

# Inductors

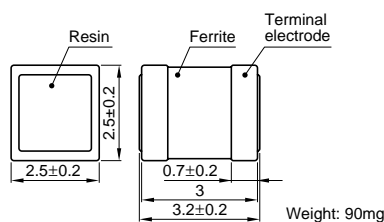
## For Power Line SMD

## ACL Series ACL3225 Type

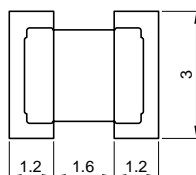
### FEATURES

- The ACL series wire-wound chip inductors are magnetically shielded, permitting their use in high-density mounting configurations.
- High inductance values are achieved without size increase.
- Low DC resistance ensures high Q.
- The temperature coefficient is low despite the magnetic shielding. Accordingly, immunity to ambient temperature change is high.

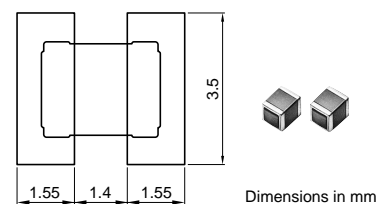
### SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERNS



#### REFLOW SOLDERING



#### FLOW SOLDERING



### ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current*1 (mA)max.	Part No.
0.01	±20%	10	100	2000	0.19	725	ACL3225S-10nM-X*2
0.012	±20%	10	100	1750	0.2	705	ACL3225S-12nM-X
0.015	±20%	10	100	1550	0.23	655	ACL3225S-15nM-X
0.018	±20%	15	100	1450	0.25	630	ACL3225S-18nM-X
0.022	±20%	15	100	1300	0.28	595	ACL3225S-22nM-X
0.027	±20%	15	100	1150	0.3	575	ACL3225S-27nM-X
0.033	±20%	15	100	1040	0.34	540	ACL3225S-33nM-X
0.039	±20%	20	100	950	0.37	515	ACL3225S-39nM-X
0.047	±20%	20	100	850	0.41	490	ACL3225S-47nM-X
0.056	±20%	20	100	770	0.47	460	ACL3225S-56nM-X
0.068	±20%	20	100	740	0.5	445	ACL3225S-68nM-X
0.082	±20%	20	100	600	0.55	425	ACL3225S-82nM-X
0.1	±20%	30	100	510	0.64	395	ACL3225S-R10M-X
0.12	±10%	35	25.2	580	0.24	645	ACL3225S-R12K-X
0.15	±10%	35	25.2	470	0.26	620	ACL3225S-R15K-X
0.18	±10%	35	25.2	400	0.29	585	ACL3225S-R18K-X
0.22	±10%	40	25.2	340	0.33	550	ACL3225S-R22K-X
0.27	±10%	40	25.2	290	0.37	515	ACL3225S-R27K-X
0.33	±10%	40	25.2	250	0.39	505	ACL3225S-R33K-X
0.39	±10%	40	25.2	220	0.42	485	ACL3225S-R39K-X
0.47	±10%	50	25.2	200	0.46	465	ACL3225S-R47K-X
0.56	±10%	50	25.2	180	0.51	440	ACL3225S-R56K-X
0.68	±10%	50	25.2	155	0.55	425	ACL3225S-R68K-X
0.82	±10%	50	25.2	140	0.6	405	ACL3225S-R82K-X
1	±10%	50	25.2	130	0.68	380	ACL3225S-1R0K-X
1.2	±10%	60	7.96	150	0.52	435	ACL3225S-1R2K-X
1.5	±10%	60	7.96	130	0.59	360	ACL3225S-1R5K-X
1.8	±10%	60	7.96	120	0.64	330	ACL3225S-1R8K-X
2.2	±10%	60	7.96	105	0.71	310	ACL3225S-2R2K-X
2.7	±10%	60	7.96	90	0.77	300	ACL3225S-2R7K-X
3.3	±10%	60	7.96	80	0.85	240	ACL3225S-3R3K-X
3.9	±10%	60	7.96	70	0.94	230	ACL3225S-3R9K-X
4.7	±10%	60	7.96	60	1	220	ACL3225S-4R7K-X

\*1 The rated current is for the smaller of the inductance change due to either temperature increase or DC current superposition.

\*2 X: packaging style (T: Taping[ø180mm reel], TL: Taping[ø330mm reel], B: Bulk)

