FEATURES

RoHS | Reach SVHC-Free | Halogen Free

- Monolithic structure for high reliability.
- Miniature volume.No cross coupling due to magnetic shield.
- Perfect shape for mounting with no directionality.
- Superior solderability and resistance to soldering heat ,suitable for reflow soldering.
- Operating Temp：-40℃~+85℃(Including self heating)



APPLICATIONS

- Widely use in Communications, Video and audio equipment, Computer, Remote control, etc.

PART NUMBERING

APLD	1608	-	2R2	K	P	T	D3
①	②		③	④	⑤	⑥	⑦

① Series Name	
APLD	Multilayer Chip Ferrite Inductor

② External Dimensions [inch]	(L×W) (mm)
1005 [0402]	1.0×0.5
1608 [0603]	1.6×0.8
2012 [0805]	2.0×1.2
3216 [1206]	3.2×1.6
3225 [1210]	3.2×2.5
4532 [1812]	4.5×3.2

③ Inductance	
Code (example)	Nominal inductance［μH］
2R2	2.2
100	10

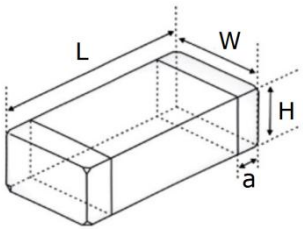
④ Inductance Tolerance	
K	±10%
M	±20%

⑤ Characteristics Code
P、S

⑥ Packaging	
T	Tape & Reel

⑦ Special Material Code
D3

DIMENSIONS



Unit: mm [inch]

Dimensions				
Series	L	W	H	a
APLD1005 [0402]	1.0±0.15 [0.040±0.006]	0.5±0.15 [0.020±0.006]	0.5±0.15 [0.020±0.006]	0.25±0.1 [0.010±0.004]
APLD1608 [0603]	1.6± 0.20 [0.063± 0.008]	0.8± 0.20 [0.031± 0.008]	0.8± 0.20 [0.031± 0.008]	0.3± 0.2 [0.01± 0.008]
APLD2012 [0805]	2.0± 0.20 [0.079± 0.008]	1.2± 0.20 [0.047± 0.008]	0.9± 0.20 [0.035± 0.008]	0.5± 0.3 [0.020± 0.012]
			1.2±0.20 [0.047±0.008]	
APLD3216 [1206]	3.2± 0.20 [0.126± 0.008]	1.6± 0.20 [0.063± 0.008]	0.9± 0.20 [0.035± 0.008]	0.5± 0.3 [0.020± 0.012]
			1.1±0.20 [0.043±0.008]	
APLD3225 [1210]	3.2±0.20 [0.126±0.008]	2.5±0.20 [0.098±0.008]	1.3±0.20 [0.051±0.008]	0.5±0.3 [0.020±0.012]
APLD4532 [1812]	4.5±0.20 [0.180±0.008]	3.2±0.20 [0.126±0.008]	1.5±0.20 [0.060±0.008]	0.5±0.3 [0.020±0.012]

ELECTRICAL CHARACTERISTICS

● APLD1005 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD1005-47NKPTD3	0.047 ±10%	50	0.45	27	10	220	0.5±0.15
APLD1005-56NKPTD3	0.056 ±10%	50	0.45	27	10	210	0.5±0.15
APLD1005-68NKPTD3	0.068 ±10%	50	0.45	27	10	210	0.5±0.15
APLD1005-82NKPTD3	0.082 ±10%	50	0.45	27	10	200	0.5±0.15
APLD1005-R10KPTD3	0.1 ±10%	25	0.7	27	15	200	0.5±0.15
APLD1005-R12KPTD3	0.12 ±10%	25	0.7	27	15	165	0.5±0.15
APLD1005-R15KPTD3	0.15 ±10%	25	0.8	27	15	140	0.5±0.15
APLD1005-R18KPTD3	0.18 ±10%	25	0.8	27	15	120	0.5±0.15
APLD1005-R22KPTD3	0.22 ±10%	25	1	27	15	110	0.5±0.15
APLD1005-R27KPTD3	0.27 ±10%	25	1.2	27	15	95	0.5±0.15
APLD1005-R33KPTD3	0.33 ±10%	25	1.2	27	15	85	0.5±0.15
APLD1005-R39KPTD3	0.39 ±10%	10	1.3	22	15	70	0.5±0.15
APLD1005-R47KPTD3	0.47 ±10%	10	1.5	22	15	68	0.5±0.15

