	0.18	5, 10	17	7.9	1350	0.15	1400	GRN
SMDFSR0603E-R22□	0.22	5, 10	17	7.9	1150	0.16	1350	BLU
SMDFSR0603E-R24□	0.24	5, 10	17	7.9	1050	0.19	1300	VIO
SMDFSR0603E-R27□	0.27	5, 10	17	7.9	1050	0.30	1050	GRY
SMDFSR0603E-R33□	0.33	5, 10	17	7.9	850	0.46	1200	WHT
SMDFSR0603E-R39□	0.39	5, 10	17	7.9	810	0.51	1200	BLK
SMDFSR0603E-R47□	0.47	5, 10	17	7.9	720	0.62	1050	BRN
SMDFSR0603E-R56□	0.56	5, 10	17	7.9	600	0.44	850	RED
SMDFSR0603E-R68□	0.68	5, 10	17	7.9	600	0.52	850	ORN
SMDFSR0603E-R78□	0.78	5, 10	17	7.9	460	0.83	850	YEL
SMDFSR0603E-R82□	0.82	5, 10	17	7.9	480	0.69	750	GRN
SMDFSR0603E-1R0□	1.0	5, 10	18	7.9	310	0.81	600	BLU
SMDFSR0603E-1R2□	1.2	5, 10	17	7.9	270	0.87	550	VIO
SMDFSR0603E-1R5□	1.5	5, 10	17	7.9	270	1.06	540	GRY
SMDFSR0603E-1R8□	1.8	5, 10	17	7.9	230	1.10	520	WHT
SMDFSR0603E-2R2□	2.2	5, 10	17	7.9	140	1.20	500	BLK
SMDFSR0603E-2R7□	2.7	5, 10	17	7.9	105	1.50	480	BRN
SMDFSR0603E-3R3□	3.3	5, 10	17	7.9	84	1.50	440	RED
SMDFSR0603E-3R9□	3.9	5, 10	17	7.9	80	1.60	430	ORN
SMDFSR0603E-4R7□	4.7	5, 10	18	7.9	69	2.10	420	YEL
SMDFSR0603E-5R6□	5.6	5, 10	18	7.9	65	2.60	400	GRN
SMDFSR0603E-6R8□	6.8	5, 10	19	7.9	55	3.10	400	BLU
SMDFSR0603E-8R2□	8.2	5, 10	17	7.9	42	3.60	400	GRY
SMDFSR0603E-100□	10	5, 10	19	7.9	40	4.80	300	WHT

