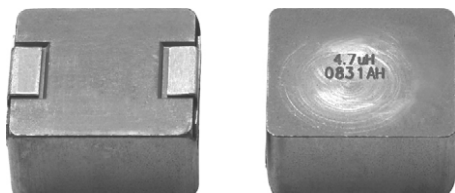


IHLP® Automotive Inductors, High Temperature (180 °C) Series



LINKS TO ADDITIONAL RESOURCES



STANDARD ELECTRICAL SPECIFICATIONS					
L₀ INDUCTANCE ± 20 % AT 100 kHz, 0.25 V, 0 A (µH)	DCR TYP. 25 °C (mΩ)	DCR MAX. 25 °C (mΩ)	HEAT RATING CURRENT DC TYP. (A) ⁽¹⁾	SATURATION CURRENT DC TYP. (A) ⁽²⁾	SRF TYP. (MHz)
0.22	0.73	0.81	66	68	113
0.33	0.83	0.92	62	44	79.9
0.47	1.05	1.16	54	42	65.6
0.56	1.24	1.33	50	32	63.1
0.68	1.33	1.42	40	29	48.1
1.0	1.65	1.77	40	26	33.4
1.2	1.98	2.12	29	24.5	32.0
1.5	2.4	2.57	27.5	23.5	29.2
1.8	2.75	2.94	26	22.5	25.9
2.2	3.43	3.67	25.5	21.5	23.3
3.3	5.08	5.44	20.2	16.7	17.8
4.7	7.41	7.93	19.7	18.5	15.8
5.6	8.51	9.11	16.8	14.2	12.3
6.8	11.3	12.09	14.9	14.1	13.4
7.8	12.6	13.48	13.5	8.5	13.4
8.2	13.2	14.12	13.2	7.6	10.3
10	16.60	17.76	12.1	7.8	10.7
12	19.00	20.33	11.4	7.9	9.5
15	24.00	25.68	10.1	7.7	8.8
22	31.30	33.49	9.0	6.3	6.6
33	46.03	49.25	6.9	6.2	5.5
47	77.00	79.60	5.6	4.5	3.9
82	141.10	150.98	3.7	3.7	3.0
100	175.00	187.0	3.1	4.3	2.8

Notes

- All test data is referenced to 25 °C ambient
 - Operating temperature range -55 °C to +180 °C
 - The part temperature (ambient + temp. rise) should not exceed 180 °C under worst case operating conditions. Circuit design, component placement, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application
 - Rated operating voltage (across inductor) = 75 V
- (1) DC current (A) that will cause an approximate ΔT of 40 °C
(2) DC current (A) that will cause L₀ to drop approximately 20 %

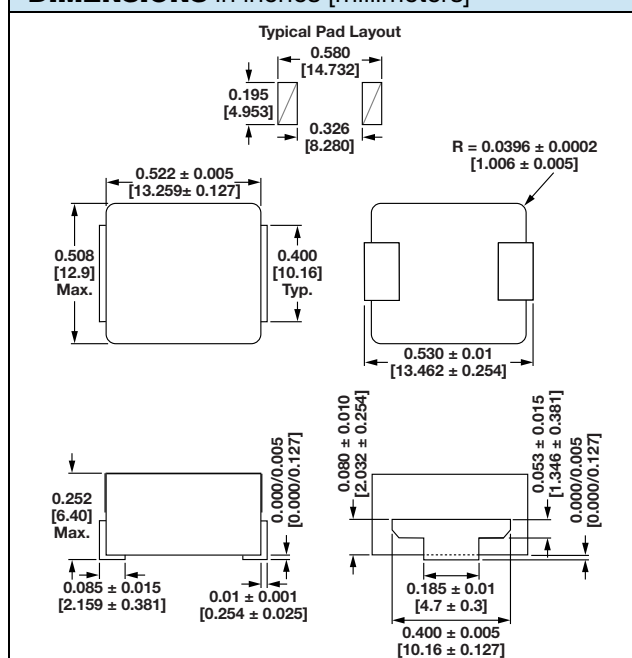
FEATURES

- High temperature, up to 180 °C
- Shielded construction
- Excellent DC/DC energy storage up to 1 MHz to 2 MHz. Filter inductor applications up the SRF (see Standard Electrical Specifications table)
- Lowest DCR/µH, in this package size
- Handles high transient current spikes up to 10 times the current rating, depending on the duration
- Ultra low buzz noise, due to composite construction
- AEC-Q200 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

APPLICATIONS

- Brushless DC motor for auto EGR (exhaust gas recycle) pump
- ADAS (advanced driver-assistance systems)
- Body electronics
 - LED lighting
 - Infotainment / driver information
 - Mirror / window / door soft close control
- EMI filter up to 180 °C
- Storage inductors for GaN switched-mode power supply applications

DIMENSIONS in inches [millimeters]





DESCRIPTION

IHLP-5050FD-8A	4.7 μH	$\pm 20\%$	EK	e3
MODEL	INDUCTANCE VALUE	INDUCTANCE TOLERANCE	PACKAGE CODE	JEDEC® LEAD (Pb)-FREE STANDARD

GLOBAL PART NUMBER

I	H	L	P	5	0	5	0	F	D	E	K	4	R	7	M	8	A
PRODUCT FAMILY				SIZE				PACKAGE CODE		INDUCTANCE			INDUCTANCE TOLERANCE		SERIES		
								EK = tape and reel		4R7 = 4.7 μ H			M = $\pm 20\%$				

