



ELECTRONIC COMPANY

SMD POWER INDUCTOR

DWPH SERIES



FEATURES/APPLICATOINS

- .Carrier tape packing use for SMT
- .Magnetically shielded construction
- .Suitable for reflow SMT craft soldering
- .Lead free products, RoHS compliant
- .Widely use in Digital products & Scanner/DC-DC converter/Power supply for VTP/LCD monitor/portable terminal equipment/Telecommunications/Notebook and PC Peripheral equipments etc



PRODUCT INDICATION

DWPA **3012** **—** **4R7** **M**

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③

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① Product type: DWPH type

② External dimension: Quadrate, 30 for Width 3.0mm

12 for Height 1.2mm

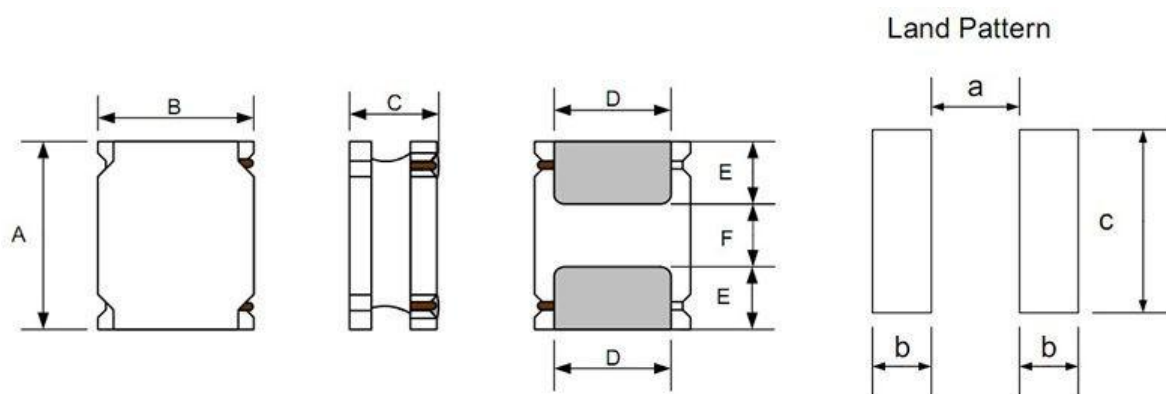
③ Electrical code: 4R7 for 4.7 μ H

④ Tolerance: K for $\pm 10\%$; M for $\pm 20\%$; N for $\pm 30\%$

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SHAPE AND DIMENSIONS



UNIT:MM

PartNo.	A	B	C (Max)	D	E	F	a Typ.	b Typ.	c Typ.
DWPH201610	2.0±0.2	1.6±0.2	1.0	1.2±0.2	0.60±0.2	0.80±0.2	0.70	0.70	1.7
DWPH202012	2.0±0.1	2.0±0.1	1.2	1.5±0.2	0.60±0.2	0.80±0.2	0.65	0.70	2.0
DWPH252010	2.5±0.2	2.0±0.2	1.0	1.5±0.2	0.80±0.2	0.80±0.2	0.80	0.85	2.0
DWPH252012	2.5±0.2	2.0±0.2	1.2	1.5±0.2	0.80±0.2	0.80±0.2	0.80	0.85	2.0
DWPH3012	3.0±0.2	3.0±0.2	1.2	2.5±0.2	0.75±0.2	1.5±0.2	1.5	0.8	2.7
DWPH3015	3.0±0.2	3.0±0.2	1.5	2.5±0.2	0.75±0.2	1.5±0.2	1.5	0.8	2.7
DWPH4012	4.0±0.2	4.0±0.2	1.2	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
DWPH4018	4.0±0.2	4.0±0.2	1.8	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
DWPH8030	8.0±0.3	8.0±0.3	3.0	6.3±0.3	2.00±0.3	4.0±0.3	3.8	2.2	7.5