ELECTRICAL CHARACTERISTICS

APLD1005 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD1005-R56KPTD3	0.56 ±10%	10	2	22	15	55	0.5±0.15
APLD1005-R68KPTD3	0.68 ±10%	10	2.3	22	15	50	0.5±0.15
APLD1005-R82KPTD3	0.82 ±10%	10	3	19	15	45	0.5±0.15
APLD1005-1R0KPTD3	1 ±10%	10	0.9	27	20	40	0.5±0.15

APLD1608 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD1608-47NKPTD3	0.047 ±10%	50	0.2	52	15	260	0.8±0.2
APLD1608-56NKPTD3	0.056 ±10%	50	0.2	52	15	260	0.8±0.2
APLD1608-68NKPTD3	0.068 ±10%	50	0.2	52	15	250	0.8±0.2
APLD1608-82NKPTD3	0.082 ±10%	50	0.2	52	15	245	0.8±0.2
APLD1608-R10KPTD3	0.1 ±10%	25	0.25	52	20	240	0.8±0.2
APLD1608-R12KPTD3	0.12 ±10%	25	0.3	52	20	205	0.8±0.2
APLD1608-R15KPTD3	0.15 ±10%	25	0.3	52	20	180	0.8±0.2
APLD1608-R18KPTD3	0.18 ±10%	25	0.3	52	20	165	0.8±0.2
APLD1608-R22KPTD3	0.22 ±10%	25	0.4	52	20	150	0.8±0.2
APLD1608-R27KPTD3	0.27 ±10%	25	0.45	52	20	136	0.8±0.2
APLD1608-R33KPTD3	0.33 ±10%	25	0.5	52	20	125	0.8±0.2
APLD1608-R39KPTD3	0.39 ±10%	25	0.6	52	20	110	0.8±0.2
APLD1608-R47KPTD3	0.47 ±10%	25	0.7	52	20	105	0.8±0.2
APLD1608-R56KPTD3	0.56 ±10%	25	0.7	52	20	95	0.8±0.2
APLD1608-R68KPTD3	0.68 ±10%	25	0.9	52	20	90	0.8±0.2
APLD1608-R82KPTD3	0.82 ±10%	25	1	52	20	85	0.8±0.2
APLD1608-1R0KPTD3	1 ±10%	10	0.5	27	25	75	0.8±0.2
APLD1608-1R2KPTD3	1.2 ±10%	10	0.55	27	25	65	0.8±0.2
APLD1608-1R5KPTD3	1.5 ±10%	10	0.7	27	25	60	0.8±0.2
APLD1608-1R8KPTD3	1.8 ±10%	10	0.75	27	25	55	0.8±0.2
APLD1608-2R2KPTD3	2.2 ±10%	10	0.8	27	25	50	0.8±0.2
APLD1608-2R7KPTD3	2.7 ±10%	10	0.9	16	25	45	0.8±0.2
APLD1608-3R3KPTD3	3.3 ±10%	10	1	16	25	40	0.8±0.2
APLD1608-3R9KPTD3	3.9 ±10%	10	1.3	16	25	35	0.8±0.2
APLD1608-4R7KPTD3	4.7 ±10%	10	1.5	16	25	33	0.8±0.2
APLD1608-5R6KPTD3	5.6 ±10%	4	1.55	5	12	22	0.8±0.2
APLD1608-6R8KPTD3	6.8 ±10%	4	1.55	5	12	20	0.8±0.2
APLD1608-8R2KPTD3	8.2 ±10%	4	1.65	5	12	18	0.8±0.2
APLD1608-100KPTD3	10 ±10%	2	1.75	3	20	17	0.8±0.2
APLD1608-120KPTD3	12 ±10%	2	1.85	3	20	15	0.8±0.2

ELECTRICAL CHARACTERISTICS

APLD1608 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD1608-150MPTD3	15 ±20%	1	2.5	1	20	14	0.8±0.2
APLD1608-180MPTD3	18 ±20%	1	2.7	1	20	13	0.8±0.2
APLD1608-220MPTD3	22 ±20%	1	3	1	20	12	0.8±0.2

