Air Core RF Inductors

AL Series

ELECTRICAL SPECIFICATIONS

AVX P/N	Turns	Inductance (nH)	Tolerance (%)	Q min.	Q typ.	Test Freq. (MHz)	DCR max (mΩ)	SRF GHz (min.)	Ir max Amps
AL05A1N65KTR	2	1.65	K	100	-	800	4	10	1.60
AL05A2N55*TR	3	2.55	J, K	100	-	800	5	8.2	1.60
AL05A3N85*TR	4	3.85	G, J, K	100	-	800	6	7.5	1.60
AL05A5N45*TR	5	5.45	G, J	100	-	800	8	7	1.60
AL05B05N6*TR	6	5.6	G, J	100	-	800	9	6.5	1.60
AL05B7N15*TR	7	7.15	G, J	100	-	800	10	6	1.60
AL05B08N8*TR	8	8.8	G, J	100	-	800	12	6	1.60
AL05B9N85*TR	9	9.85	G, J	100	-	800	13	5.2	1.60
AL05B12N5*TR	10	12.55	G, J	100	-	800	14	4.6	1.60
AL12A02N5KTR	1	2.5	K	145	-	150	1.1	12.5	4.00
AL12A05N0*TR	2	5	J, K	140	-	150	1.8	6.5	4.00
AL12A08N0*TR	3	8	G, J	140	-	150	2.6	5	4.00
AL12A12N5*TR	4	12.5	G, J	137	-	150	3.4	3.3	4.00
AL12A18N5*TR	5	18.5	G, J	132	-	150	3.9	2.5	4.00
AL12B17N5*TR	6	17.5	G, J	100	-	150	4.5	2.2	4.00
AL12B22N0*TR	7	22	G, J	102	-	150	5.2	2.1	4.00
AL12B28N0*TR	8	28	G, J	105	-	150	6	1.8	4.00
AL12B33N5*TR	9	35.5	G, J	112	-	150	6.8	1.5	4.00
AL12B43N0*TR	10	43	G, J	106	-	150	7.9	1.2	4.00
AL01622N0*TS	4	22	G, J	100	135	150	4.2	3.2	3.00
AL01627N0*TS	5	27	G, J	100	135	150	4	2.7	3.50
AL01633N0*TS	5	33	G, J	100	130	150	4.8	2.5	3.00
AL01639N0*TS	6	39	G, J	100	135	150	4.4	2.1	3.00
AL01647N0*TS	6	47	G, J	100	135	150	5.6	2.1	3.00
AL01656N0*TS	7	56	G, J	100	125	150	6.2	1.5	3.00
AL01668N0*TS	7	68	G, J	100	120	150	8.2	1.5	2.50
AL01682N0*TS	8	82	G, J	100	120	150	9.4	1.3	2.50
AL016100N*TS	9	100	G, J	100	115	150	12.3	1.2	1.70
AL016120N*TS	9	120	G, J	100	125	150	17.3	1.1	1.50
AL02390N0*TS	9	90	G, J	95	114	50	15	1.140	3.50
AL023111N*TS	10	111	G, J	87	104	50	15	1.020	3.50
AL023130N*TS	11	130	G, J	87	104	50	20	0.900	3.00
AL023169N*TS	12	169	G, J	95	114	50	25	0.875	3.00
AL023206N*TS	13	206	G, J	95	114	50	30	0.800	3.00
AL023222N*TS	14	222	G, J	92	110	50	35	0.730	3.00
AL023246N*TS	15	246	G, J	95	114	50	35	0.685	3.00
AL023307N*TS	16	307	G, J	95	114	50	35	0.660	3.00
AL023380N*TS	17	380	G, J	95	114	50	50	0.590	2.50
AL023422N*TS	18	422	G, J	95	114	50	60	0.540	2.50
AL023491N*TS	19	491	G, J	95	114	50	65	0.535	2.00
AL023538N*TS	20	538	G, J	87	104	50	90	0.490	2.00