PACKAGE CODE OPTIONS

EK = tape and reel packaging (500 pcs on 13-inch reel)

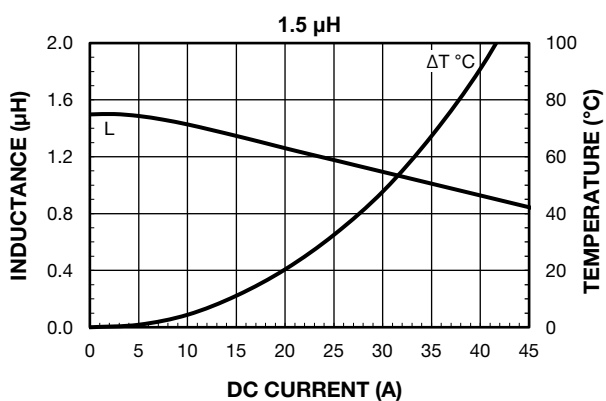
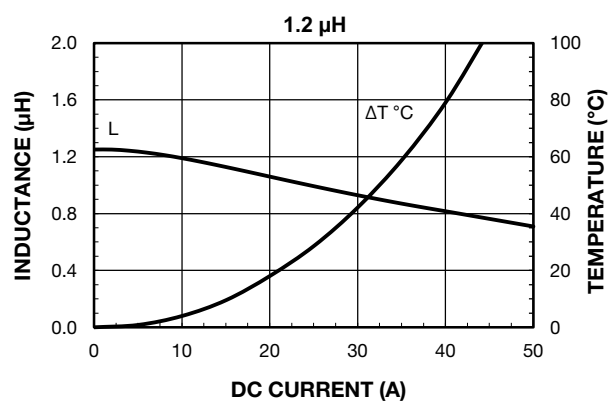
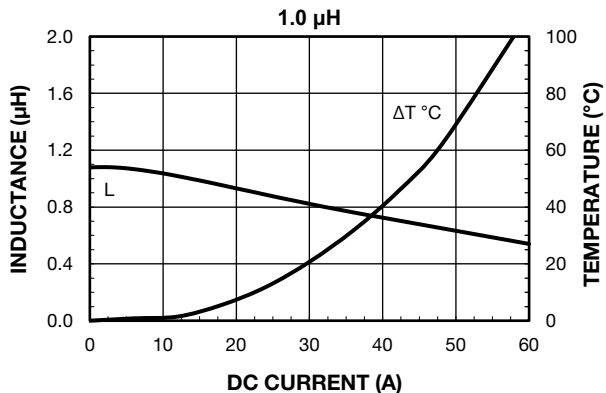
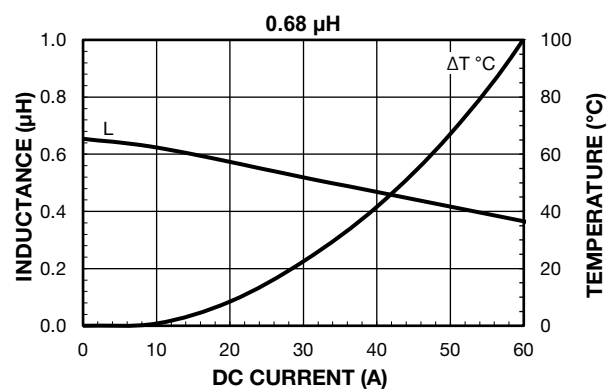