APLD2012 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD2012-47NKPTD3	0.047 ±10%	50	0.15	310	25	320	0.9±0.2
APLD2012-56NKPTD3	0.056 ±10%	50	0.15	310	25	320	0.9±0.2
APLD2012-68NKPTD3	0.068 ±10%	50	0.2	310	25	280	0.9±0.2
APLD2012-82NKPTD3	0.082 ±10%	50	0.2	310	25	280	0.9±0.2
APLD2012-R10KPTD3	0.1 ±10%	25	0.2	260	20	235	0.9±0.2
APLD2012-R12KPTD3	0.12 ±10%	25	0.25	260	20	220	0.9±0.2
APLD2012-R15KPTD3	0.15 ±10%	25	0.25	260	20	200	0.9±0.2
APLD2012-R18KPTD3	0.18 ±10%	25	0.3	260	20	185	0.9±0.2
APLD2012-R22KPTD3	0.22 ±10%	25	0.3	260	20	170	0.9±0.2
APLD2012-R27KPTD3	0.27 ±10%	25	0.4	260	20	150	0.9±0.2
APLD2012-R33KPTD3	0.33 ±10%	25	0.4	260	20	145	0.9±0.2
APLD2012-R39KPTD3	0.39 ±10%	25	0.5	210	25	135	0.9±0.2
APLD2012-R47KPTD3	0.47 ±10%	25	0.5	210	25	125	0.9±0.2
APLD2012-R56KPTD3	0.56 ±10%	25	0.6	155	25	115	0.9±0.2
APLD2012-R68KPTD3	0.68 ±10%	25	0.65	155	25	105	0.9±0.2
APLD2012-R82KPTD3	0.82 ±10%	25	0.7	155	25	100	0.9±0.2
APLD2012-1R0KPTD3	1 ±10%	10	0.4	52	35	75	0.9±0.2
APLD2012-1R2KPTD3	1.2 ±10%	10	0.4	52	35	65	0.9±0.2
APLD2012-1R5KPTD3	1.5 ±10%	10	0.4	52	35	60	0.9±0.2
APLD2012-1R8KPTD3	1.8 ±10%	10	0.4	52	35	55	0.9±0.2
APLD2012-2R2KPTD3	2.2 ±10%	10	0.6	52	35	50	0.9±0.2
APLD2012-2R7KPTD3	2.7 ±10%	10	0.6	52	35	45	0.9±0.2
APLD2012-3R3KPTD3	3.3 ±10%	10	0.6	52	35	41	0.9±0.2
APLD2012-3R9KPTD3	3.9 ±10%	10	0.8	52	35	38	0.9±0.2
APLD2012-4R7KPTD3	4.7 ±10%	10	0.9	32	35	35	0.9±0.2
APLD2012-5R6KPTD3	5.6 ±10%	4	1	16	30	32	0.9±0.2
APLD2012-6R8KPTD3	6.8 ±10%	4	1.05	16	30	29	0.9±0.2
APLD2012-8R2KPTD3	8.2 ±10%	4	1.05	16	30	26	0.9±0.2
APLD2012-100KPTD3	10 ±10%	2	1.15	16	30	24	0.9±0.2
APLD2012-120KPTD3	12 ±10%	2	1.15	16	30	22	0.9±0.2
APLD2012-150KPTD3	15 ±10%	1	1.15	5	25	19	0.9±0.2
APLD2012-180KPTD3	18 ±10%	1	1.2	5	25	18	0.9±0.2
APLD2012-220KPTD3	22 ±10%	1	1.2	5	25	16	0.9±0.2
APLD2012-270KPTD3	27 ±10%	1	1.5	5	25	16	0.9±0.2
APLD2012-330MPTD3	33 ±20%	1	1.5	5	25	16	0.9±0.2

ELECTRICAL CHARACTERISTICS

APLD2012 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD2012-390MPTD3	39 ±20%	1	1.5	5	25	16	1.2±0.2
APLD2012-470MPTD3	47 ±20%	1	1.7	5	25	15	1.2±0.2
APLD2012-560MPTD3	56 ±20%	1	2.6	5	25	10	1.2±0.2
APLD2012-680MPTD3	68 ±20%	1	2.6	5	25	10	1.2±0.2