*Tolerance: G= ± 2%, J: ± 5%, K: ± 10%

a. Test Equipment:
   L/Q: HP-4291B With HP16193A test fixture or equivalent.
   SRF: HP8753E /HP8720D or equivalent.
   RDC: Chroma 16502 or equivalent.
b. Operating temperature range: -40ºC to +125ºC.
c. For Temperature Rise: 15ºC
d. Storage Temp.: -40ºC to +85ºC.
f. MSL: Level 1

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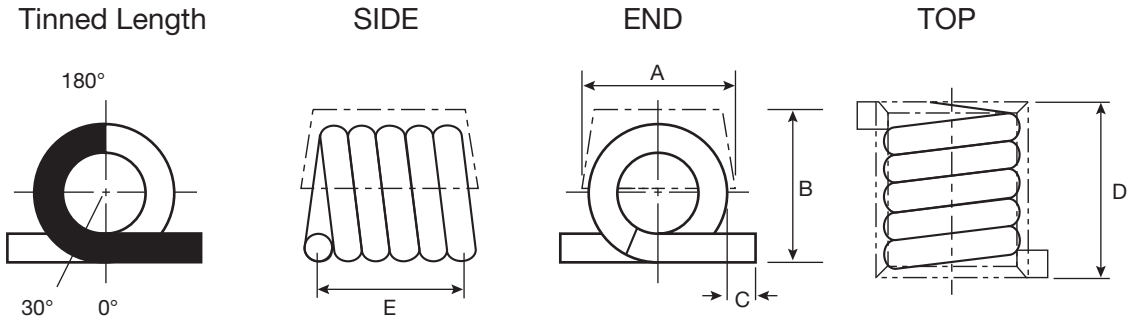
AL Series

PHYSICAL DIMENSIONS



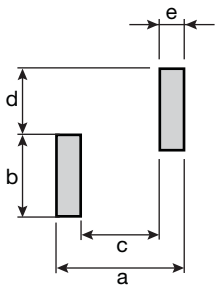
mm (inches)

Part Number	A	B	C	D	E
AL05A	1.42 ± 0.13 (0.056 ± 0.005)	1.37 ± 0.15 (0.056 ± 0.005)	0.89 ± 0.25 (0.035 ± 0.010)	2.21 ± 0.25 (0.087 ± 0.010)	1.83 ± 0.25 (0.072 ± 0.010)
AL05B	1.42 ± 0.13 (0.056 ± 0.005)	1.37 ± 0.15 (0.056 ± 0.005)	0.89 ± 0.25 (0.035 ± 0.010)	4.04 ± 0.30 (0.159 ± 0.012)	3.66 ± 0.30 (0.144 ± 0.012)
AL12A	3.05 max. (0.120 max.)	3.18 max. (0.125 max.)	0.58 ± 0.38 (0.023 ± .0.015)	3.68 max. (0.145 max.)	2.92 ± 0.25 (0.115 ± 0.010)
AL12B	3.05 max. (0.120 max.)	3.18 max. (0.125 max.)	0.58 ± 0.38 (0.023 ± 0.015)	6.86 max. (0.270 max.)	5.84 ± 0.25 (0.230 ± 0.010)
AL016	3.81 (0.150)	4.20 max. (0.165 max.)	1.53 ± 0.39 (0.060 ± 0.015)	4.83 max. (0.190 max.)	4.32 ± 0.39 (0.170 ± 0.015)
AL023	6.35 max. (0.250 max.)	5.90 max. (0.232 max.)	1.02 ± 0.39 (0.040 ± 0.015)	10.55 max. (0.415 max.)	7.98 ± 0.51 (0.314 ± 0.020)

RECOMMENDED LAND PATTERNS

mm (inches)