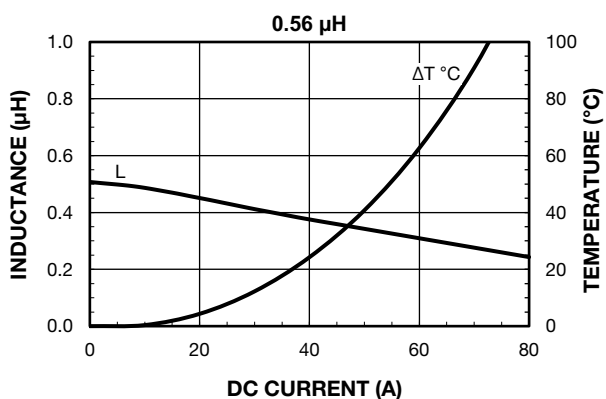
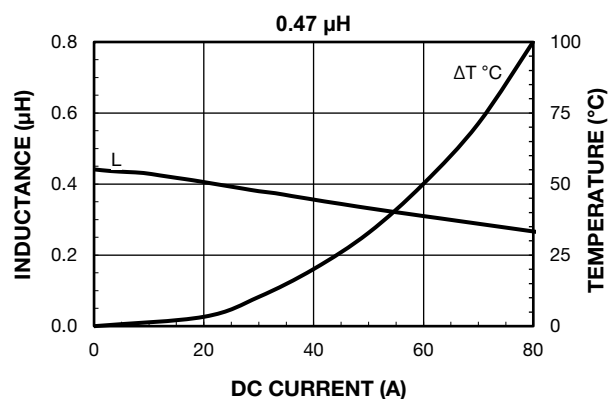
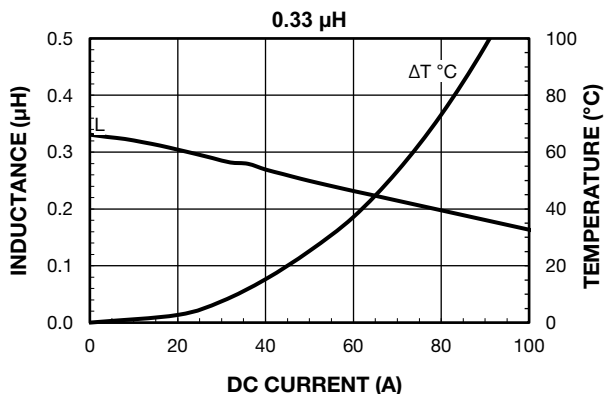
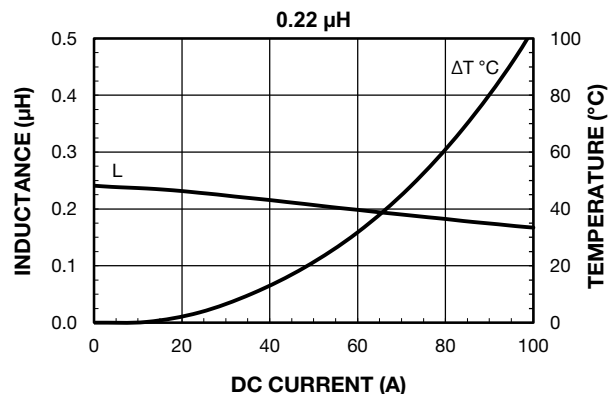
ER = tape and reel packaging (250 pcs on 13-inch reel)