APLD3216 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD3216-47NKSTD3	0.047 ±10%	50	0.15	310	30	320	0.9± 0.2
APLD3216-56NKSTD3	0.056 ±10%	50	0.2	310	30	320	0.9± 0.2
APLD3216-68NKSTD3	0.068 ±10%	50	0.25	310	30	280	0.9± 0.2
APLD3216-82NKSTD3	0.082 ±10%	50	0.25	310	30	280	0.9± 0.2
APLD3216-R10KSTD3	0.1 ±10%	25	0.25	260	25	235	0.9± 0.2
APLD3216-R12KSTD3	0.12 ±10%	25	0.25	260	25	220	0.9± 0.2
APLD3216-R15KSTD3	0.15 ±10%	25	0.25	260	25	200	0.9± 0.2
APLD3216-R18KSTD3	0.18 ±10%	25	0.3	260	25	185	0.9± 0.2
APLD3216-R22KSTD3	0.22 ±10%	25	0.3	260	25	170	0.9± 0.2
APLD3216-R27KSTD3	0.27 ±10%	25	0.3	260	25	150	0.9± 0.2
APLD3216-R33KSTD3	0.33 ±10%	25	0.3	260	25	145	0.9± 0.2
APLD3216-R39KSTD3	0.39 ±10%	25	0.5	210	30	135	0.9± 0.2
APLD3216-R47KSTD3	0.47 ±10%	25	0.5	210	30	125	0.9± 0.2
APLD3216-R56KSTD3	0.56 ±10%	25	0.5	155	30	115	0.9± 0.2
APLD3216-R68KSTD3	0.68 ±10%	25	0.5	155	30	105	0.9± 0.2
APLD3216-R82KSTD3	0.82 ±10%	25	0.6	155	30	100	0.9± 0.2
APLD3216-1R0KSTD3	1 ±10%	10	0.3	105	35	75	0.9± 0.2
APLD3216-1R2KSTD3	1.2 ±10%	10	0.4	105	35	65	0.9± 0.2
APLD3216-1R5KSTD3	1.5 ±10%	10	0.4	52	35	60	0.9± 0.2
APLD3216-1R8KSTD3	1.8 ±10%	10	0.4	52	35	55	0.9± 0.2
APLD3216-2R2KSTD3	2.2 ±10%	10	0.5	52	35	50	0.9± 0.2
APLD3216-2R7KSTD3	2.7 ±10%	10	0.5	52	35	45	0.9± 0.2
APLD3216-3R3KSTD3	3.3 ±10%	10	0.5	52	35	41	0.9± 0.2
APLD3216-3R9KSTD3	3.9 ±10%	10	0.6	52	35	38	0.9± 0.2
APLD3216-4R7KSTD3	4.7 ±10%	10	0.65	27	35	35	0.9± 0.2
APLD3216-5R6KSTD3	5.6 ±10%	4	0.8	27	35	32	0.9± 0.2
APLD3216-6R8KSTD3	6.8 ±10%	4	0.8	27	35	29	0.9± 0.2
APLD3216-8R2KSTD3	8.2 ±10%	4	0.8	27	35	26	0.9± 0.2
APLD3216-100KSTD3	10 ±10%	2	0.8	27	35	24	0.9± 0.2
APLD3216-120KSTD3	12 ±10%	2	0.9	16	35	22	0.9± 0.2
APLD3216-150KSTD3	15 ±10%	1	1	5	30	19	0.9± 0.2
APLD3216-180KSTD3	18 ±10%	1	1	5	30	18	0.9± 0.2
APLD3216-220KSTD3	22 ±10%	1	1.2	5	30	16	0.9± 0.2
APLD3216-270KSTD3	27 ±10%	1	1.2	5	30	14	0.9± 0.2
APLD3216-330KSTD3	33 ±10%	1	1.3	5	30	13	0.9± 0.2

ELECTRICAL CHARACTERISTICS

APLD3216 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD3216-390KSTD3	39 ±10%	1	1.3	5	30	13	0.9± 0.2
APLD3216-470KSTD3	47 ±10%	1	1.6	5	30	12	1.1±0.2
APLD3216-560MSTD3	56 ±20%	1	1.8	5	30	12	1.1±0.2
APLD3216-680MSTD3	68 ±20%	1	2	5	30	11	1.1±0.2
APLD3216-820MSTD3	82 ±20%	1	2.4	5	30	11	1.1±0.2
APLD3216-101MSTD3	101 ±20%	1	3	5	30	8	1.1±0.2