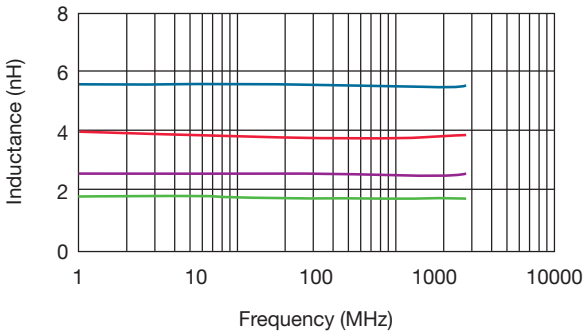
Part Number	A	B	C	D	E
AL05A	2.62 (0.103)	2.46 (0.097)	1.04 (0.041)	1.02 (0.040)	0.79 (0.031)
AL05B	4.45 (0.175)	2.46 (0.097)	2.87 (0.113)	1.02 (0.040)	0.79 (0.031)
AL12A	4.19 (0.165)	3.30 (0.130)	1.65 (0.065)	2.79 (0.110)	1.27 (0.050)
AL12B	7.24 (0.285)	3.30 (0.130)	4.70 (0.185)	2.79 (0.110)	1.27 (0.050)
AL016	5.80 (0.228)	5.16 (0.203)	2.85 (0.112)	2.62 (0.103)	1.48 (0.058)
AL023	10.0 (0.394)	4.70 (0.185)	5.95 (0.234)	2.42 (0.095)	2.04 (0.080)