Note

- For additional packaging details see "[Packaging Methods](#)"

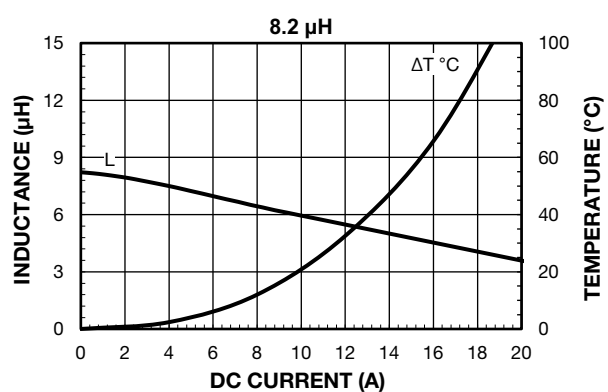
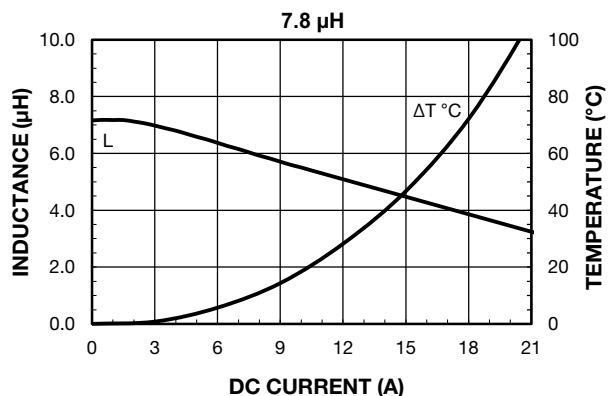
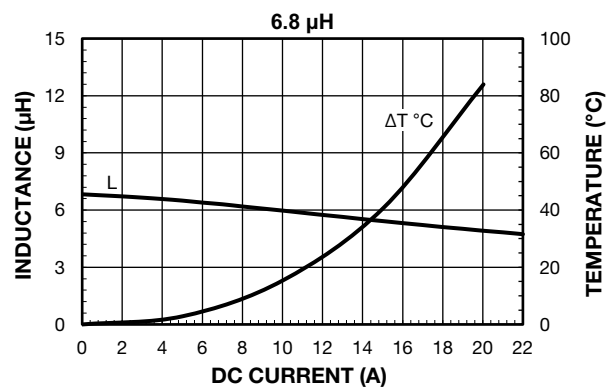
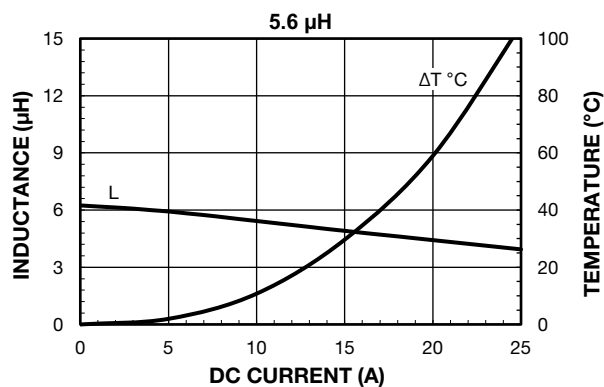
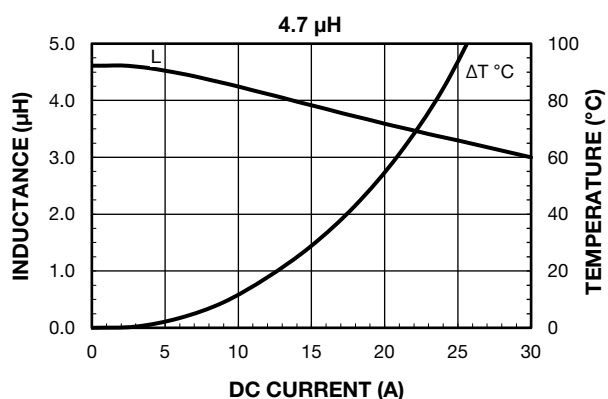
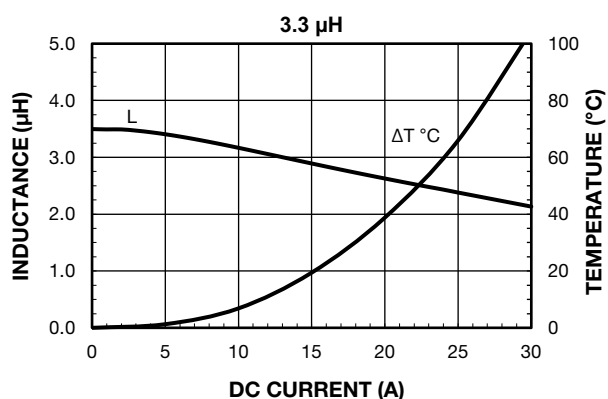
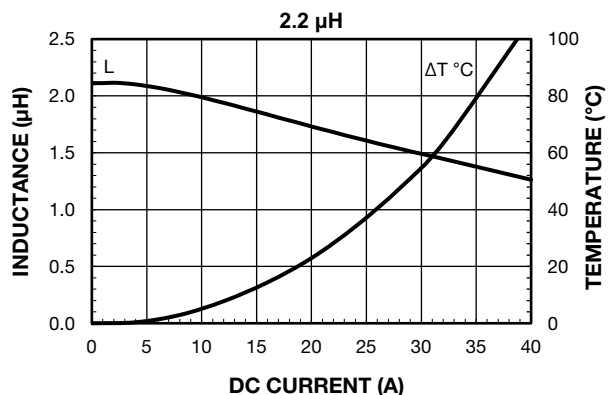
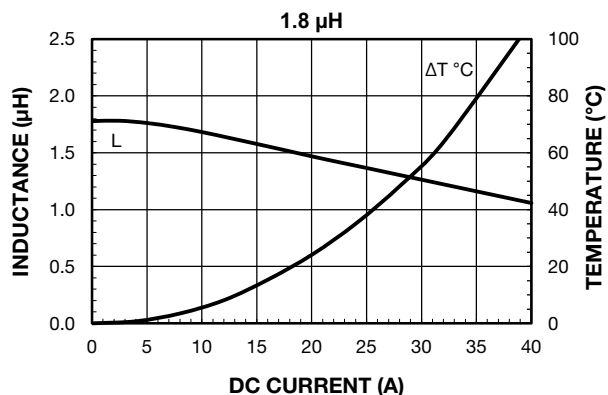