Electrical Characteristics DWPH201610Series

PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max.	typ.	max.	typ.
DWPH201610-R16M	0.16	20%	0.031	0.026	4.3	4.8	3.2	3.5
DWPH201610-R24M	0.24	20%	0.04	0.033	3.7	4.1	2.9	3.2
DWPH201610-R33M	0.33	20%	0.04	0.033	2.5	3.1	2.9	3.2
DWPH201610-R47M	0.47	20%	0.059	0.049	2.3	2.85	2.35	2.6
DWPH201610-R68M	0.68	20%	0.076	0.063	1.95	2.45	2.05	2.25
DWPH201610-1R0M	1	20%	0.114	0.095	1.65	1.85	1.45	1.6
DWPH201610-1R5M	1.5	20%	0.174	0.145	1.35	1.65	1.25	1.4
DWPH201610-2R2M	2.2	20%	0.264	0.22	1.2	1.45	1.1	1.2
DWPH201610-3R3M	3.3	20%	0.335	0.279	0.9	1.05	0.88	0.98
DWPH201610-4R7M	4.7	20%	0.479	0.399	0.7	0.85	0.74	0.82
DWPH201610-6R8M	6.8	20%	0.816	0.68	0.6	0.7	0.52	0.58
DWPH201610-100M	10	20%	1.02	0.85	0.5	0.55	0.45	0.5

Special inquiries besides the above common used types can be meet

Electrical Characteristics DWPH202012 Series

PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max.	typ.	max.	typ.
DWPH202012-R16MT	0.16	20%	0.031	0.026	5.2	5.8	2.5	2.75
DWPH202012-R24MT	0.24	20%	0.042	0.035	4.7	5.2	2.2	2.4
DWPH202012-R33MT	0.33	20%	0.042	0.035	3.5	4	2.2	2.4
DWPH202012-R47MT	0.47	20%	0.05	0.042	3.55	3.75	2	2.2

Special inquiries besides the above common used types can be meet



PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max.	typ.	max.	typ.
DWPH202012-R68MT	0.68	20%	0.06	0.05	2.95	3.1	1.8	2
DWPH202012-1R0MT	1	20%	0.088	0.073	2.7	2.85	1.5	1.65
DWPH202012-1R5MT	1.5	20%	0.112	0.093	2	2.2	1.3	1.45
DWPH202012-2R2MT	2.2	20%	0.127	0.106	1.4	1.65	1.2	1.35
DWPH202012-3R3MT	3.3	20%	0.276	0.23	1.2	1.35	0.85	0.95
DWPH202012-4R7MT	4.7	20%	0.294	0.245	0.97	1.1	0.82	0.9
DWPH202012-6R8MT	6.8	20%	0.479	0.399	0.82	0.92	0.64	0.7
DWPH202012-100MT	10	20%	0.785	0.654	0.72	0.82	0.49	0.54
DWPH202012H150MT	15	20%	1.368	1.14	0.55	0.65	0.38	0.42
DWPH202012H220MT	22	20%	1.68	1.4	0.4	0.5	0.35	0.38
DWPH202012H330MT	33	20%	2.16	1.8	0.35	0.4	0.3	0.33

Special inquiries besides the above common used types can be meet

Electrical Characteristics DWPH252010 Series

PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max.	typ.	max.	typ.
DWPH252010-R24M	0.24	20%	0.034	0.028	3.6	4.4	2.75	3
DWPH252010-R33M	0.33	20%	0.043	0.036	3.8	4.6	2.4	2.65
DWPH252010-R47M	0.47	20%	0.044	0.037	2.4	2.8	2.4	2.65
DWPH252010-R68M	0.68	20%	0.061	0.051	2.75	3.1	2.1	2.35
DWPH252010-1R0M	1	20%	0.08	0.067	2.05	2.45	1.8	2
DWPH252010-1R5M	1.5	20%	0.108	0.09	1.7	2.05	1.55	1.7
DWPH252010-2R2M	2.2	20%	0.137	0.114	1.55	1.8	1.4	1.55
DWPH252010-3R3M	3.3	20%	0.228	0.17	1.1	1.4	1.1	1.2
DWPH252010-4R7M	4.7	20%	0.323	0.269	1	1.15	0.91	1

Special inquiries besides the above common used types can be meet



PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max.	typ.	max.	typ.
DWPH252010-6R8M	6.8	20%	0.451	0.376	0.82	0.95	0.76	0.84
DWPH252010-100M	10	20%	0.584	0.487	0.65	0.75	0.67	0.74
DWPH252010-150M	15	20%	0.954	0.795	0.55	0.65	0.5	0.55
DWPH252010-220M	22	20%	1.548	1.29	0.45	0.55	0.4	0.45