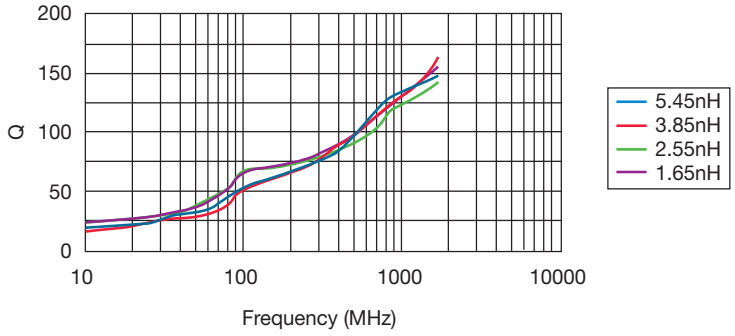
PERFORMANCE SPECIFICATIONS

AL05A

Inductance vs. Frequency

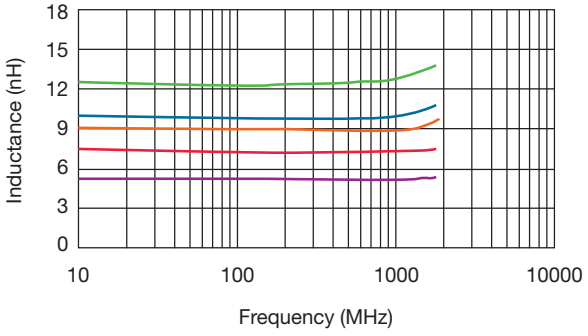


Typical Q vs. Frequency

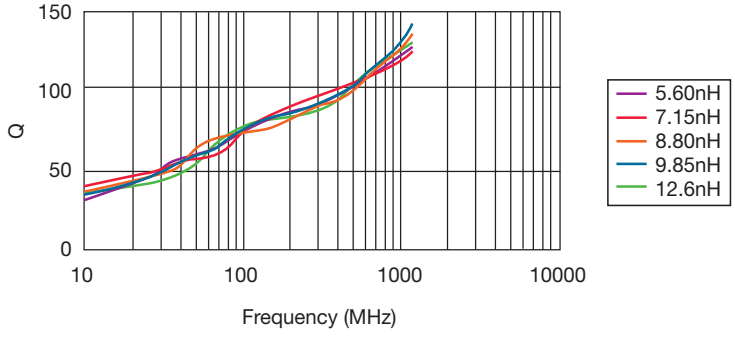


AL05B

Inductance vs. Frequency

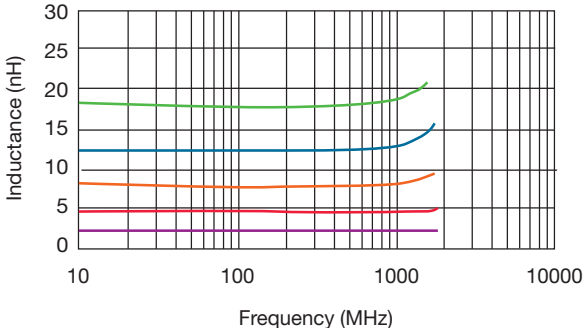


Typical Q vs. Frequency

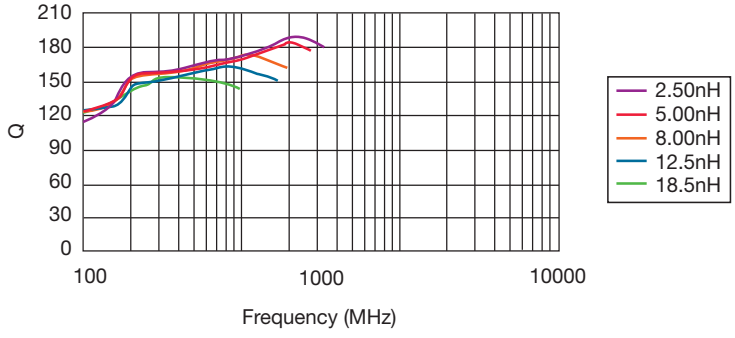


AL12A

Inductance vs. Frequency



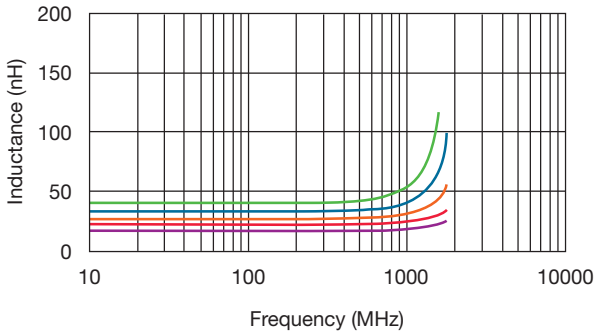