PERFORMANCE GRAPHS



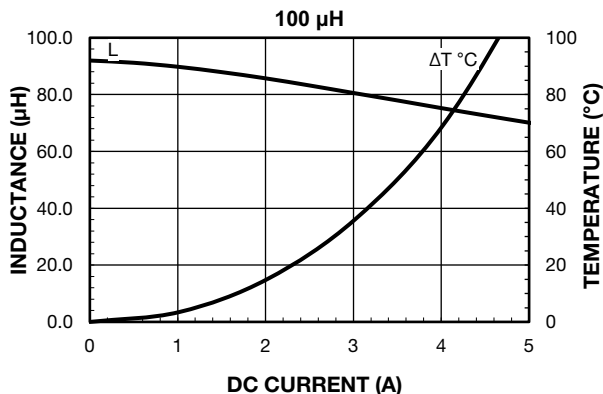
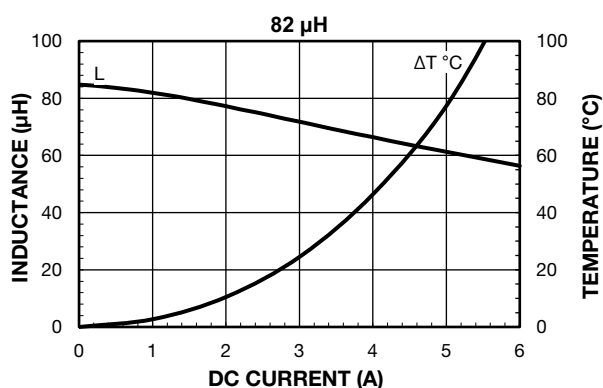
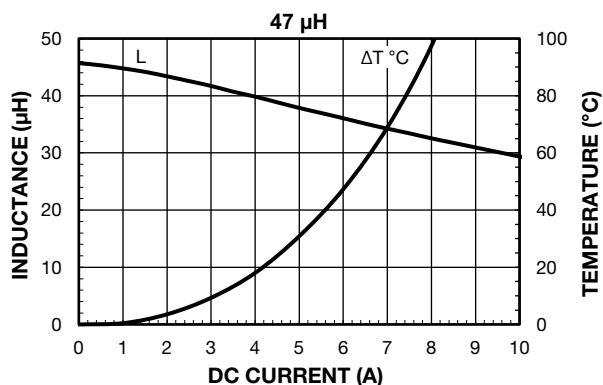
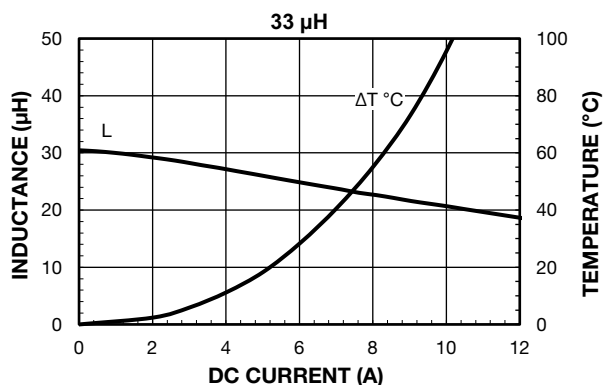
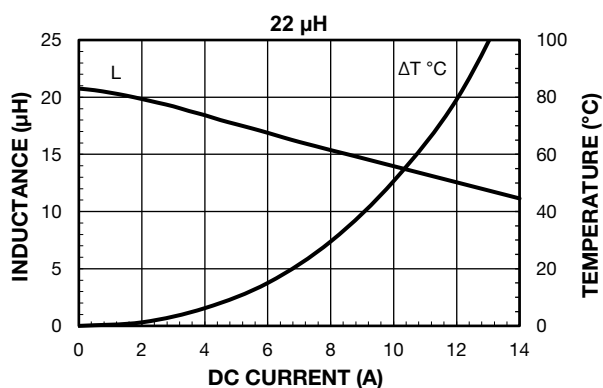
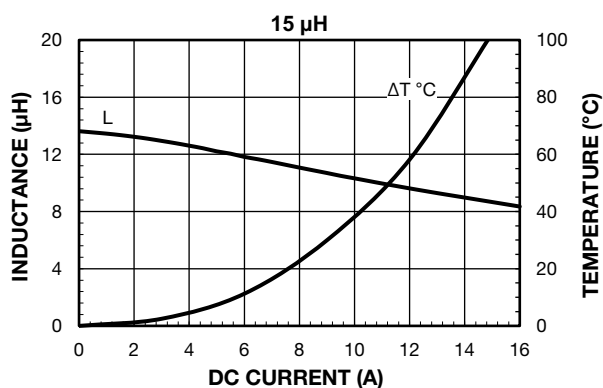
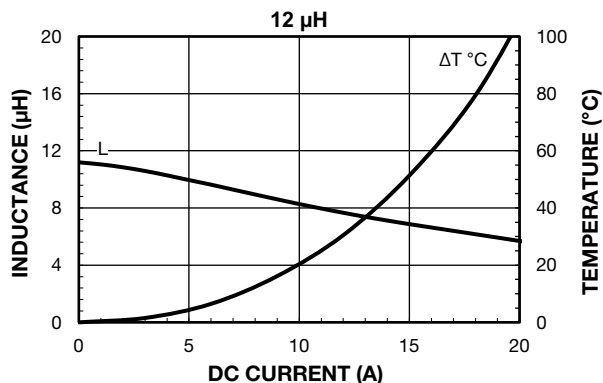
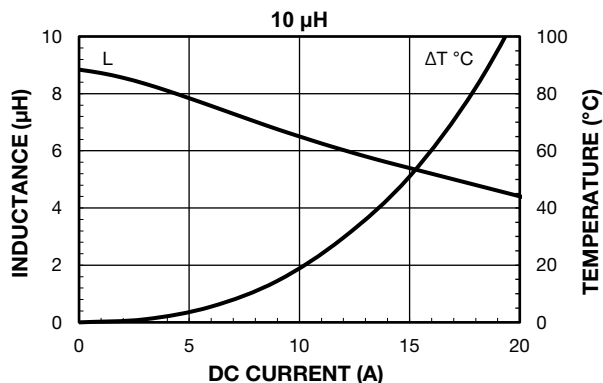


