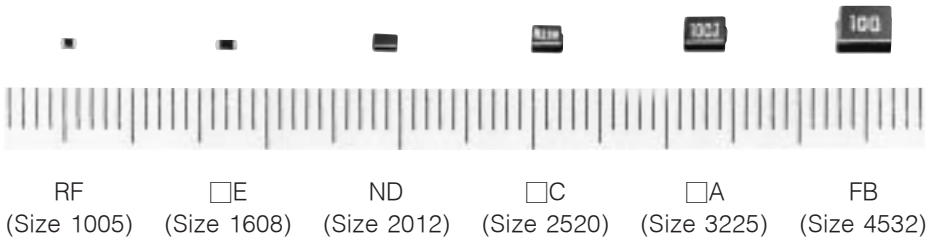
Chip Inductors

Japan

Series: **Chip**

Type: **RF, RE, ND, NC, NA, FC, FA, FB, SA, PE, PC, PA, EA**



RF (Size 1005) □E (Size 1608) ND (Size 2012) □C (Size 2520) □A (Size 3225) FB (Size 4532)

Non winding (RF, □E) and wire wound type chip inductors for automatic mounting and high-density mounting

Industrial Property: Patents 6 (incl. pending)

■ Features

- High Q
- Good for mounting
- Wide allowable range (1.0 nH to 1000 µH)

■ Recommended Applications

- CTV, VTR, HIC, HDD, FDD, Cordless telephones, Portable telephones Pagers, Video cameras

■ Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11
E	L	J	F	A	2	2	1	J	F	
Product Code			Type		Inductance			Tolerance	Packaging	Option

Inductance	
2N2→	2.2 nH
22N→	22 nH
R22→	0.22 µH
2R2→	2.2 µH
220→	22 µH
221→	220 µH
102→	1000 µH

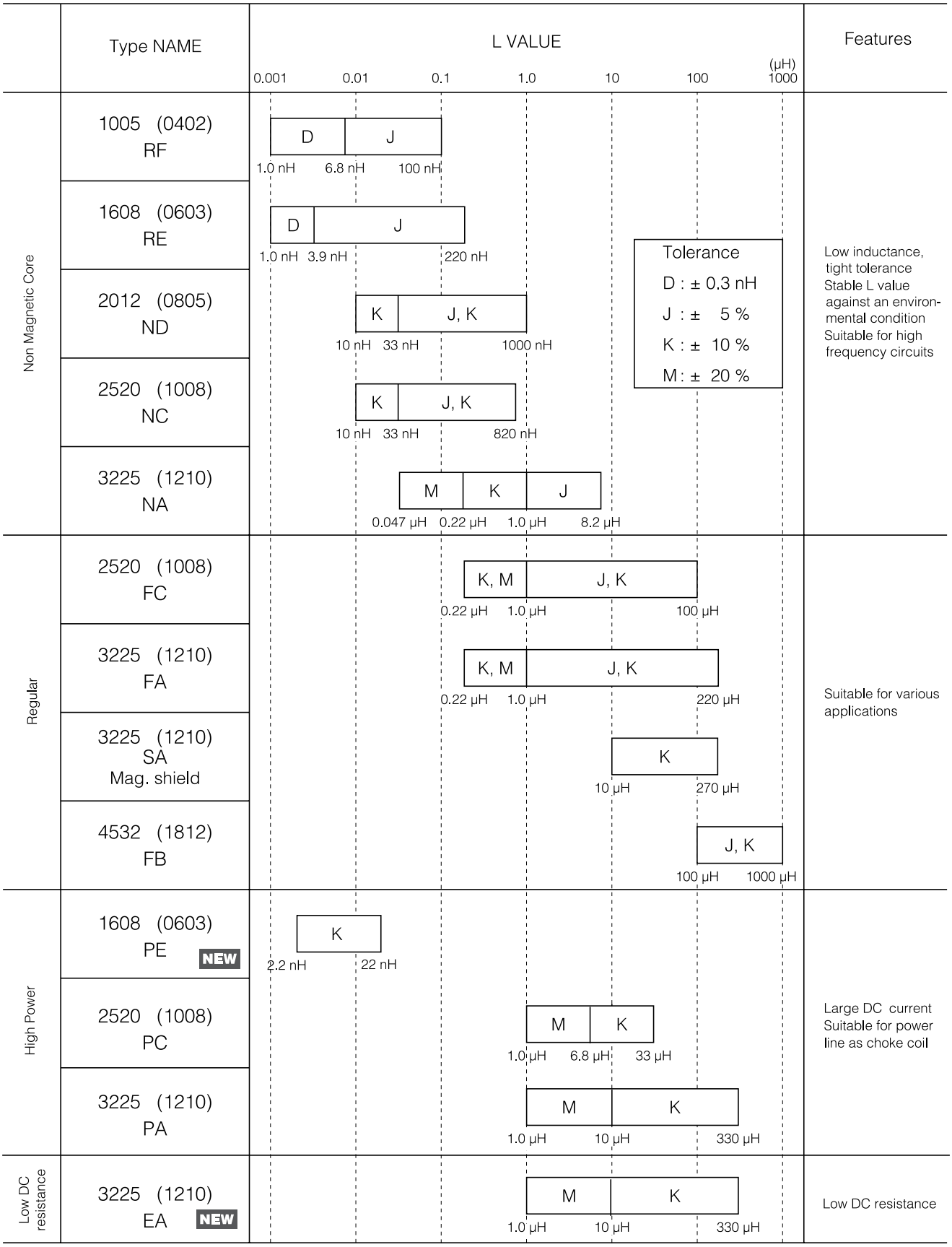
Tolerance	
D	±0.3 nH
J	± 5 %
K	±10 %
M	±20 %