Special inquiries besides the above common used types can be meet

Electrical Characteristics DWPH252012 Series

PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max.	typ.	max.	typ.
DWPH252012-R16M	0.16	20%	0.022	0.018	6.5	7.2	4.05	4.5
DWPH252012-R24M	0.24	20%	0.022	0.018	4	4.75	4.05	4.5
DWPH252012-R33M	0.33	20%	0.029	0.024	4	4.7	3.35	3.7
DWPH252012-R47M	0.47	20%	0.036	0.03	3.7	4.1	3	3.3
DWPH252012-R68M	0.68	20%	0.061	0.051	3	3.3	2.1	2.3
DWPH252012-1R0M	1	20%	0.044	0.037	1.7	1.9	2.2	2.4
DWPH252012-1R2M	1.2	20%	0.078	0.065	2.2	2.5	1.95	2.1
DWPH252012-1R5M	1.5	20%	0.078	0.065	2	2.35	1.95	2.1
DWPH252012-2R2M	2.2	20%	0.096	0.08	1.8	1.95	1.8	1.95
DWPH252012-3R3M	3.3	20%	0.144	0.12	1.15	1.25	1.4	1.5
DWPH252012-4R7M	4.7	20%	0.21	0.175	1.1	1.2	1.12	1.25
DWPH252012-6R8M	6.8	20%	0.36	0.3	0.8	1	0.95	1.05
DWPH252012-100M	10	20%	0.522	0.435	0.7	0.85	0.79	0.87
DWPH252012-150M	15	20%	1	0.83	0.65	0.75	0.57	0.63
DWPH252012-180M	18	20%	1	0.83	0.5	0.65	0.57	0.63
DWPH252012-220M	22	20%	1.09	0.91	0.45	0.55	0.54	0.6
DWPH252012-330M	33	20%	1.84	1.53	0.35	0.4	0.42	0.46

Special inquiries besides the above common used types can be meet

Electrical Characteristics DWPH3012 Series

PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max.	typ.	max.	typ.
DWPH3012-1R0M	1.0	20%	0.040	0.033	2.20	2.50	2.30	2.50
DWPH3012-2R2M	2.2	20%	0.089	0.075	1.50	1.80	1.40	1.60
DWPH3012-3R3M	3.3	20%	0.133	0.114	1.23	1.54	1.40	1.60
DWPH3012-100M	10	20%	0.372	0.31	0.75	0.9	0.75	0.8
DWPH3012-220M	22	20%	0.84	0.7	0.5	0.6	0.5	0.55

Special inquiries besides the above common used types can be meet

Electrical Characteristics DWPH3015 Series

PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max.	typ.	max.	typ.
DWPH3015-1R0M	1.0	±20%	0.040	0.033	2.70	3.00	2.20	2.5
DWPH3015-2R2M	2.2	±20%	0.060	0.050	1.50	1.70	1.80	2.05
DWPH3015-3R3M	3.3	±20%	0.084	0.070	1.30	1.50	1.50	1.70
DWPH3015-4R7M	4.7	±20%	0.115	0.096	1.10	1.20	1.30	1.50
DWPH3015-6R8M	6.8	±20%	0.144	0.12	0.80	0.90	1.16	1.35
DWPH3015-100M	10	±20%	0.270	0.24	0.73	0.90	0.83	0.96
DWPH3015-220M	22	±20%	0.550	0.450	0.52	0.60	0.06	0.70
DWPH3015-330M	33	±20%	1.12	0.090	0.51	0.55	0.50	0.55
DWPH3015-470M	47	±20%	1.245	1.020	0.35	0.42	0.45	0.50