PERFORMANCE GRAPHS



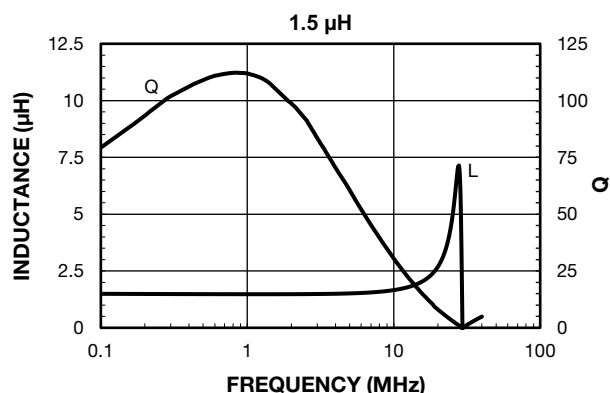
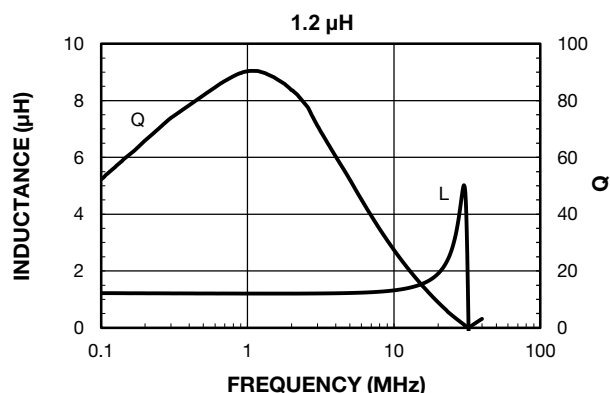
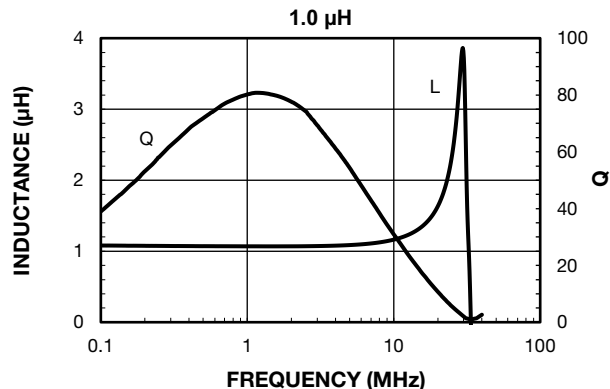
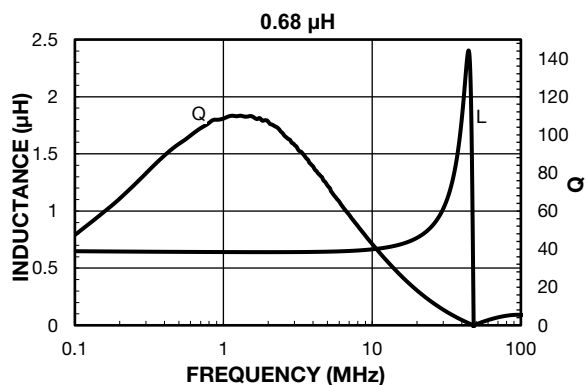
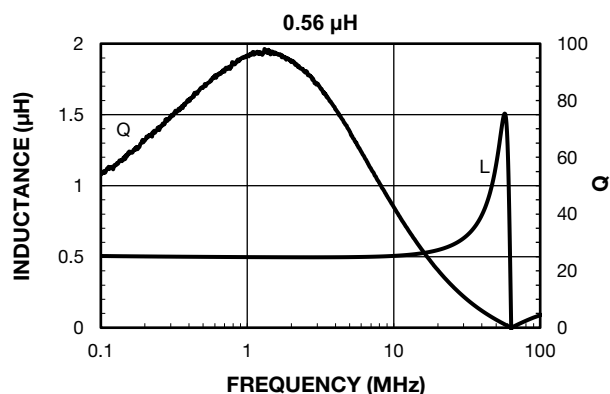
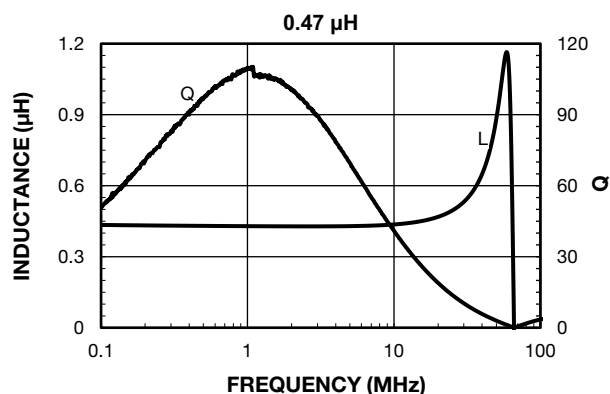
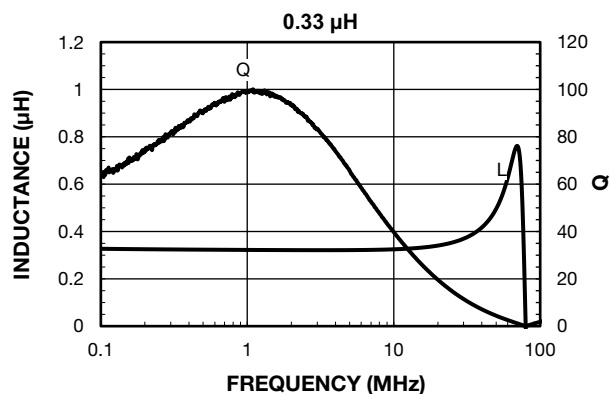
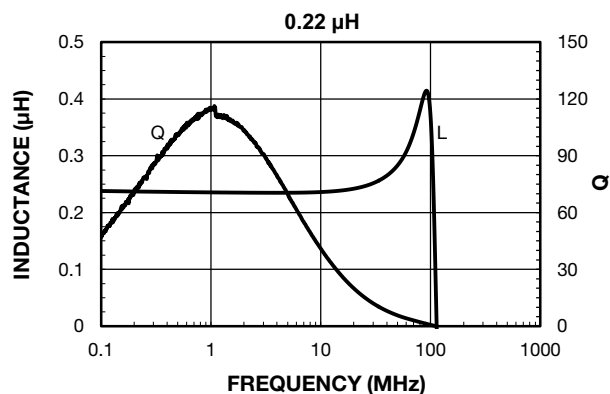