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## For Power Line SMD

## ACL Series ACL3225 Type

### ELECTRICAL CHARACTERISTICS

Inductance (μH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current* <sup>1</sup> (mA)max.	Part No.
5.6	±10%	60	7.96	52	1.1	180	ACL3225S-5R6K-X* <sup>2</sup>
6.8	±10%	60	7.96	44	1.25	160	ACL3225S-6R8K-X
8.2	±10%	60	7.96	37	1.35	130	ACL3225S-8R2K-X
10	±10%	60	7.96	31	1.5	120	ACL3225S-100K-X
12	±10%	50	2.52	49	1.5	120	ACL3225S-120K-X
15	±10%	50	2.52	30	1.75	120	ACL3225S-150K-X
18	±10%	50	2.52	22	1.95	110	ACL3225S-180K-X
22	±10%	50	2.52	17	2.15	100	ACL3225S-220K-X
27	±10%	50	2.52	14.5	2.35	85	ACL3225S-270K-X
33	±10%	50	2.52	12.5	2.65	85	ACL3225S-330K-X
39	±10%	50	2.52	11.5	2.9	70	ACL3225S-390K-X
47	±10%	50	2.52	10.5	3.15	65	ACL3225S-470K-X
56	±10%	50	2.52	10	3.4	45	ACL3225S-560K-X
68	±10%	50	2.52	9	3.8	55	ACL3225S-680K-X
82	±10%	50	2.52	8.5	4.3	40	ACL3225S-820K-X
100	±10%	50	2.52	7.8	4.7	40	ACL3225S-101K-X
120	±20%	25	0.796	7.6	3.05	14	ACL3225S-121M-X
150	±20%	25	0.796	6.8	3.5	13	ACL3225S-151M-X
180	±20%	25	0.796	6.2	3.95	10	ACL3225S-181M-X
220	±20%	25	0.796	5.6	4.2	10	ACL3225S-221M-X
270	±20%	25	0.796	5.1	4.8	8.5	ACL3225S-271M-X
330	±20%	25	0.796	4.6	5.55	8.5	ACL3225S-331M-X
390	±20%	25	0.796	4.2	6	8	ACL3225S-391M-X
470	±20%	25	0.796	3.7	6.7	8	ACL3225S-471M-X
560	±20%	25	0.796	3.4	7.5	7.5	ACL3225S-561M-X
680	±20%	25	0.796	3.1	8.35	6	ACL3225S-681M-X
820	±20%	25	0.796	2.7	9.55	5.5	ACL3225S-821M-X
1000	±20%	25	0.796	2.4	11	5	ACL3225S-102M-X

\*<sup>1</sup> The rated current is for the smaller of the inductance change due to either temperature increase or DC current superposition.

\*<sup>2</sup> X: packaging style (T: Taping[ø180mm reel], TL: Taping[ø330mm reel], B: Bulk)

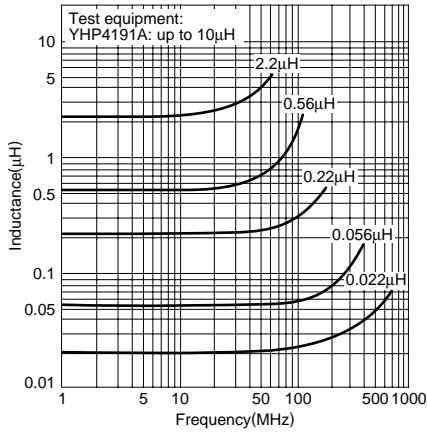
# Inductors

For Power Line  
SMD

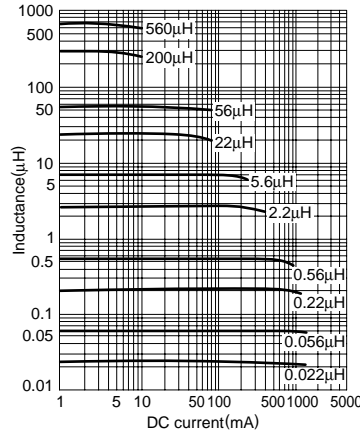
ACL Series ACL3225 Type

## TYPICAL ELECTRICAL CHARACTERISTICS

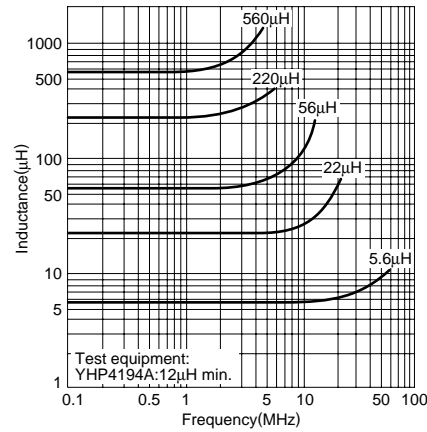
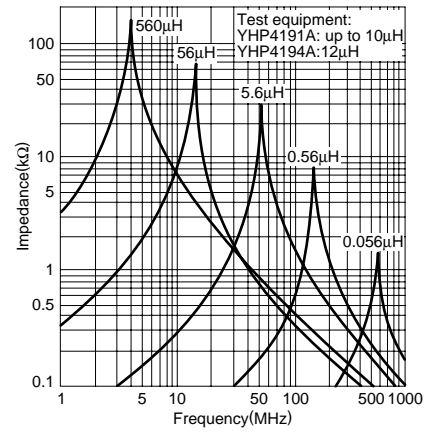
### INDUCTANCE vs. FREQUENCY CHARACTERISTICS



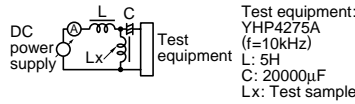
### INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



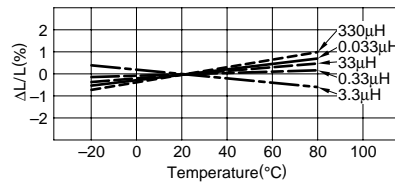
### IMPEDANCE vs. FREQUENCY CHARACTERISTICS



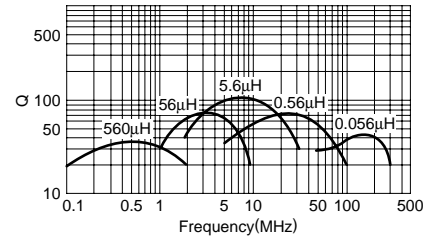
### MEASURING CIRCUIT



### INDUCTANCE CHANGE vs. TEMPERATURE CHARACTERISTICS



### Q vs. FREQUENCY CHARACTERISTICS



### COUPLING FACTORS