Special inquiries besides the above common used types can be meet

**Electrical Characteristics DWPH4012 Series**

PartNo.	Inductance @1MHz (uH)	Inductance tolerance (%)	DC resistance (Ω)		Saturation Current(A)		Heat Rating Current(A)	
			max.	typ.	max	typ.	max.	typ.
DWPH4012-R47N	0.47	30%	0.032	0.027	3.5	4.2	2.9	3.2
DWPH4012-R82N	0.82	30%	0.042	0.035	3	3.5	2.5	2.9
DWPH4012-1R0N	1	30%	0.05	0.042	2.8	3.3	2.2	2.5
DWPH4012-1R5N	1.5	30%	0.05	0.042	2.1	2.2	2.2	2.5
DWPH4012-1R8N	1.8	30%	0.066	0.055	2.1	2.4	2	2.3
DWPH4012-2R2M	2.2	20%	0.066	0.055	1.7	1.8	2	2.3
DWPH4012-3R3M	3.3	20%	0.084	0.07	1.4	1.7	1.7	2
DWPH4012-3R6M	3.6	20%	0.09	0.075	1.2	1.6	1.7	2
DWPH4012-4R3M	4.3	20%	0.108	0.09	1.2	1.5	1.5	1.8
DWPH4012-4R7M	4.7	20%	0.108	0.09	1.2	1.3	1.5	1.8
DWPH4012-5R1M	5.1	20%	0.132	0.11	1.2	1.4	1.4	1.6
DWPH4012-5R6M	5.6	20%	0.132	0.11	1.1	1.4	1.4	1.6
DWPH4012-6R8M	6.8	20%	0.15	0.125	0.9	1.1	1.3	1.6
DWPH4012-100M	10	20%	0.204	0.17	0.8	0.9	1.1	1.3
DWPH4012-120M	12	20%	0.312	0.26	0.85	1	0.9	1
DWPH4012-150M	15	20%	0.312	0.26	0.65	0.8	0.9	1
DWPH4012-180M	18	20%	0.432	0.36	0.65	0.8	0.78	0.9
DWPH4012-220M	22	20%	0.46	0.38	0.5	0.65	0.78	0.9
DWPH4012-270M	27	20%	0.672	0.56	0.5	0.6	0.63	0.73
DWPH4012-330M	33	20%	0.756	0.63	0.45	0.55	0.57	0.68
DWPH4012-360M	36	20%	0.756	0.63	0.4	0.5	0.57	0.68
DWPH4012-390M	39	20%	1.188	0.99	0.55	0.62	0.47	0.54
DWPH4012-470M	47	20%	1.188	0.99	0.4	0.5	0.47	0.54
DWPH4012-560M	56	20%	1.32	1.1	0.35	0.45	0.45	0.52
DWPH4012-680M	68	20%	1.8	1.5	0.38	0.45	0.38	0.44
DWPH4012-820M	82	20%	2.04	1.7	0.3	0.38	0.36	0.42
DWPH4012-101M	100	20%	2.04	1.7	0.25	0.31	0.36	0.42

Special inquiries besides the above common used types can be meet

Electrical Characteristics DWPH4018 Series

PartNo.	Inductance @100kHz, 1V (uH)	Inductance tolerance (%)	DC resistance (Ω)	S.R.F Min (MHz)	Saturation Current(A)	Based on temperature rise typ.
DWPH4018-1R0N	1	30%	0.027	90	4	3.2
DWPH4018-1R5N	1.5	30%	0.031	70	3.6	2.95
DWPH4018-2R2M	2.2	20%	0.042	60	3	2.2
DWPH4018-3R3M	3.3	20%	0.055	45	2.3	2
DWPH4018-4R7M	4.7	20%	0.07	35	2	1.7
DWPH4018-6R8M	6.8	20%	0.098	30	1.6	1.45
DWPH4018-100M	10	20%	0.15	25	1.3	1.2
DWPH4018-150M	15	20%	0.21	18	1.1	0.85
DWPH4018-220M	22	20%	0.29	15	0.9	0.7
DWPH4018-330M	33	20%	0.46	12	0.7	0.55

Special inquiries besides the above common used types can be meet

Electrical Characteristics DWPH8030 Series

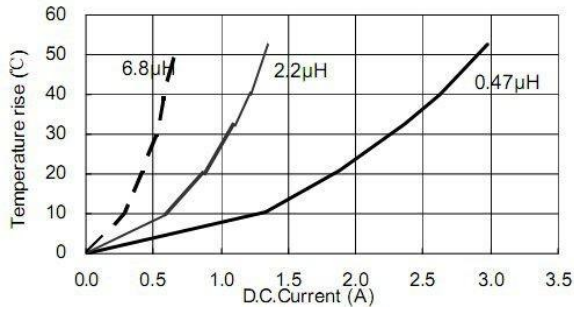
PartNo.	Inductance @100kHz, 1V (uH)	Inductance tolerance (%)	DC resistance (Ω)	S.R.F Min (MHz)	Saturation Current(A)	Based on temperature rise typ.
DWPH8030-1R0N	1	30%	0.009	120	7.8	6.2
DWPH8030-1R5N	1.5	30%	0.012	80	6.2	5.3
DWPH8030-2R2M	2.2	20%	0.015	60	4.9	4.8
DWPH8030-3R3M	3.3	20%	0.019	50	4.2	4.3
DWPH8030-4R7M	4.7	20%	0.022	40	3.6	4
DWPH8030-6R8M	6.8	20%	0.029	32	3	3.4
DWPH8030-100M	10	20%	0.033	27	2.4	3
DWPH8030-150M	15	20%	0.06	20	2	2.2
DWPH8030-220M	22	20%	0.07	16	1.75	1.9
DWPH8030-330M	33	20%	0.12	13	1.3	1.5
DWPH8030-470M	47	20%	0.17	11	1.1	1.3