PERFORMANCE GRAPHS



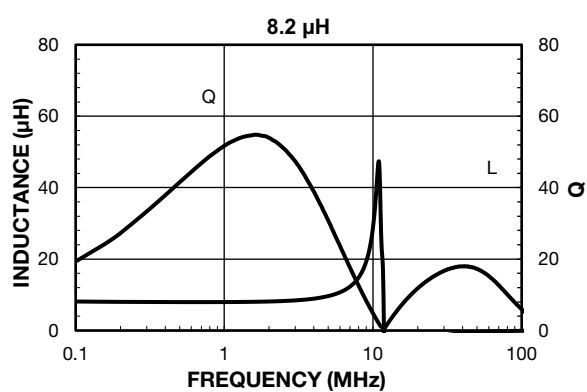
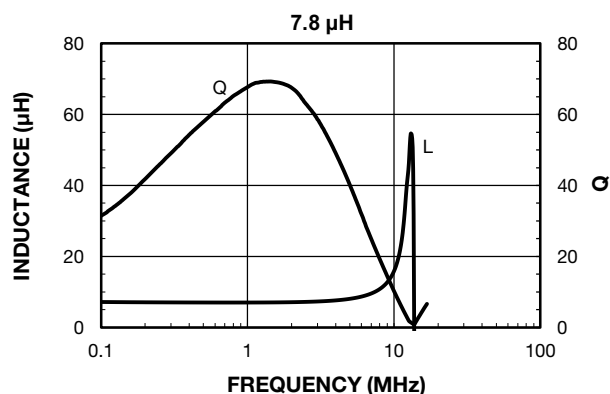
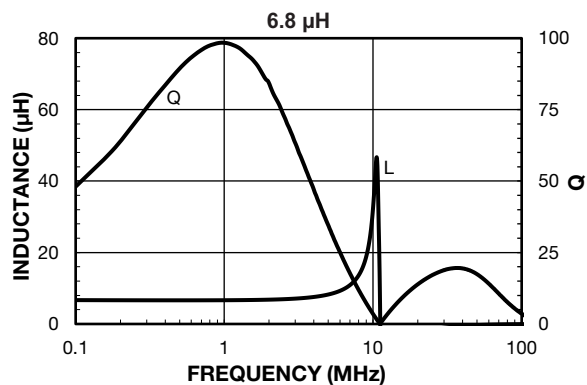
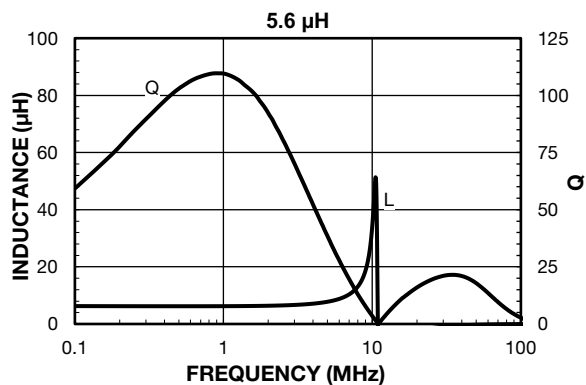
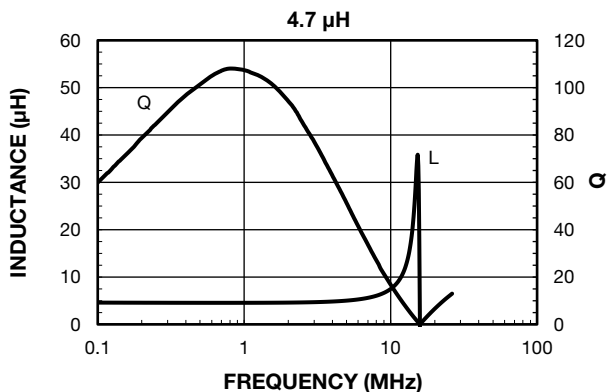
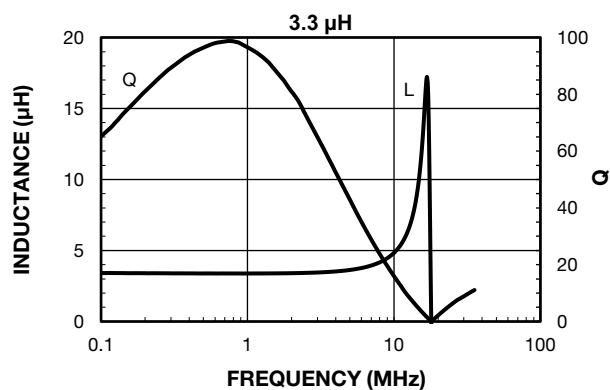
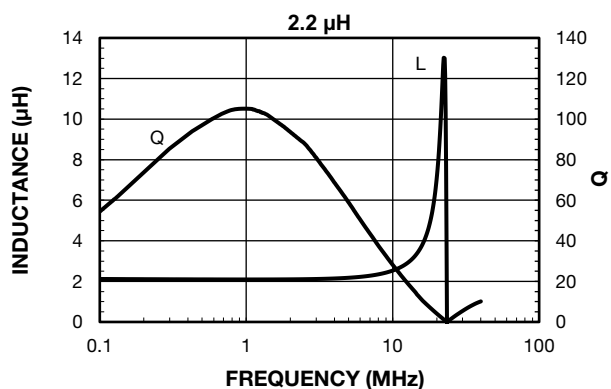
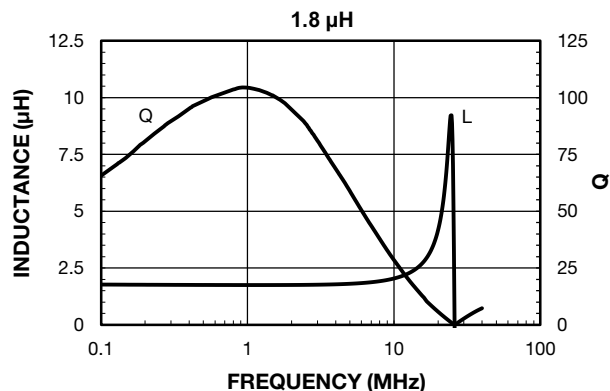