### Typical performance curves :

Inductance vs Frequency Curve



Q vs Frequency Curve



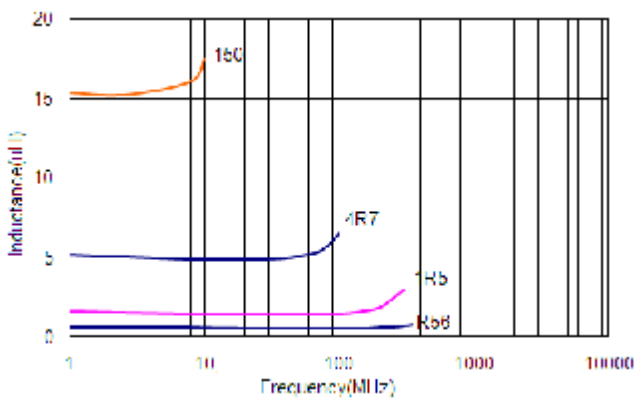


## I SMDFSR0805 series

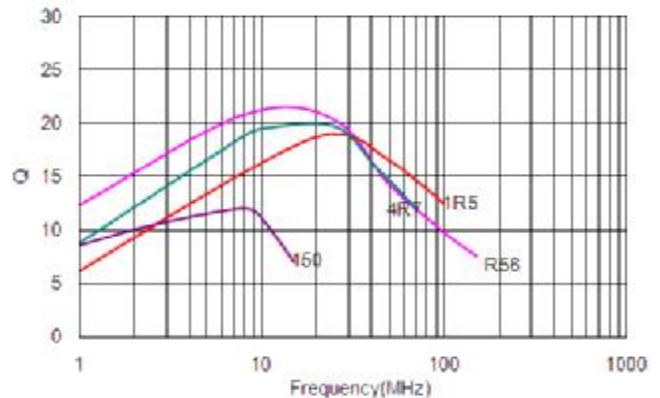
Part No.	Inductance L (uH)	Tolerance (±%)	Q Min.	Test Freq. (MHz) L&Q	SRF (MHz) Min.	DCR (Ω) Max.	Rated Current (mA) Max.
SMDFSR0805-R47□	0.47	5, 10, 20	10	25.2	450	0.40	500
SMDFSR0805-R56□	0.56	5, 10, 20	10	25.2	450	0.40	500
SMDFSR0805-R68□	0.68	5, 10, 20	10	25.2	400	0.60	500
SMDFSR0805-R82□	0.82	5, 10, 20	10	25.2	400	0.80	500
SMDFSR0805-1R0□	1.0	5, 10, 20	10	7.96	360	1.00	430
SMDFSR0805-1R2□	1.2	5, 10, 20	10	7.96	350	1.15	410
SMDFSR0805-1R5□	1.5	5, 10, 20	10	7.96	300	1.20	400
SMDFSR0805-1R8□	1.8	5, 10, 20	10	7.96	200	1.35	380
SMDFSR0805-2R2□	2.2	5, 10, 20	10	7.96	170	1.50	350
SMDFSR0805-2R7□	2.7	5, 10, 20	10	7.96	100	1.70	320
SMDFSR0805-3R3□	3.3	5, 10, 20	10	7.96	90	1.80	300
SMDFSR0805-3R9□	3.9	5, 10, 20	10	7.96	90	1.95	280
SMDFSR0805-4R7□	4.7	5, 10, 20	10	7.96	85	2.05	250
SMDFSR0805-5R6□	5.6	5, 10, 20	10	7.96	70	2.30	240
SMDFSR0805-6R8□	6.8	5, 10, 20	10	7.96	55	2.60	220
SMDFSR0805-8R2□	8.2	5, 10, 20	10	7.96	50	3.00	180
SMDFSR0805-100□	10	5, 10, 20	8	2.52	30	3.20	150
SMDFSR0805-120□	12	5, 10, 20	8	2.52	17	3.50	110
SMDFSR0805-150□	15	5, 10, 20	8	2.52	16	4.20	100
SMDFSR0805-180□	18	5, 10, 20	8	2.52	15	4.50	95
SMDFSR0805-220□	22	5, 10, 20	8	2.52	14	6.00	80