APLD3225 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD3225-1R0KSTD3	1 ±10%	10	0.2	630	40	70	1.3±0.2
APLD3225-1R2KSTD3	1.2 ±10%	10	0.2	630	40	70	1.3±0.2
APLD3225-1R5KSTD3	1.5 ±10%	10	0.3	520	40	70	1.3±0.2
APLD3225-1R8KSTD3	1.8 ±10%	10	0.3	520	40	70	1.3±0.2
APLD3225-2R2KSTD3	2.2 ±10%	10	0.3	520	40	50	1.3±0.2
APLD3225-2R7KSTD3	2.7 ±10%	10	0.3	520	40	50	1.3±0.2
APLD3225-3R3KSTD3	3.3 ±10%	10	0.4	520	40	50	1.3±0.2
APLD3225-3R9KSTD3	3.9 ±10%	10	0.4	520	40	30	1.3±0.2
APLD3225-4R7KSTD3	4.7 ±10%	10	0.5	520	40	30	1.3±0.2
APLD3225-5R6KSTD3	5.6 ±10%	4	0.6	470	35	30	1.3±0.2
APLD3225-6R8KSTD3	6.8 ±10%	4	0.6	470	35	20	1.3±0.2
APLD3225-8R2KSTD3	8.2 ±10%	4	0.7	420	35	20	1.3±0.2
APLD3225-100KSTD3	10 ±10%	2	0.7	420	35	20	1.3±0.2
APLD3225-120KSTD3	12 ±10%	2	0.7	420	35	20	1.3±0.2
APLD3225-150KSTD3	15 ±10%	1	0.7	310	35	20	1.3±0.2
APLD3225-180KSTD3	18 ±10%	1	0.7	310	35	10	1.3±0.2
APLD3225-220KSTD3	22 ±10%	1	0.75	260	35	10	1.3±0.2
APLD3225-270KSTD3	27 ±10%	1	0.75	260	35	10	1.3±0.2
APLD3225-330KSTD3	33 ±10%	1	0.8	260	35	10	1.3±0.2
APLD3225-390KSTD3	39 ±10%	1	0.8	260	35	10	1.3±0.2
APLD3225-470KSTD3	47 ±10%	1	1	210	35	10	1.3±0.2
APLD3225-560MSTD3	56 ±10%	1	1.2	210	35	5	1.3±0.2
APLD3225-680MSTD3	68 ±10%	1	1.3	155	35	5	1.3±0.2
APLD3225-820MSTD3	82 ±10%	1	1.5	155	35	5	1.3±0.2
APLD3225-101MSTD3	100 ±10%	1	1.5	155	35	5	1.3±0.2
APLD3225-121MSTD3	120 ±10%	1	1.8	155	35	5	1.3±0.2

APLD4532 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD4532-1R0KSTD3	1 ±10%	10	0.55	680	35	50	1.5±0.2
APLD4532-1R2KSTD3	1.2 ±10%	10	0.55	680	35	50	1.5±0.2

