

# ADB Technology Co., Ltd.

## Multilayer Ferrite Chip Inductors / CML

### Feature

Monolithic structure  
 Closed magnetic circuit  
 S.M.T. type  
 Suitable for flow and reflow soldering  
 Shapes and dimensions follow E.I.A. SPEC  
 Available in various sizes & 6 materials  
 Excellent soldering ability and heat resistance  
 High reliability

### Application

Noise elimination for four I/O lines of Notebook PCs,  
 Digital TVs, VTRs printers, Hard disk drives,  
 Personal computers, other general consumer  
 And computers products.

### Product Identification

CML  
1

1608  
2

1R0  
3

K  
4

1. Series name.

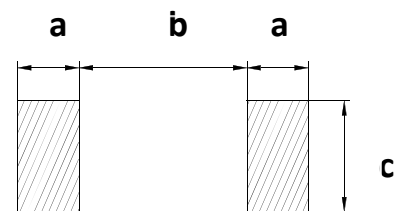
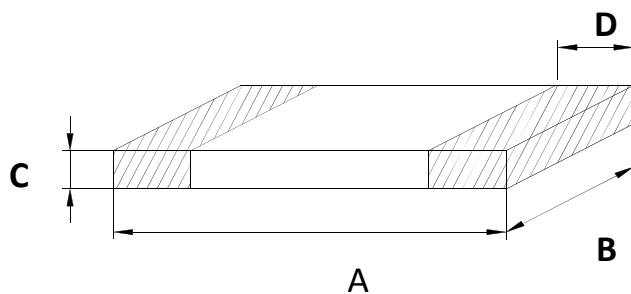
2. Dimension.

3. Inductance.(1R0=1  $\mu$  H)

4. Tolerance.

(J=5% K=10% L=15% M=20%)

### Configurations & Dimensions



PCB Pattern

Series Name	A	B	C	D	a	b	c
CML 1608	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.3 ± 0.2	1.0(REF)	0.6(REF)	0.8(REF)
CML 2012	2.0 ± 0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3	1.0(REF)	1.0(REF)	1.0(REF)
CML 2520	2.5 ± 0.2	2.0 ± 0.2	1.6 ± 0.2	0.5 ± 0.3	1.2(REF)	1.5(REF)	1.5(REF)
CML 3216	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3	1.1(REF)	2.2(REF)	1.4(REF)
CML 3225	3.2 ± 0.2	2.5 ± 0.2	1.3 ± 0.2	0.5 ± 0.3	1.1(REF)	2.2(REF)	3.4(REF)
CML 4532	4.5 ± 0.2	3.2 ± 0.2	1.5 ± 0.2	0.5 ± 0.3	1.67(REF)	2.57(REF)	4.22(REF)

Unit: mm

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### Electrical Characteristics

CML 1608 Series						
Part Number	Inductance	Q Value	Test Frequency	SRF	DC Resistance	Rated Current
	( $\mu$ H)	Min.	(MHz)	(MHz) Min.	(m $\Omega$ ) Max.	(mA) Max.
CML 1608-47N	0.047	10	50	260	300	50
CML 1608-68N	0.068	10	50	250	300	50
CML 1608-82N	0.082	10	50	245	300	50
CML 1608-R10	0.1	15	25	240	500	50
CML 1608-R12	0.12	15	25	205	500	50
CML 1608-R15	0.15	15	25	180	600	50
CML 1608-R18	0.18	15	25	165	600	50
CML 1608-R22	0.22	15	25	150	800	50
CML 1608-R27	0.27	15	25	136	800	50
CML 1608-R33	0.33	15	25	125	850	35
CML 1608-R39	0.39	15	25	110	1,000	35
CML 1608-R47	0.47	15	25	105	1,350	35
CML 1608-R56	0.56	15	25	95	1,550	35
CML 1608-R68	0.68	15	25	80	1,700	35
CML 1608-R82	0.82	15	25	75	2,100	35
CML 1608-1R0	1	30	10	70	600	25
CML 1608-1R2	1.2	30	10	60	800	25
CML 1608-1R5	1.5	30	10	55	800	25
CML 1608-1R8	1.8	30	10	50	950	25
CML 1608-2R2	2.2	30	10	45	1,150	15
CML 1608-2R7	2.7	30	10	40	1,350	15
CML 1608-3R3	3.3	30	10	38	1,550	15
CML 1608-3R9	3.9	30	10	36	1,700	15
CML 1608-4R7	4.7	30	10	33	2,100	15
CML 1608-5R6	5.6	30	4	22	1,550	15
CML 1608-6R8	6.8	30	4	20	1,700	15
CML 1608-8R2	8.2	30	4	18	2,100	15
CML 1608-100	10	30	2	17	2,550	15
CML 1608-120	12	30	2	15	2,750	15
CML 1608-150	15	20	1	14	1,700	15
CML 1608-180	18	20	1	13	1,850	15