Typical Q vs. Frequency



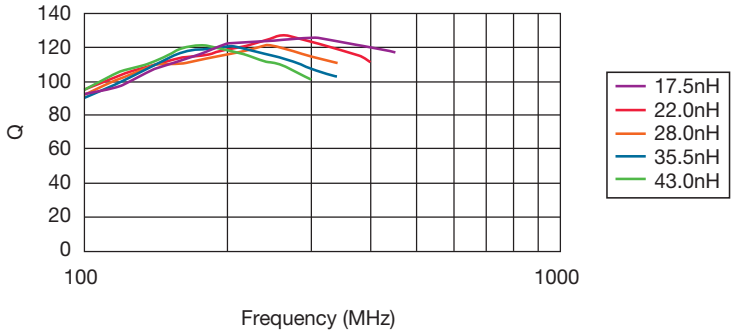
PERFORMANCE SPECIFICATIONS

AL12B

Inductance vs. Frequency

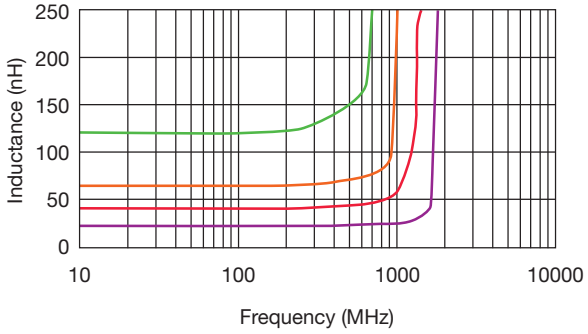


Typical Q vs. Frequency

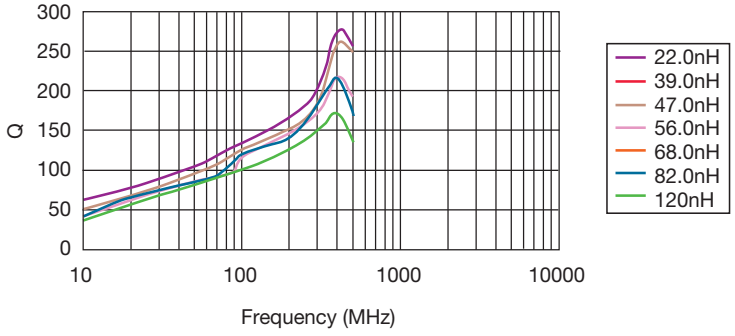


AL016

Inductance vs. Frequency

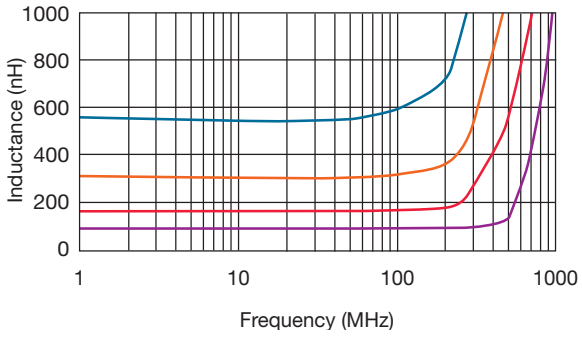


Typical Q vs. Frequency

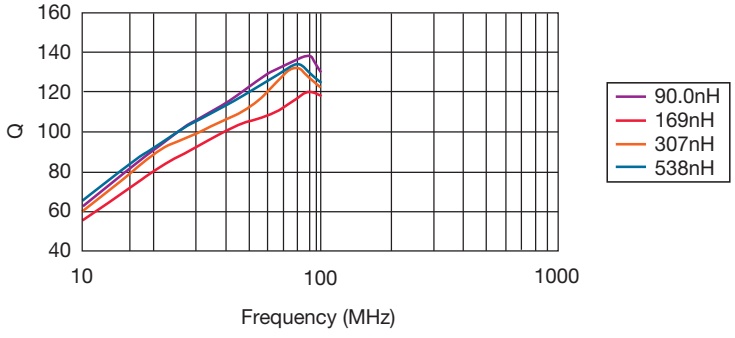


AL023

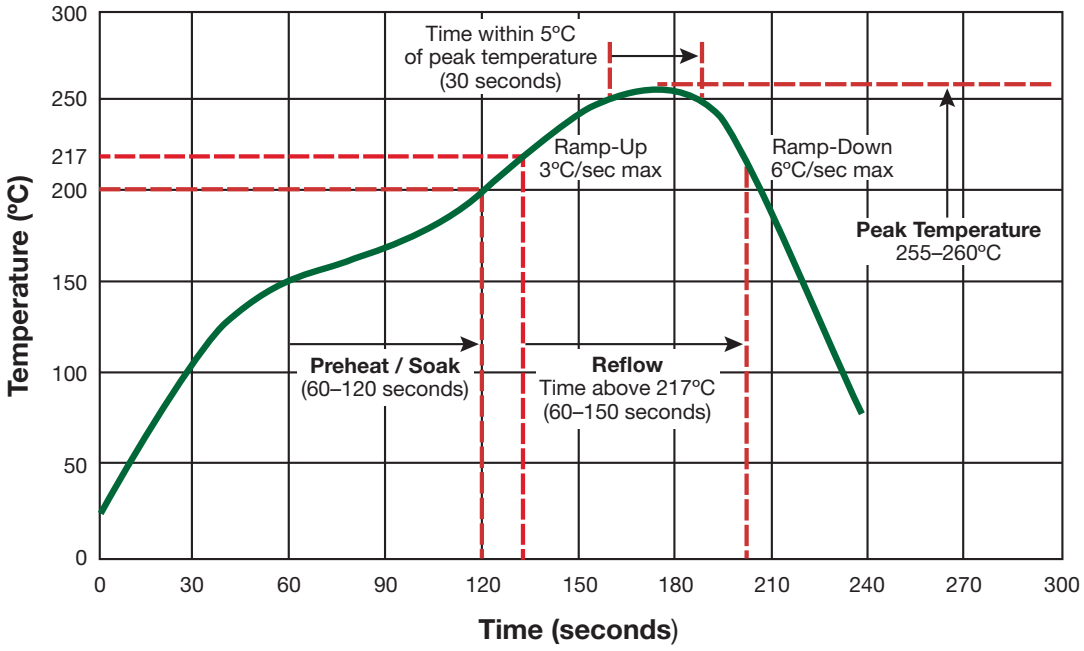
Inductance vs. Frequency