Packaging	
F	Tape & Reel

Types \ Styles	F 1005 (0402)	E 1608 (0603)	D 2012 (0805)	C 2520 (1008)	A 3225 (1210)	B 4532 (1812)
Non Magnetic Core	RF	RE	ND	NC	NA	–
Regular	–	–	–	FC	FA	FB
Shield	–	–	–	–	SA	–
High Power	–	PE	–	PC	PA	–
Low DC resistance	–	–	–	–	EA	–

Size unit: mm

■ Inductance, Size Guide



Size unit : mm

1. Non Magnetic Core Types RF, RE, ND, NC, NA

■ Examples : Type 1005(0402)RF

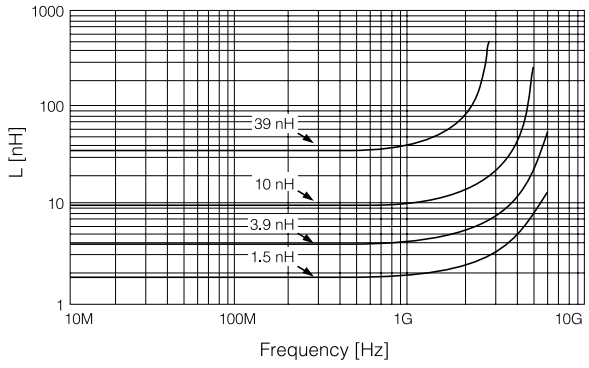
Part No.	Inductnce		Q min.	L,Q Test-Freq. (MHz)	Q Typical (800 MHz)	SRF.*1 min.(MHz)	DCR.*2 max.(Ω)	DC current max.(mA)
	nH	Tolerance						
ELJRF1N0DF2	1.0	±0.3 nH	8	100	21	6000	0.05	400
ELJRF1N2DF2	1.2				21	6000	0.06	400
ELJRF1N5DF2	1.5				21	6000	0.07	400
ELJRF1N8DF2	1.8				21	6000	0.08	400
ELJRF2N2DF2	2.2				21	6000	0.09	400
ELJRF2N7DF2	2.7				21	5500	0.10	400
ELJRF3N3DF2	3.3				21	5500	0.12	400
ELJRF3N9DF2	3.9				20	5200	0.15	360
ELJRF4N7DF2	4.7				20	4800	0.17	360
ELJRF5N6DF2	5.6				20	4600	0.19	340
ELJRF6N8JF2	6.8	± 5 %			19	4000	0.30	320
ELJRF8N2JF2	8.2				19	3500	0.35	320
ELJRF10NJF2	10				19	2800	0.41	320
ELJRF12NJF2	12				19	2800	0.45	320
ELJRF15NJF2	15				19	2500	0.60	240
ELJRF18NJF2	18				19	2200	0.70	240
ELJRF22NJF2	22				19	2000	0.80	200
ELJRF27NJF2	27				19	1800	1.2	200
ELJRF33NJF2	33				18	1800	1.4	170
ELJRF39NJF2	39				18	1800	1.7	150
ELJRF47NJF2	47				17	1800	2.1	140
ELJRF56NJF2	56				17	1500	2.5	130
ELJRF68NJF2	68				15	1500	4.0	120
ELJRF82NJF2	82				15	1400	4.5	110
ELJRFR10JF2	100				14	1200	5.5	90