ELECTRICAL CHARACTERISTICS

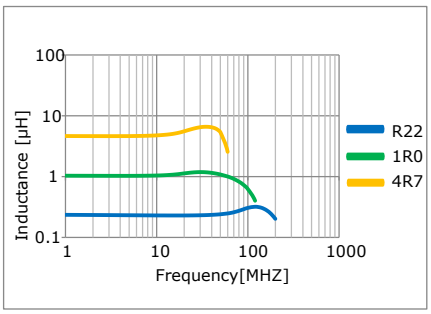
- APLD4532 Series

Part Number	Inductance (μH)	L,Q Test Freq. (MHz)	Max. DC Resistance (Ω)	Max. Rated Current (mA)	Min. Q	Min. SRF (MHz)	Thickness (mm)
APLD4532-1R5KSTD3	1.5 ±10%	10	0.55	630	35	45	1.5±0.2
APLD4532-1R8KSTD3	1.8 ±10%	10	0.65	630	35	45	1.5±0.2
APLD4532-2R2KSTD3	2.2 ±10%	10	0.65	520	35	40	1.5±0.2
APLD4532-2R7KSTD3	2.7 ±10%	10	0.7	520	35	40	1.5±0.2
APLD4532-3R3KSTD3	3.3 ±10%	10	0.75	520	35	35	1.5±0.2
APLD4532-3R9KSTD3	3.9 ±10%	10	0.8	520	35	35	1.5±0.2
APLD4532-4R7KSTD3	4.7 ±10%	10	0.9	520	30	25	1.5±0.2
APLD4532-5R6KSTD3	5.6 ±10%	4	0.9	520	30	20	1.5±0.2
APLD4532-6R8KSTD3	6.8 ±10%	4	1	520	30	18	1.5±0.2
APLD4532-8R2KSTD3	8.2 ±10%	4	1	470	30	17	1.5±0.2
APLD4532-100KSTD3	10 ±10%	2	1	470	30	16	1.5±0.2
APLD4532-120KSTD3	12 ±10%	2	1	470	35	15	1.5±0.2
APLD4532-150KSTD3	15 ±10%	1	1	420	35	14	1.5±0.2
APLD4532-180KSTD3	18 ±10%	1	1	420	35	13	1.5±0.2
APLD4532-220KSTD3	22 ±10%	1	1.3	310	35	12	1.5±0.2
APLD4532-270KSTD3	27 ±10%	1	1.3	310	35	10	1.5±0.2
APLD4532-330KSTD3	33 ±10%	1	1.5	260	40	10	1.5±0.2
APLD4532-390KSTD3	39 ±10%	1	1.5	260	40	10	1.5±0.2
APLD4532-470KSTD3	47 ±10%	1	1.65	260	40	8	1.5±0.2
APLD4532-560KSTD3	56 ±10%	1	1.8	260	40	8	1.5±0.2
APLD4532-680MSTD3	68 ±20%	1	2	210	40	6	1.5±0.2
APLD4532-820MSTD3	82 ±20%	1	2.3	210	40	6	1.5±0.2
APLD4532-101MSTD3	100 ±20%	1	2.3	155	40	6	1.5±0.2
APLD4532-121MSTD3	120 ±20%	1	2.5	155	40	6	1.5±0.2

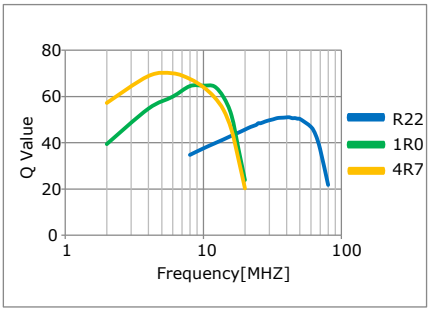
- Rated current：Apply the rated current, and the surface temperature rise of the product shall not exceed 40℃.
- Inductance and Q testing conditions: E4982A or equivalent, test voltage 50mV ± 5mV, Temperature 15℃~35℃， Humidity 25%~75%.
- RDC Testing conditions：RM3542A or equivalent, Temperature 15℃~35℃， Humidity 25%~75%.