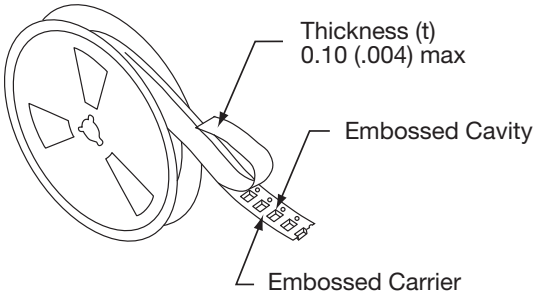
Typical Q vs. Frequency



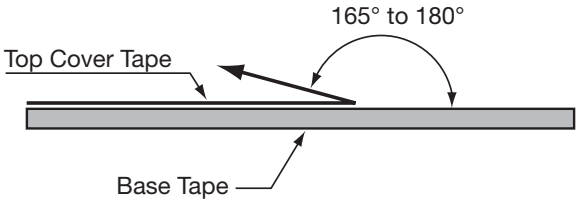
TYPICAL RoHS REFLOW PROFILE

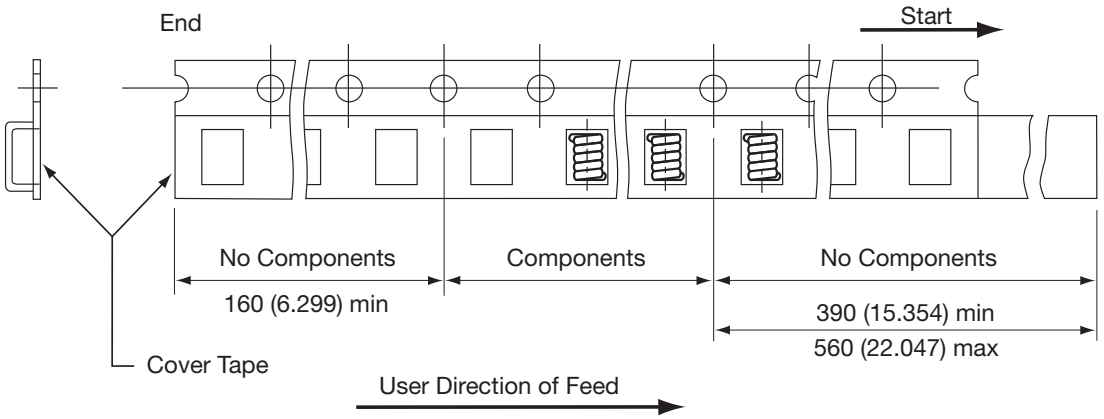


PACKAGING SPECIFICATIONS

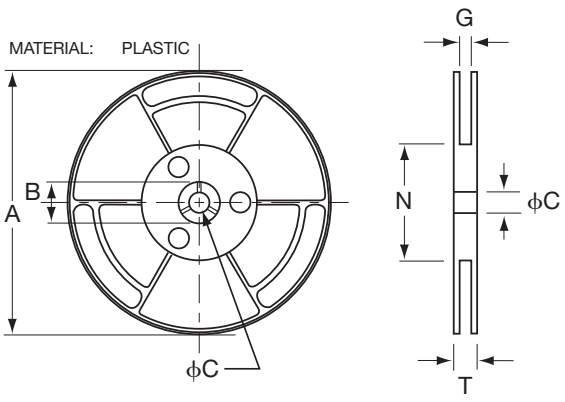


• The force for tearing off cover tape is 10 to 130 grams in the arrow direction

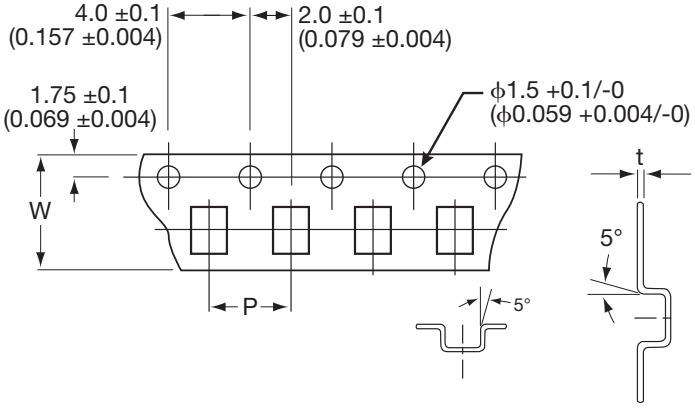




CARRIER TAPE REELS



DIMENSIONS OF CARRIER TAPE



mm (inches)