*1 : Self Resonant Frequency *2 : DC Resistance

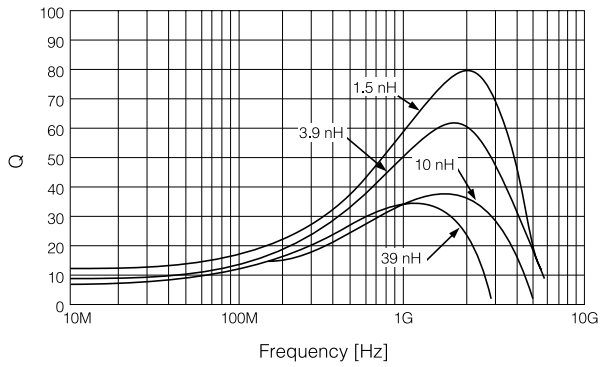
■ Performance Characteristics

Type: 1005 (0402) RF

L vs Frequency Characteristics



Q vs Frequency Characteristics



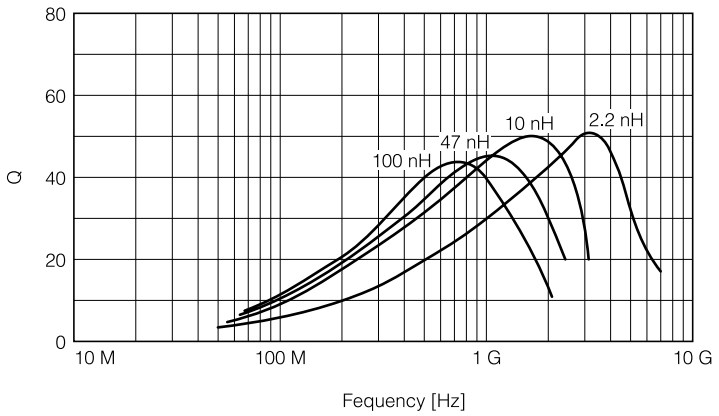
■ Examples : Type 1608(0603)RE

Part No.	Inductance		Q min.	L , Q Test-Freq. (MHz)	Q Typical (800 MHz)	SRF *1 min.(MHz)	DCR *2 max.(Ω)	DC Current max.(mA)
	nH	Tolerance						
ELJRE1N0DF2	1.0	±0.3 nH	7	100	47	6000	0.05	500
ELJRE1N2DF2	1.2				47	6000	0.06	500
ELJRE1N5DF2	1.5		8		47	6000	0.07	500
ELJRE1N8DF2	1.8				45	6000	0.08	500
ELJRE2N2DF2	2.2				35	6000	0.09	500
ELJRE2N7DF2	2.7				35	6000	0.10	500
ELJRE3N3DF2	3.3		9		35	5500	0.12	500
ELJRE3N9JF2	3.9	± 5 %			36	5500	0.15	450
ELJRE4N7JF2	4.7				36	4800	0.17	450
ELJRE5N6JF2	5.6				36	4600	0.18	430
ELJRE6N8JF2	6.8				36	3550	0.20	430
ELJRE8N2JF2	8.2				36	3500	0.28	400
ELJRE10NJF2	10		10		37	2800	0.32	400
ELJRE12NJF2	12				37	2800	0.35	400
ELJRE15NJF2	15				38	2500	0.41	350
ELJRE18NJF2	18				39	2300	0.45	350
ELJRE22NJF2	22				40	2000	0.50	300
ELJRE27NJF2	27				41	2000	0.55	300
ELJRE33NJF2	33				40	1800	0.60	300
ELJRE39NJF2	39		11		39	1800	0.80	300
ELJRE47NJF2	47				38	1800	0.95	250
ELJRE56NJF3	56		12		35	1800	1.2	250
ELJRE68NJF3	68				35	1500	1.3	250
ELJRE82NJF3	82				33	1500	1.5	250
ELJRER10JF3	100				30	1300	1.8	200
ELJRER12JF3	120		5	25.2	25	1200	3.0	130
ELJRER15JF3	150				22	1100	4.5	100
ELJRER18JF3	180		4		20	1000	6.5	80
ELJRER22JF3	220				—	900	7.5	70

✻1 : Self Resonant Frequency ✻2 : DC Resistance

■ Q-Frequency Characteristics

Type: 1608 (0603) RE



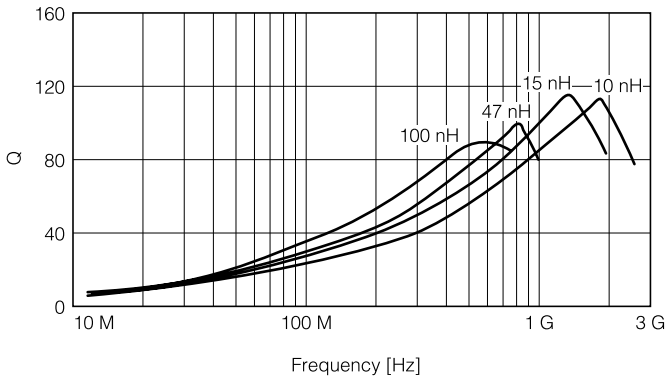
■ Examples : Type 2012(0805)ND

Part No.	Inductance		Q min.	L , Q Test-Freq. (MHz)	Q Typical (800 MHz)	SRF*1 min.(MHz)	DCR*2 max.(Ω)	DC Current max.(mA)
	nH	Tolerance						
ELJND10NKF	10	±10 %	10	100	72	3300	0.18	540
ELJND12NKF	12				67	3300	0.24	535
ELJND15NKF	15		12		73	3000	0.24	520
ELJND18NKF	18				74	3000	0.29	480
ELJND22NKF	22		15		75	2600	0.29	465
ELJND27NKF	27				73	2500	0.34	455
ELJND33NJ/KF	33	± 5 % ±10 %			80	2050	0.39	395
ELJND39NJ/KF	39				72	2000	0.41	390
ELJND47NJ/KF	47				71	1650	0.46	385
ELJND56NJ/KF	56				63	1550	0.51	360
ELJND68NJ/KF	68				57	1450	0.57	340
ELJND82NJ/KF	82				56	1100	0.63	330
ELJNDR10J/KF	100		8	25.2	51	800	0.86	285
ELJNDR12J/KF	120				32	600	0.99	275
ELJNDR15J/KF	150		10		36	600	1.47	230
ELJNDR18J/KF	180				34	600	1.61	195
ELJNDR22J/KF	220				—	500	1.84	170
ELJNDR27J/KF	270				—	300	1.95	165
ELJNDR33J/KF	330				—	200	2.16	160
ELJNDR39J/KF	390				—	150	2.37	150
ELJNDR47J/KF	470				—	150	2.56	145
ELJNDR56J/KF	560				—	100	2.69	140
ELJNDR68J/KF	680				—	100	3.02	130
ELJNDR82J/KF	820				—	80	3.38	125
ELJND1R0J/KF	1000		8	7.96	—	80	3.88	120