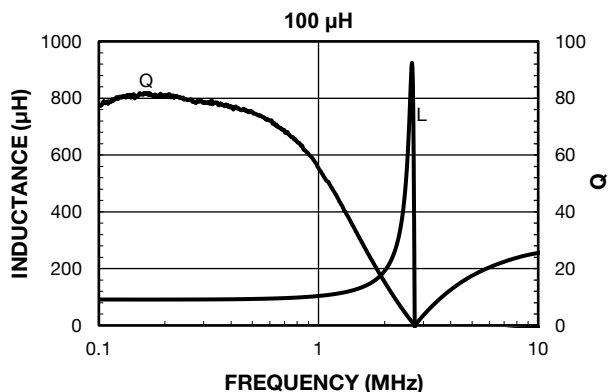
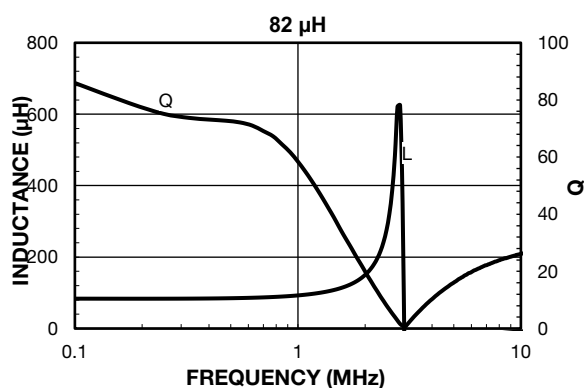
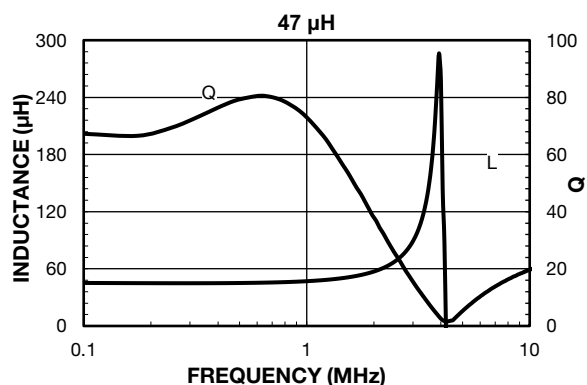
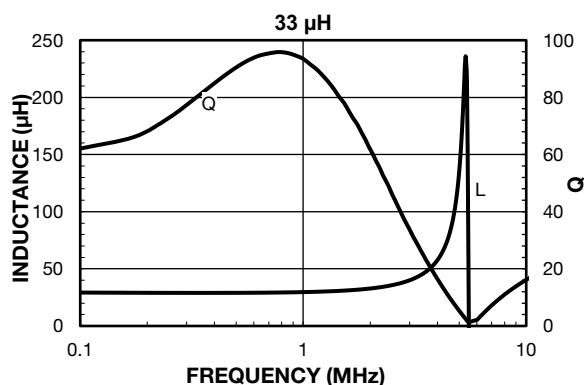
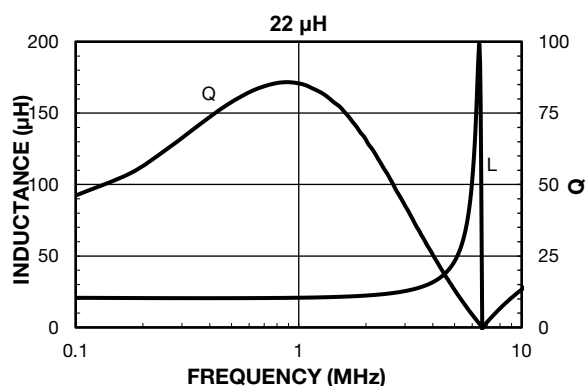
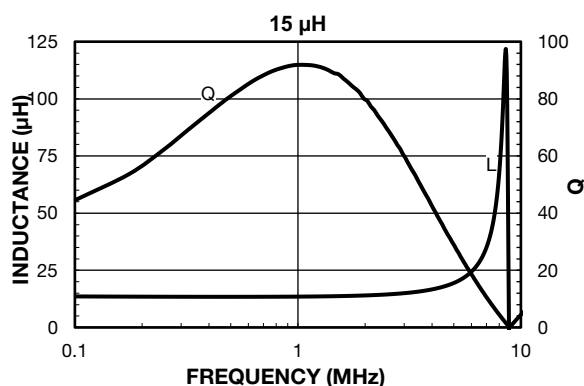
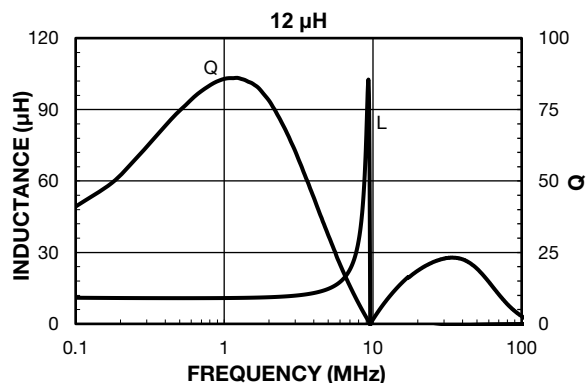
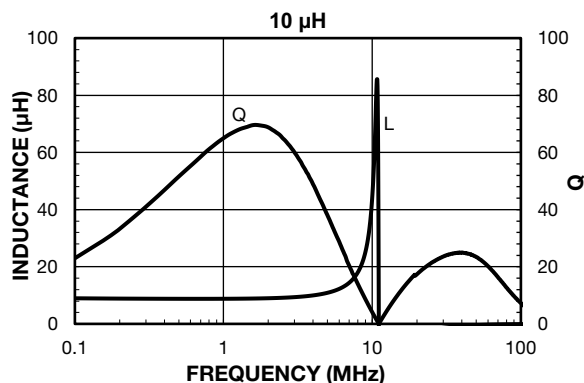
PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY





PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY



PERFORMANCE GRAPHS: INDUCTANCE AND Q VS. FREQUENCY




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