Series	ITEM	A	B	C	N	G	T	W	P	t
AL05A	DIM.	178	21	13	75	8.4	12.5	8	4	0.30
	TOL.	±2.0	±0.8	±0.8	±2.0	+1.5	+1.5	±0.3	±0.1	±0.05
AL05B	DIM.	180	21	13	50	12.4	18.4	12	4	0.35
	TOL.	MAX	±0.8	+0.5/-0.2	MIN	+2.0	MAX	±0.30	±0.10	±0.05
AL12A	DIM.	178	25	15	75	12.5	16.4	12	8	0.25
	TOL.	±2.0	±1.0	±0.5	±2.0	+1.5	+1.5	±0.2	±0.1	±0.05
AL12B	DIM.	178	50	15	75	16.5	20.4	16	8	0.25
	TOL.	±2.0	±1.0	±0.5	±2.0	+1.5	+1.5	±0.2	±0.1	±0.05
AL016	DIM.	340	20.2	13	100	16.5	25.5	16	12	0.30
	TOL.	MAX	MIN	±0.5	REF	±0.5	±0.5	±0.30	±0.10	±0.05
AL023	DIM.	340	20.2	13	100	24.5	30.4	24.0	12.0	0.35
	TOL.	MAX	MIN	±0.5	REF	±0.5	±0.5	±0.30	±0.10	±0.05

Mouser Electronics

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Kyocera AVX:

AL01647N0JTS AL01668N0JTS AL023307NJTS AL05A5N45GTR AL05B7N15GTR AL12A12N5JTR AL12B28N0GTR AL016100NJTR AL016120NJTR AL01622N0JTR AL01627N0JTR AL01633N0JTR AL01639N0JTR AL01647N0JTR AL01656N0JTR AL01668N0JTR AL01682N0JTR AL023111NJTR AL023130NJTR AL023169NJTR AL023206NJTR AL023222NJTR AL023246NJTR AL023307NJTR AL023380NJTR AL023422NJTR AL023491NJTR AL023538NJTR AL02390N0JTR AL05A1N65KTR AL05A2N55GTR AL05A2N55JTR AL05A2N55KTR AL05A3N85GTR AL05A3N85JTR AL05A3N85KTR AL05A5N45JTR AL05A5N45KTR AL05B05N6GTR AL05B05N6JTR AL05B05N6KTR AL05B08N8GTR AL05B08N8JTR AL05B08N8KTR AL05B12N6GTR AL05B12N6JTR AL05B12N6KTR AL05B7N15JTR AL05B7N15KTR AL05B9N85GTR AL05B9N85JTR AL05B9N85KTR AL12A02N5KTR AL12A05N0GTR AL12A05N0JTR AL12A05N0KTR AL12A08N0GTR AL12A08N0JTR AL12A08N0KTR AL12A12N5GTR AL12A12N5KTR AL12A18N5GTR AL12A18N5JTR AL12A18N5KTR AL12B17N5GTR AL12B17N5JTR AL12B17N5KTR AL12B22N0GTR AL12B22N0JTR AL12B22N0KTR AL12B28N0JTR AL12B28N0KTR AL12B35N5GTR AL12B35N5JTR AL12B35N5KTR AL12B43N0GTR AL12B43N0JTR AL12B43N0KTR AL01682N0JTS AL01656N0JTS AL023491NJTS AL023130NJTS AL023422NJTS AL023222NJTS AL023246NJTS AL023111NJTS AL023538NJTS AL01639N0JTS AL023380NJTS AL01622N0JTS AL016120NJTS AL016100NJTS AL023206NJTS AL02390N0JTS AL01627N0JTS AL023169NJTS AL01633N0JTS