*1 : Self Resonant Frequency *2 : DC Resistance

■ Q-Frequency Characteristics

Type: 2012 (0805) ND



■ Examples : Type 2520(1008)NC

Part No.	Inductance		Q min.	L , Q Test Freq.(MHz)	SRF *1 min.(MHz)	DCR *2 max.(Ω)	DC Current max.(mA)
	nH	Tolerance					
ELJNC10NKF	10	±10 %	10	100	2500	0.32	280
ELJNC12NKF	12				2200	0.34	270
ELJNC15NKF	15				1800	0.38	255
ELJNC18NKF	18				1550	0.40	250
ELJNC22NKF	22		15		1350	0.43	240
ELJNC27NKF	27				1150	0.47	230
ELJNC33NK/JF	33	±10 % ± 5 %			1000	0.51	220
ELJNC39NK/JF	39				890	0.55	215
ELJNC47NK/JF	47				770	0.59	205
ELJNC56NK/JF	56				670	0.63	200
ELJNC68NK/JF	68				590	0.68	190
ELJNC82NK/JF	82				520	0.73	185
ELJNCR10K/JF	100		10	25.2	460	0.80	175
ELJNCR12K/JF	120				400	0.87	170
ELJNCR15K/JF	150				340	0.98	160
ELJNCR18K/JF	180				300	1.05	155
ELJNCR22K/JF	220				260	1.15	145
ELJNCR27K/JF	270				230	1.25	140
ELJNCR33K/JF	330				200	1.37	135
ELJNCR39K/JF	390				180	1.47	130
ELJNCR47K/JF	470				160	1.58	125
ELJNCR56K/JF	560				145	1.70	120
ELJNCR68K/JF	680				130	1.85	110
ELJNCR82K/JF	820				100	2.10	100

*1 : Self Resonant Frequency *2 : DC Resistance

■ Examples : Type 3225(1210)NA

Part No.	Inductance			Q		SRF *1 min.(MHz)	DCR *2 max.(Ω)	DC Current max.(mA)
	μH	Freq. (MHz)	Tolerance	min.	Freq. (MHz)			
ELJNA47NMF	0.047	100	±20 %	10	100	680	0.20	450
ELJNA56NMF	0.056					600	0.22	420
ELJNA68NMF	0.068					540	0.25	400
ELJNA82NMF	0.082					500	0.27	380
ELJNAR10MF	0.10					450	0.30	360
ELJNAR12MF	0.12	25.2			25.2	400	0.67	240
ELJNAR15MF	0.15					350	0.72	230
ELJNAR18MF	0.18					320	0.81	220
ELJNAR22KF	0.22	1.0	±10 %			280	0.90	210
ELJNAR27KF	0.27					250	1.0	200
ELJNAR33KF	0.33					220	1.1	190
ELJNAR39KF	0.39					200	1.2	180
ELJNAR47KF	0.47					180	1.4	175
ELJNAR56KF	0.56					160	1.5	170
ELJNAR68KF	0.68					150	1.7	155
ELJNAR82KF	0.82					135	1.9	145
ELJNA1R0JF	1.0		± 5 %	13	7.96	120	2.1	125
ELJNA1R2JF	1.2					110	2.3	120
ELJNA1R5JF	1.5					95	2.7	115
ELJNA1R8JF	1.8					85	3.0	110
ELJNA2R2JF	2.2					80	3.2	110
ELJNA2R7JF	2.7					70	3.6	105
ELJNA3R3JF	3.3					62	4.2	100
ELJNA3R9JF	3.9					57	4.4	95
ELJNA4R7JF	4.7					52	7.7	70
ELJNA5R6JF	5.6					46	8.7	65
ELJNA6R8JF	6.8					42	10	60
ELJNA8R2JF	8.2					38	11	60

*1 : Self Resonant Frequency *2 : DC Resistance

2. Normal Types FC, FA, SA, FB

■ Examples : Type 2520(1008)FC

Part No.	Inductance		Q min.	L , Q Test Freq.(MHz)	SRF *1 min.(MHz)	DCR *2 max.(Ω)	DC Current max.(mA)
	μH	Tolerance					
ELJFCR22M/KF	0.22	±20 % ±10 %	25	25.2	230	0.70	190
ELJFCR27M/KF	0.27				210	0.75	180
ELJFCR33M/KF	0.33				190	0.85	170
ELJFCR39M/KF	0.39				175	0.95	160
ELJFCR47M/KF	0.47				160	1.0	155
ELJFCR56M/KF	0.56				150	1.1	150
ELJFCR68M/KF	0.68				135	1.25	140
ELJFCR82M/KF	0.82				125	1.4	130
ELJFC1R0K/JF	1.0	±10 % ± 5 %		7.96	115	0.65	195
ELJFC1R2K/JF	1.2				100	0.75	180
ELJFC1R5K/JF	1.5				90	0.85	170
ELJFC1R8K/JF	1.8				85	0.95	160
ELJFC2R2K/JF	2.2				80	1.05	155
ELJFC2R7K/JF	2.7				75	1.2	145
ELJFC3R3K/JF	3.3				65	1.3	135
ELJFC3R9K/JF	3.9				60	1.4	130
ELJFC4R7K/JF	4.7				55	1.55	125
ELJFC5R6K/JF	5.6				50	1.75	120
ELJFC6R8K/JF	6.8				45	1.95	115
ELJFC8R2K/JF	8.2				40	2.2	105
ELJFC100K/JF	10			2.52	32	3.5	80
ELJFC120K/JF	12				30	3.8	75
ELJFC150K/JF	15				28	4.4	70
ELJFC180K/JF	18				25	5.0	65
ELJFC220K/JF	22				22	5.8	60
ELJFC270K/JF	27		20		21	6.3	115
ELJFC330K/JF	33				20	7.1	110
ELJFC390K/JF	39				18	9.5	90
ELJFC470K/JF	47				17	11.0	80
ELJFC560K/JF	56				16	12.1	75
ELJFC680K/JF	68				15	16.6	70
ELJFC820K/JF	82				13	19.0	65
ELJFC101K/JF	100		15	0.796	12	21.0	60