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### Electrical Characteristics

CML 2012 Series						
Part Number	Inductance	Q Value	Test Frequency	SRF	DC Resistance	Rated Current
	( $\mu$ H)	Min.	(MHz)	(MHz) Min.	(m $\Omega$ ) Max.	(mA) Max.
CML 2012-47N	0.047	15	50	320	200	300
CML 2012-68N	0.068	15	50	280	200	300
CML 2012-82N	0.082	15	50	255	200	300
CML 2012-R10	0.1	20	25	235	300	250
CML 2012-R12	0.12	20	25	220	300	250
CML 2012-R15	0.15	20	25	200	400	250
CML 2012-R18	0.18	20	25	185	400	250
CML 2012-R22	0.22	20	25	170	500	250
CML 2012-R27	0.27	20	25	150	500	250
CML 2012-R33	0.33	20	25	145	500	250
CML 2012-R39	0.39	25	25	135	650	200
CML 2012-R47	0.47	25	25	125	650	200
CML 2012-R56	0.56	25	25	115	750	150
CML 2012-R68	0.68	25	25	105	800	150
CML 2012-R82	0.82	45	25	100	1,000	150
CML 2012-1R0	1	45	10	75	400	50
CML 2012-1R2	1.2	45	10	65	500	50
CML 2012-1R5	1.5	45	10	60	500	50
CML 2012-1R8	1.8	45	10	55	600	50
CML 2012-2R2	2.2	45	10	50	650	30
CML 2012-2R7	2.7	45	10	45	750	30
CML 2012-3R3	3.3	45	10	41	800	30
CML 2012-3R9	3.9	45	10	38	900	30
CML 2012-4R7	4.7	45	10	35	1,000	30
CML 2012-5R6	5.6	45	4	32	900	15
CML 2012-6R8	6.8	45	4	29	1,000	15
CML 2012-8R2	8.2	45	4	26	1,100	15
CML 2012-100	10	45	2	24	1,150	15
CML 2012-120	12	45	2	22	1,250	15
CML 2012-150	15	30	1	19	800	5
CML 2012-180	18	30	1	18	900	5
CML 2012-220	22	30	1	16	1,100	5
CML 2012-270	27	30	1	14	1,150	5

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### Electrical Characteristics