Special inquiries besides the above common used types can be meet

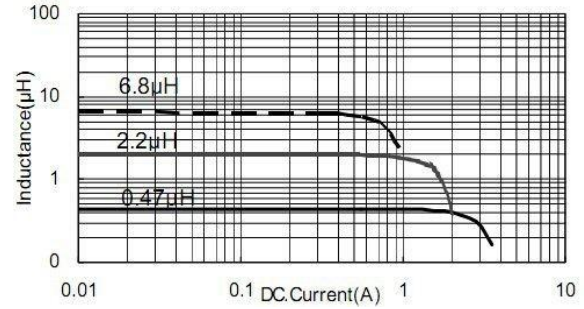
TYPICAL ELECTRICAL CHARACTERISTICS

DWPH201610 Series

Temperature vs. DC Current Characteristics

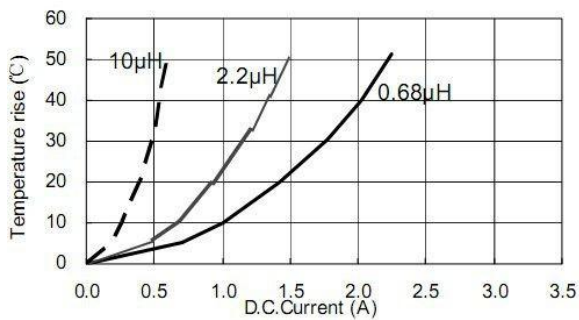


Inductance vs. DC Current Characteristics

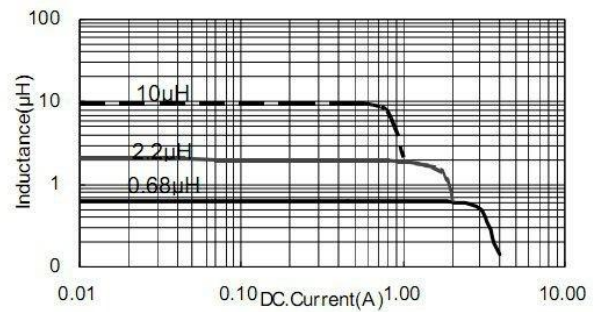


DWPH202012 Series

Temperature vs. DC Current Characteristics

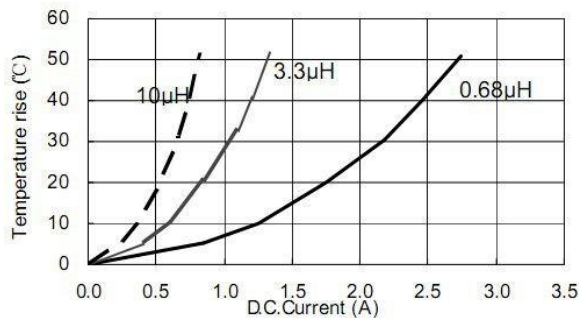


Inductance vs. DC Current Characteristics

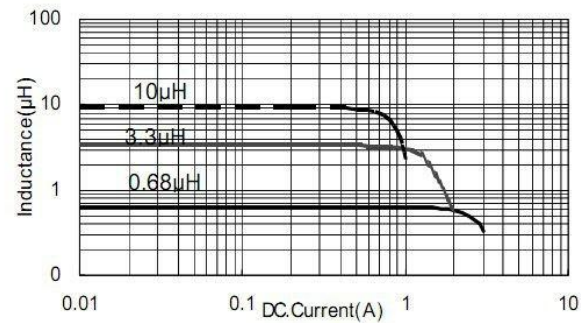


DWPH252010 Series

Temperature vs. DC Current Characteristics

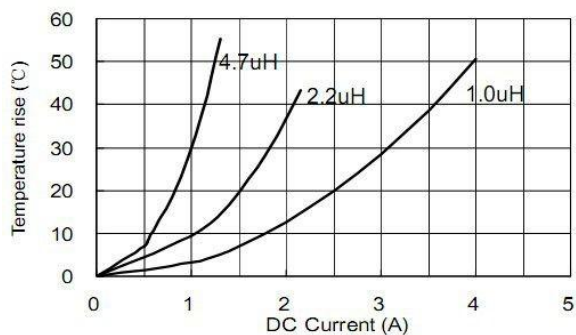


Inductance vs. DC Current Characteristics