✻1 : Self Resonant Frequency ✻2 : DC Resistance

■ Examples : Type 3225(1210)FA

Part No.	Inductance		Q min.	L , Q Test Freq.(MHz)	SRF*1 min.(MHz)	DCR*2 max.(Ω)	DC Current max.(mA)
	μH	Tolerance					
ELJFAR22M/KF2	0.22	±20 % ±10 %	25	25.2	230	0.29	360
ELJFAR27M/KF2	0.27				210	0.32	345
ELJFAR33M/KF2	0.33				190	0.35	330
ELJFAR39M/KF2	0.39				175	0.39	305
ELJFAR47M/KF2	0.47				160	0.44	290
ELJFAR56M/KF2	0.56				150	0.49	275
ELJFAR68M/KF2	0.68				135	0.55	260
ELJFAR82M/KF2	0.82				125	0.61	245
ELJFA1R0K/JF2	1.0	±10 % ± 5 %	30	7.96	115	0.69	230
ELJFA1R2K/JF2	1.2				100	0.75	215
ELJFA1R5K/JF	1.5				90	0.75	210
ELJFA1R8K/JF	1.8				85	0.82	200
ELJFA2R2K/JF	2.2				80	0.95	190
ELJFA2R7K/JF	2.7				75	1.1	180
ELJFA3R3K/JF	3.3				65	1.2	180
ELJFA3R9K/JF	3.9				60	1.3	175
ELJFA4R7K/JF	4.7				55	1.5	165
ELJFA5R6K/JF	5.6				50	1.6	160
ELJFA6R8K/JF	6.8				45	1.8	150
ELJFA8R2K/JF	8.2				40	2.0	140
ELJFA100K/JF	10			2.52	36	2.1	140
ELJFA120K/JF	12				33	2.5	125
ELJFA150K/JF	15				30	2.8	120
ELJFA180K/JF	18				27	3.3	110
ELJFA220K/JF	22				25	3.7	105
ELJFA270K/JF	27				22	5.0	90
ELJFA330K/JF	33				20	5.6	85
ELJFA390K/JF	39				20	6.4	80
ELJFA470K/JF	47				15	7.0	75
ELJFA560K/JF	56				15	8.0	70
ELJFA680K/JF	68				15	9.0	65
ELJFA820K/JF	82				11	10	60
ELJFA101K/JF	100		20	0.796	10	10	60
ELJFA121K/JF	120				10	11	55
ELJFA151K/JF	150				8	15	50
ELJFA181K/JF	180				7	17	50
ELJFA221K/JF	220				7	21	45

*1 : Self Resonant Frequency *2 : DC Resistance

■ Examples : Type 3225(1210)SA

Part No.	Inductance			Q		SRF*1 min.(MHz)	DCR*2 max.(Ω)	DC Current max.(mA)
	μH	Freq. (MHz)	Tolerance	min.	Freq. (MHz)			
ELJSA100KF	10	1.0	±10 %	40	5.0	30	1.8	18
ELJSA120KF	12					28	2.0	17
ELJSA150KF	15					25	2.2	15
ELJSA180KF	18					23	2.5	13
ELJSA220KF	22					20	2.8	12
ELJSA270KF	27					18	3.2	10
ELJSA330KF	33					17	3.5	10
ELJSA390KF	39					15	3.8	9
ELJSA470KF	47					14	4.0	8
ELJSA560KF	56					13	4.5	7
ELJSA680KF	68				1.5	12	5.0	6
ELJSA820KF	82					11	6.0	6
ELJSA101KF	100					10	7.0	5
ELJSA121KF	120					9	8.0	5
ELJSA151KF	150	0.1				5	9.0	5
ELJSA181KF	180					5	11	5
ELJSA221KF	220					4	12	5
ELJSA271KF	270					4	14	5

✻1 : Self Resonant Frequency ✻2 : DC Resistance

■ Examples : Type 4532(1812)FB

Part No.	Inductance			Q		SRF*1 min.(MHz)	DCR*2 max.(Ω)	DC Current max.(mA)
	μH	Freq. (MHz)	Tolerance	min.	Freq. (MHz)			
ELJFB101K/JF	100	0.1	±10 % ± 5 %	40	2.52	6.7	8.8	105
ELJFB121K/JF	120				1.5	6.1	10	100
ELJFB151K/JF	150					5.5	11	95
ELJFB181K/JF	180					5.1	13	85
ELJFB221K/JF	220				0.796	4.5	13	85
ELJFB271K/JF	270					4.1	14	80
ELJFB331K/JF	330					3.7	16	75
ELJFB391K/JF	390					3.3	19	70
ELJFB471K/JF	470			30		3.3	31	55
ELJFB561K/JF	560					2.7	35	50
ELJFB681K/JF	680					2.5	39	50
ELJFB821K/JF	820					2.4	45	45
ELJFB102K/JF	1000					2.1	53	40