CML 2520 Series						
Part Number	Inductance	Q Value	Test Frequency	SRF	DC Resistance	Rated Current
	( $\mu$ H)	Min.	(MHz)	( MHz ) Min.	( m ) Max.	( mA ) Max.
CML 2520-R10	0.1	30	25.2	680	210	450
CML 2520-R12	0.12	30	25.2	650	220	400
CML 2520-R15	0.15	30	25.2	530	250	400
CML 2520-R18	0.18	30	25.2	520	290	370
CML 2520-R22	0.22	30	25.2	390	300	370
CML 2520-R27	0.27	30	25.2	330	330	350
CML 2520-R33	0.33	30	25.2	310	390	350
CML 2520-R39	0.39	30	25.2	290	400	320
CML 2520-R47	0.47	30	25.2	240	440	300
CML 2520-R56	0.56	30	25.2	210	490	250
CML 2520-R68	0.68	30	25.2	180	520	250
CML 2520-R82	0.82	30	25.2	155	610	200
CML 2520-1R0	1	30	7.96	140	750	150
CML 2520-1R2	1.2	30	7.96	135	870	120
CML 2520-1R5	1.5	30	7.96	130	1,000	110
CML 2520-1R8	1.8	30	7.96	120	1,100	100
CML 2520-2R2	2.2	30	7.96	105	1,300	100
CML 2520-2R7	2.7	30	7.96	90	1,400	100
CML 2520-3R3	3.3	30	7.96	80	1,600	80
CML 2520-3R9	3.9	30	7.96	75	1,700	80
CML 2520-4R7	4.7	30	7.96	65	1,900	80
CML 2520-5R6	5.6	30	7.96	60	2,200	80
CML 2520-6R8	6.8	30	7.96	55	2,400	70
CML 2520-8R2	8.2	30	7.96	50	2,600	50
CML 2520-100	10	25	2.52	30	2,200	30
CML 2520-120	12	25	2.52	27	2,500	20
CML 2520-150	15	25	2.52	23	2,800	20
CML 2520-180	18	25	2.52	22	3,200	20
CML 2520-220	22	25	2.52	21	3,600	20
CML 2520-270	27	25	2.52	19	4,300	15
CML 2520-330	33	25	2.52	17	4,700	15

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## Multilayer Ferrite Chip Inductors / CML

### Electrical Characteristics

CML 3216 Series						
Part Number	Inductance	Q Value	Test Frequency	SRF	DC Resistance	Rated Current
	( $\mu$ H)	Min.	(MHz)	(MHz) Min.	(m $\Omega$ ) Max.	(mA) Max.
CML 3216-47N	0.047	20	50	320	150	300
CML 3216-68N	0.068	20	50	280	250	300
CML 3216-R10	0.1	20	25	235	250	250
CML 3216-R12	0.12	20	25	220	300	250
CML 3216-R15	0.15	20	25	200	300	250
CML 3216-R18	0.18	20	25	185	400	250
CML 3216-R22	0.22	20	25	170	400	250
CML 3216-R27	0.27	20	25	150	500	250
CML 3216-R33	0.33	20	25	145	500	250
CML 3216-R39	0.39	25	25	135	600	250
CML 3216-R47	0.47	25	25	125	600	200
CML 3216-R56	0.56	25	25	115	700	200
CML 3216-R68	0.68	25	25	105	800	150
CML 3216-R82	0.82	25	25	100	900	150
CML 3216-1R0	1	45	10	75	400	100
CML 3216-1R2	1.2	45	10	65	500	100
CML 3216-1R5	1.5	45	10	60	500	50
CML 3216-1R8	1.8	45	10	55	500	50
CML 3216-2R2	2.2	45	10	50	600	50
CML 3216-2R7	2.7	45	10	45	600	50
CML 3216-3R3	3.3	45	10	41	700	50
CML 3216-3R9	3.9	45	10	38	800	50
CML 3216-4R7	4.7	45	10	35	900	50
CML 3216-5R6	5.6	50	4	32	700	25
CML 3216-6R8	6.8	50	4	29	800	25
CML 3216-8R2	8.2	50	4	26	900	25
CML 3216-100	10	50	2	24	1,000	25
CML 3216-120	12	50	2	22	1,050	15
CML 3216-150	15	35	1	19	700	5
CML 3216-180	18	35	1	18	700	5
CML 3216-220	22	35	1	16	900	5
CML 3216-270	27	35	1	14	900	5
CML 3216-330	33	35	0.4	13	1,050	5

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### Electrical Characteristics