CHARACTERISTICS -

APLD1608 Series

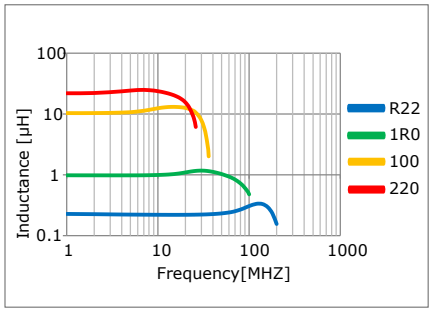


INDUCTANCE VS. FREQUENCY

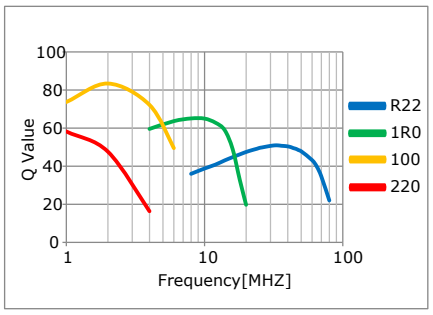


Q VALUE VS. FREQUENCY

APLD2012 Series

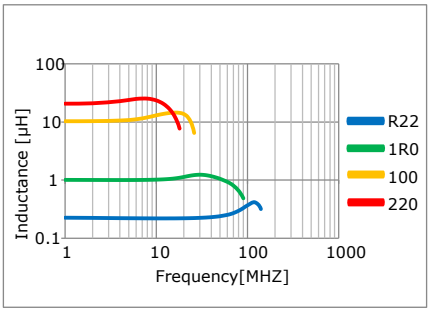


INDUCTANCE VS. FREQUENCY

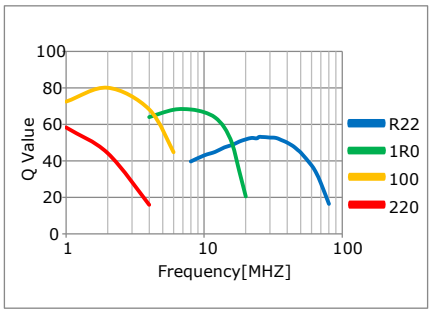


Q VALUE VS. FREQUENCY

APLD3216 Series

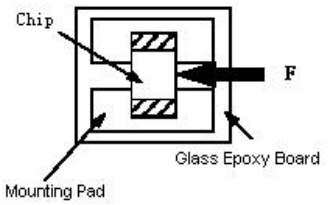
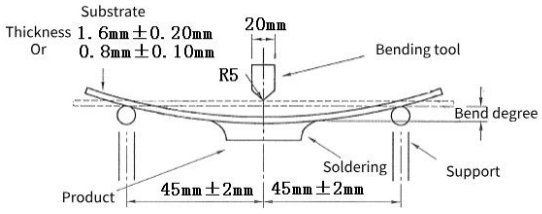


INDUCTANCE VS. FREQUENCY

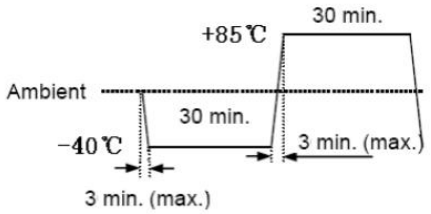


Q VALUE VS. FREQUENCY

RELIABILITY TEST

Items	Requirements	Test Methods and Remarks
1. Solder ability	No mechanical damage. 95% or more of electrode area shall be coated by new solder.	Preheating temperature:120℃ to 150℃ Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 245±3℃ Immersion tin depth:10mm Duration : 3±0.3s Dip performance to a flux of about:3 ~ 5 s
2. Resistance to Soldering Heat	No mechanical damage. Inductance ： change within ±30% Q value change(ferrite): within ±30%	Preheating temperature: 120℃ to 150℃ Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 260℃±5℃ Immersion tin depth:10mm Duration : 10±1s Dip performance to a flux of about:3~5 s
3. Adhesion of electrode	The termination and body should be no damage.	Applied force: 5N force for 1005 series ； 7N force for 1608 series ； 10N force for 2012、3216 series. 15N force for 3225、4532 series. Keep time ： 10±1S 
4. Low temperature resistance	No mechanical damage. Inductance change: within ±10% Q value change(ferrite): within ± 30%	Temperature:-40±2℃ Testing time:1000 h （+24h）
5. Bending strength	No mechanical damage	Testing board: glass epoxy-resin substrate For（1±0.5） mm/s compression speed, curvature: 2mm, hold time20s±1s . 
6. Vibration	No mechanical damage. Inductance change: within ±20% Q value change(ferrite): within ± 30%	Amplitude modulation: 1.5mm Test time: A period of 2h in each of 3 mutually perpendicular directions. Frequency range: 10Hz to 55Hz to 10Hz for 1min.
7. High temperature resistance	No mechanical damage. Inductance change: within ±10% Q value change(ferrite): within ± 30%	Testing time: 1000 h （+24h） Temperature: 85±2℃
8. Static Humidity	No mechanical damage. Inductance change: within ±10% Q value change(ferrite): within ± 30%	Humidity: 90% to 95% RH Temperature: 60℃±2℃ Testing time:1000 h （+24h）