✻1 : Self Resonant Frequency ✻2 : DC Resistance

3. High Power Types PE, PC, PA

■ xamples : Type 1608(0603)PE

Part No.	Inductance		Q min.	L , Q Test Freq.(MHz)	SRF *1 min.(MHz)	DCR *2 max.(Ω)	DC Current max.(mA)
	nH	Tolerance					
ELJPE2N2KF	2.2	± 10 %	8	100	6000	0.030	2.1
ELJPE2N7KF	2.7				5500	0.030	2.1
ELJPE3N3KF	3.3				5500	0.040	2.1
ELJPE3N9KF	3.9		9		5200	0.040	2.1
ELJPE4N7KF	4.7				4800	0.050	2.1
ELJPE5N6KF	5.6				4600	0.055	2.1
ELJPE6N8KF	6.8				4000	0.055	1.9
ELJPE8N2KF	8.2				3500	0.060	1.7
ELJPE10NKF	10				2800	0.065	1.4
ELJPE12NKF	12				2500	0.080	1.3
ELJPE15NKF	15				2200	0.100	0.9
ELJPE18NKF	18				2000	0.120	0.8
ELJPE22NKF	22				1800	0.150	0.7

✻1 : Self Resonant Frequency ✻2 : DC Resistance

■ Examples : Type 2520(1008)PC

Part No.	Inductance		Q min.	L , Q Test Freq.(MHz)	SRF *1 min.(MHz)	DCR *2 max.(Ω)	DC Current max.(mA)
	μH	Tolerance					
ELJPC1R0MF	1.0	±20 %	10	7.96	95	0.45	475
ELJPC1R5MF	1.5				85	0.55	435
ELJPC2R2MF	2.2				65	0.65	390
ELJPC3R3MF	3.3		8		55	0.85	340
ELJPC4R7MF	4.7				43	1.2	285
ELJPC6R8KF	6.8	±10 %	8.5		44	1.3	170
ELJPC100KF	10		20	2.52	32	2.2	210
ELJPC120KF	12				25	2.7	195
ELJPC150KF	15				21	3.2	175
ELJPC220KF	22				18	4.0	160
ELJPC330KF	33				16	6.5	120

✻1 : Self Resonant Frequency ✻2 : DC Resistance

■ Examples : Type 3225(1210)PA

Part No.	Inductance		Q min.	L , Q Test Freq.(MHz)	SRF *1 min.(MHz)	DCR *2 max.(Ω)	DC Current max.(mA)
	μH	Tolerance					
ELJPA1R0MF	1.0	±20 %	7	7.96	150	0.15	600
ELJPA1R5MF	1.5				110	0.18	550
ELJPA2R2MF	2.2				80	0.23	500
ELJPA3R3MF	3.3				58	0.28	400
ELJPA4R7MF	4.7				46	0.34	350
ELJPA6R8MF	6.8				38	0.42	300
ELJPA100KF	10	±10 %	15	2.52	23	0.50	240
ELJPA120KF	12				21	0.60	230
ELJPA150KF	15				18	0.74	220
ELJPA180KF	18				17	0.90	205
ELJPA220KF	22				15	1.15	185
ELJPA270KF	27				13	1.45	165
ELJPA330KF	33				12	1.65	155
ELJPA390KF	39				11	1.90	145
ELJPA470KF	47				9.5	2.25	135
ELJPA560KF	56				8.5	3.30	110
ELJPA680KF	68				7.5	3.70	105
ELJPA820KF	82				7.0	4.20	100
ELJPA101KF	100		20	0.796	6.5	5.00	90
ELJPA121KF	120				6.0	7.00	75
ELJPA151KF	150				5.5	8.00	70
ELJPA181KF	180				5.0	9.50	65
ELJPA221KF	220				4.0	11.0	60
ELJPA271KF	270				3.5	14.5	55
ELJPA331KF	330				3.0	16.0	50

*1 : Self Resonant Frequency *2 : DC Resistance

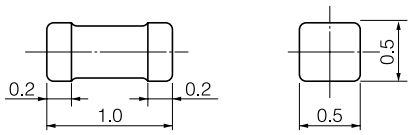
4. Low DC resistance Type EA

■ Examples : Type 3225(1210)EA

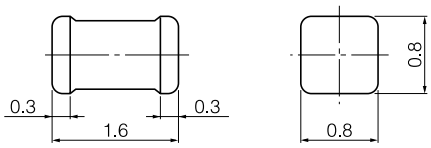
Part No.	Inductance		Q min.	L , Q Test Freq.(MHz)	SRF *1 min.(MHz)	DCR *2 max.(Ω)	DC Current max.(mA)
	μH	Tolerance					
ELJEA1R0MF	1.0	±20 %	7	7.96	100	0.09	500
ELJEA1R5MF	1.5				80	0.10	390
ELJEA2R2MF	2.2				65	0.13	350
ELJEA3R3MF	3.3				50	0.16	270
ELJEA4R7MF	4.7				46	0.18	240
ELJEA6R8MF	6.8				36	0.25	200
ELJEA100KF	10	±10 %	10	2.52	29	0.34	160
ELJEA150KF	15				25	0.42	145
ELJEA220KF	22				18	0.65	115
ELJEA330KF	33				16	0.91	95
ELJEA470KF	47				13	1.30	80
ELJEA680KF	68				10	1.95	60
ELJEA101KF	100		20	0.796	8.0	3.12	50
ELJEA151KF	150				7.0	4.03	45
ELJEA221KF	220				5.0	7.15	35
ELJEA331KF	330				4.0	9.23	30