### Typical performance curves :

Inductance vs Frequency Curve



Q vs Frequency Curve



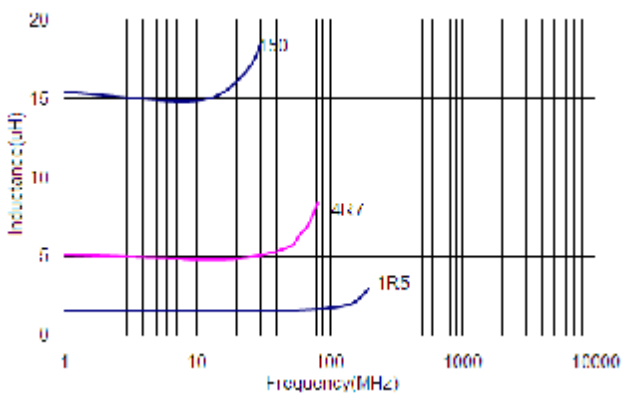


## I SMDFSR1008 series

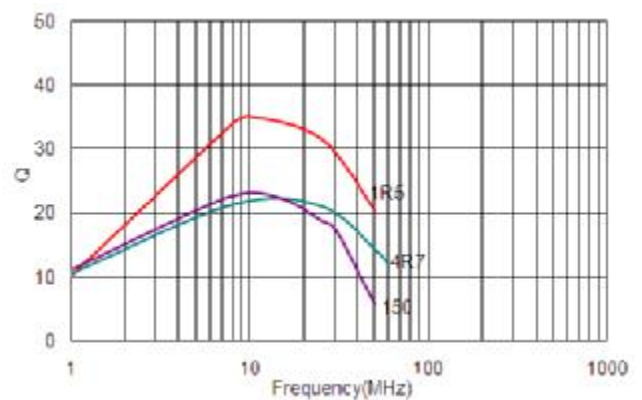
Part No.	Inductance L (uH)	Tolerance (±%)	Q Min.	Test Freq. (MHz) L&Q	SRF (MHz) Min.	DCR (Ω) Max.	Rated Current (mA) Max.
SMDFSR1008-R68□	0.68	10, 20	12	25.2	330	0.45	600
SMDFSR1008-R82□	0.82	10, 20	12	25.2	300	0.62	600
SMDFSR1008-1R0□	1.0	5, 10, 20	12	25.2	300	0.55	580
SMDFSR1008-1R2□	1.2	5, 10, 20	12	7.96	250	0.75	550
SMDFSR1008-1R5□	1.5	5, 10, 20	12	7.96	230	0.85	400
SMDFSR1008-1R8□	1.8	5, 10, 20	12	7.96	168	0.95	320
SMDFSR1008-2R2□	2.2	5, 10, 20	12	7.96	150	1.30	315
SMDFSR1008-2R7□	2.7	5, 10, 20	12	7.96	100	1.40	300
SMDFSR1008-3R3□	3.3	5, 10, 20	12	7.96	80	1.50	280
SMDFSR1008-3R9□	3.9	5, 10, 20	12	7.96	60	1.55	250
SMDFSR1008-4R7□	4.7	5, 10, 20	12	7.96	50	1.75	210
SMDFSR1008-5R6□	5.6	5, 10, 20	12	7.96	40	1.90	190
SMDFSR1008-6R8□	6.8	5, 10, 20	12	7.96	35	2.00	175
SMDFSR1008-8R2□	8.2	5, 10, 20	12	7.96	25	2.20	160
SMDFSR1008-100□	10	5, 10, 20	10	2.52	25	2.50	155
SMDFSR1008-120□	12	5, 10, 20	10	2.52	20	2.60	145
SMDFSR1008-150□	15	5, 10, 20	10	2.52	20	3.00	130
SMDFSR1008-180□	18	5, 10, 20	10	2.52	20	3.00	130
SMDFSR1008-220□	22	5, 10, 20	10	2.52	18	3.90	105
SMDFSR1008-270□	27	5, 10, 20	10	2.52	10	4.00	100
SMDFSR1008-330□	33	5, 10, 20	10	2.52	8	4.80	85
SMDFSR1008-390□	39	5, 10, 20	10	2.52	7	5.00	80
SMDFSR1008-470□	47	5, 10, 20	10	2.52	7	5.70	60
SMDFSR1008-560□	56	5, 10, 20	10	2.52	6.5	6.00	55
SMDFSR1008-680□	68	5, 10, 20	10	2.52	6.5	6.70	50
SMDFSR1008-820□	82	5, 10, 20	10	2.52	6.5	7.50	45
SMDFSR1008-101□	100	5, 10, 20	8	0.796	4.5	11.0	40

### Typical performance curves :

Inductance vs Frequency Curve



Q vs Frequency Curve



\* Due to the limited space, the catalogue shows the typical specifications only. For more specific details ( characteristics graph, reliability, and others), kindly invite you to access 3L official website [www.3lcoil.com](http://www.3lcoil.com) for better known.