CML 3225 Series						
Part Number	Inductance	Q Value	Test Frequency	SRF	DC Resistance	Rated Current
	( $\mu$ H)	Min.	(MHz)	( MHz ) Min.	( m ) Max.	( mA ) Max.
CML 3225-R12	0.12	30	25.2	500	220	450
CML 3225-R15	0.15	30	25.2	450	250	450
CML 3225-R18	0.18	30	25.2	380	280	420
CML 3225-R22	0.22	30	25.2	350	320	420
CML 3225-R27	0.27	30	25.2	260	360	420
CML 3225-R33	0.33	30	25.2	220	400	400
CML 3225-R39	0.39	30	25.2	200	450	400
CML 3225-R47	0.47	30	25.2	180	500	370
CML 3225-R56	0.56	30	25.2	150	550	320
CML 3225-R68	0.68	30	25.2	140	600	300
CML 3225-R82	0.82	30	25.2	130	650	280
CML 3225-1R0	1	30	7.96	120	700	200
CML 3225-1R2	1.2	30	7.96	100	750	150
CML 3225-1R5	1.5	30	7.96	85	850	150
CML 3225-1R8	1.8	30	7.96	80	900	150
CML 3225-2R2	2.2	30	7.96	75	1,000	150
CML 3225-2R7	2.7	30	7.96	70	1,100	120
CML 3225-3R3	3.3	30	7.96	60	1,200	120
CML 3225-3R9	3.9	30	7.96	55	1,300	120
CML 3225-4R7	4.7	30	7.96	50	1,500	120
CML 3225-5R6	5.6	30	7.96	47	1,600	120
CML 3225-6R8	6.8	30	7.96	43	1,800	100
CML 3225-8R2	8.2	30	7.96	40	2,000	90
CML 3225-100	10	30	2.52	36	2,100	45
CML 3225-120	12	30	2.52	33	2,500	45
CML 3225-150	15	30	2.52	30	2,800	35
CML 3225-180	18	30	2.52	27	3,300	35
CML 3225-220	22	30	2.52	25	3,700	35
CML 3225-270	27	30	2.52	20	5,000	15
CML 3225-330	33	30	2.52	17	5,600	15

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## Multilayer Ferrite Chip Inductors / CML

### Electrical Characteristics

<b>CML 4532 Series</b>						
<b>Part Number</b>	<b>Inductance</b>	<b>Q Value</b>	<b>Test Frequency</b>	<b>SRF</b>	<b>DC Resistance</b>	<b>Rated Current</b>
	<b>(<math>\mu</math>H)</b>	<b>Min.</b>	<b>(MHz)</b>	<b>( MHz ) Min.</b>	<b>( m ) Max.</b>	<b>( mA ) Max.</b>
CML 4532-R10	0.1	35	25.2	300	180	700
CML 4532-R12	0.12	35	25.2	250	200	670
CML 4532-R15	0.15	35	25.2	180	220	670
CML 4532-R18	0.18	35	25.2	140	240	670
CML 4532-R22	0.22	40	25.2	120	250	640
CML 4532-R27	0.27	40	25.2	105	260	605
CML 4532-R33	0.33	40	25.2	100	280	575
CML 4532-R39	0.39	40	25.2	95	300	545
CML 4532-R47	0.47	40	25.2	90	320	510
CML 4532-R56	0.56	40	25.2	85	360	480
CML 4532-R68	0.68	40	25.2	80	400	445
CML 4532-R82	0.82	40	25.2	75	450	415
CML 4532-1R0	1	50	7.96	70	500	370
CML 4532-1R2	1.2	50	7.96	60	550	300
CML 4532-1R5	1.5	50	7.96	54	600	300
CML 4532-1R8	1.8	50	7.96	50	650	300
CML 4532-2R2	2.2	50	7.96	46	700	250
CML 4532-2R7	2.7	50	7.96	43	750	170
CML 4532-3R3	3.3	50	7.96	40	800	160
CML 4532-3R9	3.9	50	7.96	35	900	160
CML 4532-4R7	4.7	50	7.96	32	1,000	160
CML 4532-5R6	5.6	50	7.96	30	1,100	150
CML 4532-6R8	6.8	50	7.96	27	1,200	150
CML 4532-8R2	8.2	50	7.96	25	1,400	120
CML 4532-100	10	50	2.52	20	1,600	100
CML 4532-120	12	50	2.52	18	2,000	65
CML 4532-150	15	50	2.52	17	2,500	60
CML 4532-180	18	50	2.52	15	2,800	55
CML 4532-220	22	50	2.52	13	3,200	45
CML 4532-270	27	50	2.52	12	3,600	40
CML 4532-330	33	50	2.52	11	4,000	40