*1 : Self Resonant Frequency *2 : DC Resistance

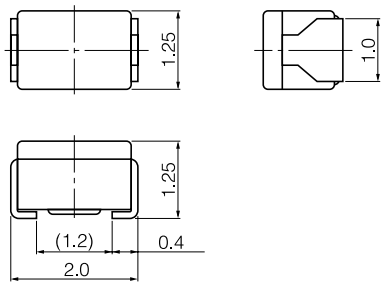
■ Dimensions in mm (not to scale)



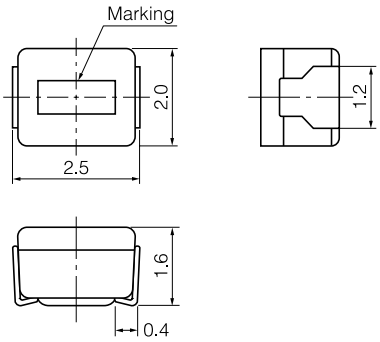
Type RF
(1.0×0.5×0.5)



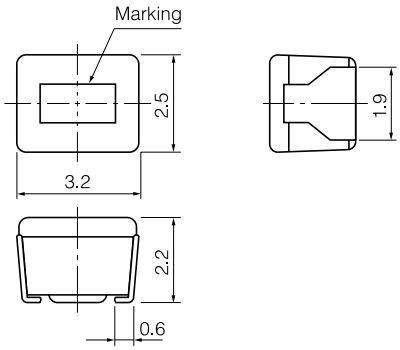
Type RE, PE
(1.6×0.8×0.8)



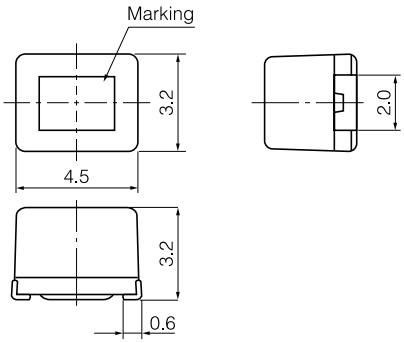
Type ND
(2.0×1.25×1.25)



Types FC, NC, PC
(2.5×2.0×1.6)

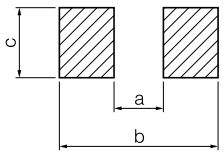


Types FA, SA, NA, PA, EA
(3.2×2.5×2.2)



Type FB
(4.5×3.2×3.2)

■ Recommended Land Pattern in mm (not to scale)

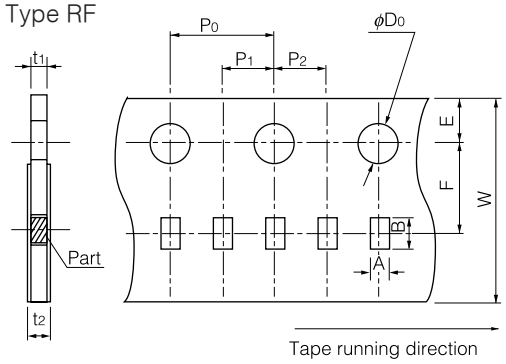


Type	a	b	c
RF	0.5~0.6	1.5~1.7	0.5~0.6
□E	0.8~1.0	2.0~2.6	0.7~0.9
ND	1.0~1.2	3.0~3.8	0.9~1.3
□C	1.4~1.5	3.5~4.0	1.2~1.6
□A	1.6~2.0	4.0~4.6	1.9~2.4
FB	2.4~2.6	5.5~6.0	2.0~3.0

□E: RE, PE □C: NC, FC, PC □A: NA, FA, SA, PA, EA

■ Paper Tape Dimensions in mm (not to scale)

Type RF

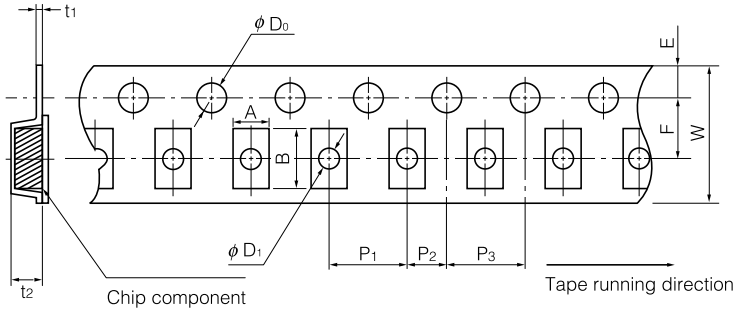


A	B	W	E	F	P1
0.71	1.21	8.0	1.75	3.5	2.0

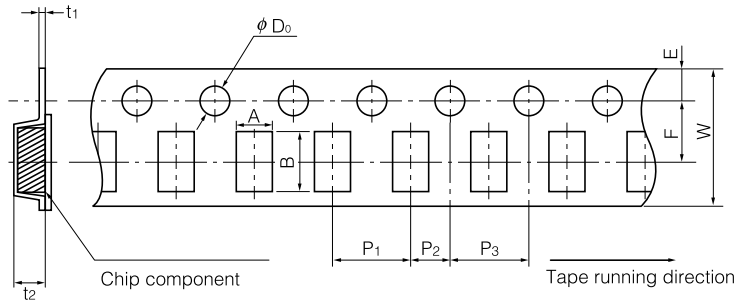
P2	P0	φD0	t1	t2
2.0	4.0	φ 1.5	0.7 max.	1.0 max.