RELIABILITY TEST

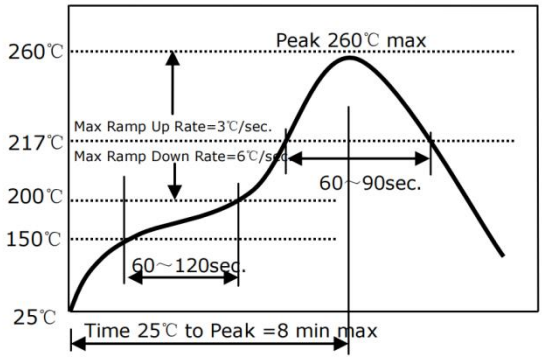
Items	Requirements	Test Methods and Remarks
9. High temperature load	No mechanical damage. Inductance change: within ±10% Q value change(ferrite): within ± 30%	impose current: at room Testing time: 1000 h （+24h） Temperature: 85±2℃
10. Temperature Shock	No mechanical damage. Inductance change: within ±10% Q value change(ferrite): within ± 30%	Temperature: -40℃ for 30±3min +85℃ for 30±3min Number of cycles: 32 
Note: When there are questions concerning, measurement shall be made after 24±2hrs of recovery under the standard condition.		

Recommended Soldering Technologies

Reflowing Profile

- Preheat condition: 150~200℃/60~120sec.
- Allowed time above 217℃: 60~90sec.
- Max temp: 260℃
- Max time at max temp: 10sec.
- Solder paste: Sn/3.0Ag/0.5Cu
- Allowed Reflow time: 2x max

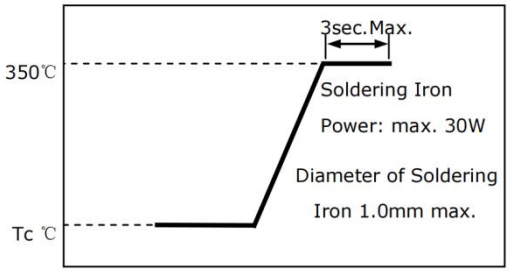
Note: The reflow profile in the above table is only for qualification and is not meant to specify board assembly profiles. Actual board assembly profiles must be based on the customer's specific board design, solder paste and process, and should not exceed the parameters as the Reflow profile shows.



Iron Soldering Profile

- Iron soldering power: Max.30W
- Pre-heating: 150 ℃ / 60sec.
- Soldering Tip temperature: 350℃Max.
- Soldering time: 3sec Max.
- Solder paste: Sn/3.0Ag/0.5Cu
- Max.1 times for iron soldering

Note: Take care not to apply the tip of the soldering iron to the terminal electrodes.



Safety Reminders

SAFETY REMINDERS

- The storage period is within 12 months. Be sure to follow the storage conditions (temperature: 15 to 35℃, humidity: 75% RH or less).If the storage period elapses, the soldering of the terminal electrodes may deteriorate.
- Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
- Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
- When embedding a printed circuit board where a chip is mounted to a set, be sure that residual stress is not given to the chip due to the overall distortion of the printed circuit board and partial distortion such as at screw tightening portions.
- Self heating (temperature increase) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- This product is not designed for production processes involving ultrasonic welding, as high-frequency vibration may cause application issues such as product detachment and breakage.
- Carefully layout the coil for the circuit board design of the non-magnetic shield type. A malfunction may occur due to magnetic interference.
- Use a wrist band to discharge static electricity in your body through the grounding wire.
- Do not expose the products to magnets or magnetic fields.
- Do not use for a purpose outside of the contents regulated in the delivery specifications.
- The products listed on this catalog are intended for use in general electronic equipment, under a normal operation and use condition.

All products listed in this specification are developed, designed and intended for use in general electronics equipment. The products are not designed or Warranted to meet the requirements of the applications listed below, whose performance and/or quality require especially high reliability, or whose failure, malfunction or trouble might directly cause damage to society, person, or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below. Please contact us for more details if you intend to use our products in the following applications.

(1) Aerospace/aviation equipment
(2) Transportation equipment (cars, electric trains, ships, etc.)
(3) Medical equipment
(4) Power-generation control equipment
(5) Atomic energy-related equipment
(6) Seabed equipment
(7) Transportation control equipment
(8) Public information-processing equipment
(9) Military equipment
(10) Electric heating apparatus, burning equipment
(11) Disaster prevention/crime prevention equipment
(12) Safety equipment
(13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.