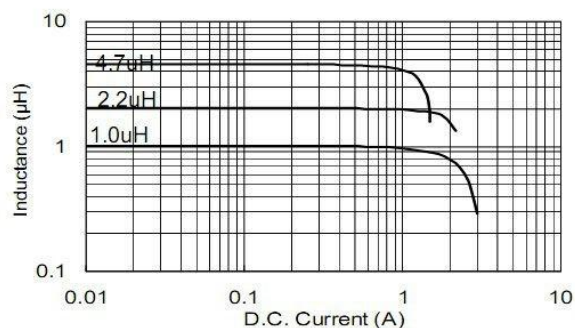


DWPH252012 Series

Temperature vs. DC Current Characteristics

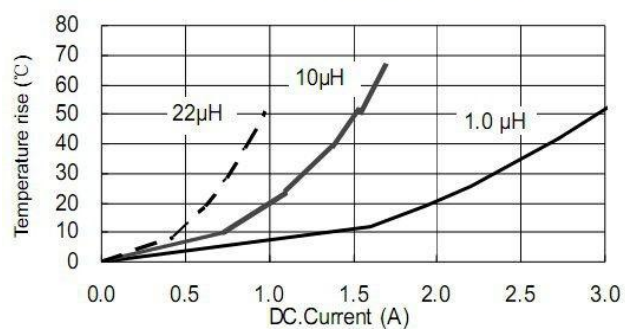


Inductance vs. DC Current Characteristics

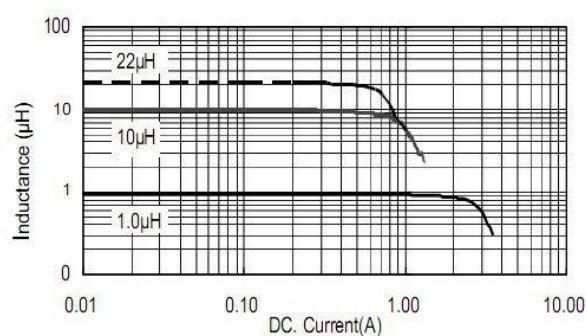


DWPH4012 Series

Temperature vs. DC Current Characteristics

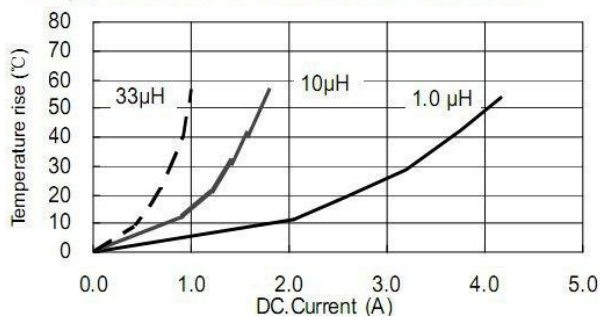


Inductance vs. DC Current Characteristics

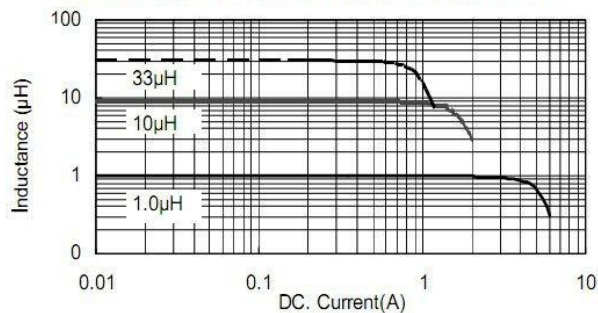


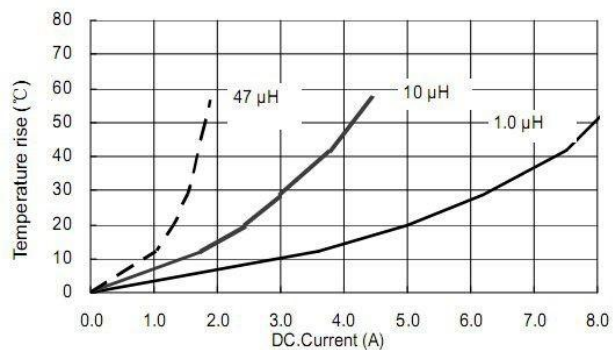
DWPH4018 Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



DWPH8030 Series**Temperature vs. DC Current Characteristics****Inductance vs. DC Current Characteristics**