■ Embossed Carrier Tape Dimensions in mm (not to scale)

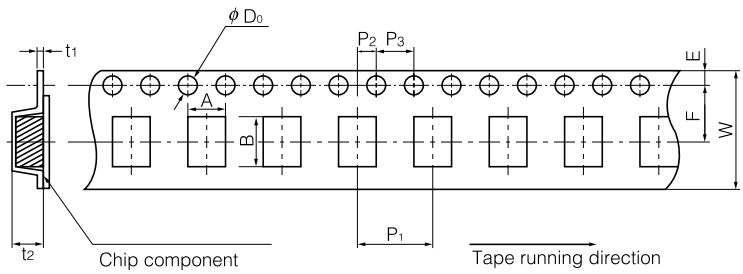
Types RE, PE, ND, NC, FC, PC (W=8 mm)



Types NA, FA, SA, PA , EA (W=8 mm)



Type FB (W=12 mm)



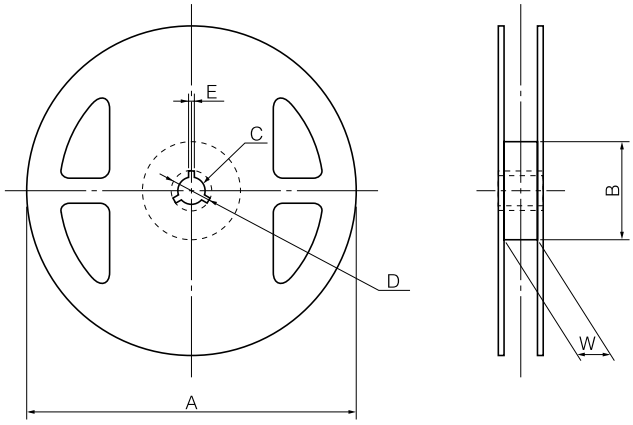
Size/Types \ Dimensions		A	B	W	F	E	P_1	P_2	P_3	ϕD_0	ϕD_1	t_1	t_2
1608(0603)	RE, PE	1.0	1.8	8	3.5	1.75	4.0	2.0	4.0	1.5	0.6	(0.27)	1.2
2012(0805)	ND	1.45	2.25	8	3.5	1.75	4.0	2.0	4.0	1.5	1.0	(0.25)	1.55
2520(1008)	NC, FC, PC	2.4	2.9	8	3.5	1.75	4.0	2.0	4.0	1.5	1.1	(0.25)	1.85
3225(1210)	NA, FA, SA, PA, EA	2.8	3.6	8	3.5	1.75	4.0	2.0	4.0	1.5	—	(0.25)	2.4
4532(1812)	FB	3.6	4.9	12	5.5	1.75	8.0	2.0	4.0	1.5	—	(0.3)	3.5

■ Packaging Methods

● Standard Packing Quantity and Mass

Types \ Quantity, Mass	Quantity	Mass (Weight) Approx.
RF	10000 pcs.	—
RE, PE, ND	3000 pcs.	90 g
NC, FC, PC	2000 pcs.	100 g
NA, FA, SA, PA, EA	2000 pcs.	170 g
FB	500 pcs.	100 g

■ Reel Dimensions in mm (not to scale)



Types \ Dimensions	A	B	C	D	E	W
RF	180	60	13	21	2	9
RE, PE, ND, NC, FC PC, NA, FA, SA, PA, EA	180	60	13	21	2	9
FB	180	60	13	21	2	13

⚠ Cautions for use

For securing upgraded reliability and safety, consider following caution items.

1. Land pattern design

Refer to the recommended land dimensions of each type at flow and reflow solderings.
Avoid placing the chip inductor on any metal pattern except the land because the drop of Q and mutual conductance may occur.
Provisions for venting of flux gases should be made for high density assemblies.

2. Mounting

Placement force should not exceed 20N because electric and magnetic characteristics change by applying strong force.

3. Soldering

ⓐ Flow soldering
Recommended conditions; 260 °C max., 5sec. max.(total time at 2 waves method)
ⓑ Reflow soldering
① Infra-red reflow soldering
Recommended conditions: 200 °C or high at electrode, 60sec. max. and peak 250 °C max., 5sec. max.
If the solder at the two electrodes are not melt simultaneously, the chip inductor may not be mounted on the right place.
It is recommended to fix by adhesive when the deviation is great.
② VPS reflow soldering
Recommended conditions: 215±5 °C, 20 to 60sec.

4. Cleaning

① Do not use acid or alkari agents. Some cleaning solvents out of CFC may damage the products. Confirm the reliability in advance.
② If ultrasonic cleaning is employed, please inform us immediately for technical consultation.

5. Instructions for applying current

The rated current is defined as the smaller value of either the current value when the inductance drops 10 % down from the initial point, or the current value when the average temperature of coil inside rises 20 K up from initial point.
Do not operate this coils beyond the specified rated current.

6. Storage

① Be careful a high temperature, a large amount of moisture, gases and magnetic field.
② At long storage of more than 1 year, use the products after inspecting the outer structure