

# Wire Wound SMD Power Inductors – WEC Series

Operating Temp. : -40°C~+125°C (Including self-heating)



## FEATURES

- Magnetic-resin shielded construction reduces buzz noise to ultra-low levels
- Metallization on ferrite core results in excellent shock resistance and damage-free durability
- Closed magnetic circuit design reduces leakage flux and Electro Magnetic Interference (EMI)
- Takes up less PCB real estate and save more power
- 30% lower DCR than SWPAseries and larger current

## APPLICATIONS

- Smart phone
- Blue -ray disc recorders, set top box
- Notebooks, desktop computers, servers
- Portable gaming devices, personal navigation systems, personal multimedia devices

## PRODUCT IDENTIFICATION

WEC  
①

252012  
②

H  
③

2R2  
④

M  
⑤

T  
⑥

□□□  
⑦

① Type	
WE C	Wire Wound SMD Power Inductor

③ Material Code	
U	U Type Material
H	H Type Material

④ Nominal Inductance	
Example	Nominal Value
R47	0.47μH
2R2	2.2μH

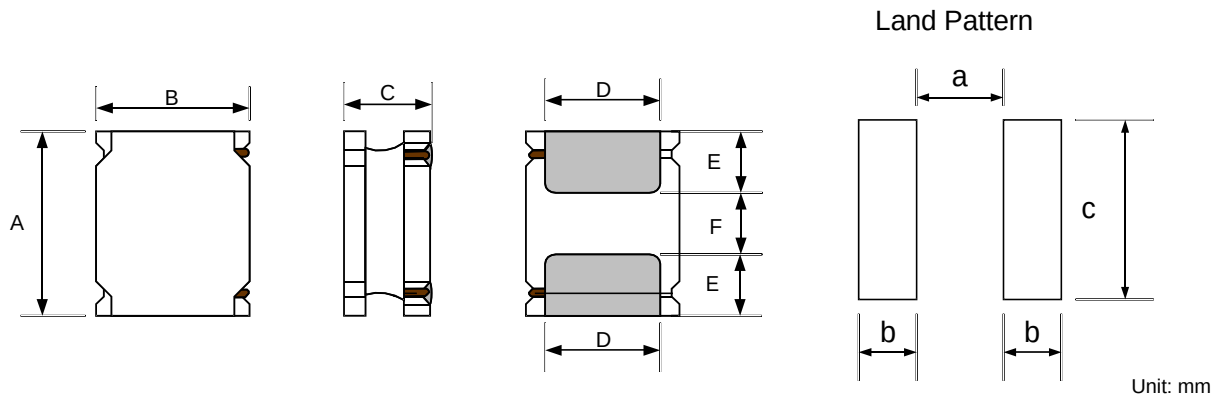
⑤ Inductance Tolerance	
M	±20%

⑥ Packing	
T	Tape & Reel

② External Dimensions (L×W×H) [mm]	
201610	2.0×1.6×1.0
202012	2.0×2.0×1.2
252010	2.5×2.0×1.0
252012	2.5×2.0×1.2
3012	3.0×3.0×1.2
3015	3.0×3.0×1.5
4012	4.0×4.0×1.2
4018	4.0×4.0×1.8
4020	4.0×4.0×2.0
4030	4.0×4.0×3.0
8030	8.0×8.0×3.0

⑦ Design Code	
□□□	Design Code
* Standard product is blank	

## SHAPE AND DIMENSIONS



Series	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
WEC201610	2.0±0.2	1.6±0.2	1.0 Max.	1.60±0.2	0.60±0.2	0.80±0.2	0.70	0.70	1.7
WEC202012	2.0±0.1	2.0±0.1	1.2 Max.	1.60±0.2	0.60±0.2	0.80±0.2	0.65	0.70	2.0
WEC252010	2.5±0.2	2.0±0.2	1.0 Max.	2.00±0.2	0.80±0.2	0.80±0.2	0.80	0.85	2.0
WEC252012	2.5±0.2	2.0±0.2	1.2 Max.	2.00±0.2	0.80±0.2	0.80±0.2	0.80	0.85	2.0
WEC3012	3.0±0.2	3.0±0.2	1.2 Max.	2.5±0.2	0.75±0.2	1.5±0.2	1.5	0.8	2.7
WEC3015	3.0±0.2	3.0±0.2	1.5 Max.	2.5±0.2	0.75±0.2	1.5±0.2	1.5	0.8	2.7
WEC4012	4.0±0.2	4.0±0.2	1.2 Max.	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
WEC4018	4.0±0.2	4.0±0.2	1.8 Max.	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
WEC4020	4.0±0.2	4.0±0.2	2.0 Max.	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
WEC4030	4.0±0.2	4.0±0.2	3.0 Max.	3.3±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
WEC8030	8.0±0.3	8.0±0.3	3.0 Max.	6.3±0.3	2.00±0.3	4.0±0.3	3.0	2.2	7.5

## SPECIFICATIONS

### WEC201610H Series

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		A		A	
Symbol	L	DCR		Isat		Irms	
WEC201610HR16MT	0.16±20%	0.031	0.026	4.30	4.80	3.20	3.50
WEC201610HR24MT	0.24±20%	0.040	0.033	3.70	4.10	2.90	3.20
WEC201610HR33MT	0.33±20%	0.040	0.033	2.50	3.10	2.90	3.20
WEC201610HR47MT	0.47±20%	0.059	0.049	2.30	2.85	2.35	2.60
WEC201610HR68MT	0.68±20%	0.076	0.063	1.95	2.45	2.05	2.25
WEC201610H1R0MT	1.0±20%	0.114	0.095	1.65	1.85	1.45	1.60
WEC201610H1R5MT	1.5±20%	0.174	0.145	1.35	1.65	1.25	1.40
WEC201610H2R2MT	2.2±20%	0.264	0.220	1.20	1.45	1.10	1.20
WEC201610H3R3MT	3.3±20%	0.335	0.279	0.90	1.05	0.88	0.98
WEC201610H4R7MT	4.7±20%	0.479	0.399	0.70	0.85	0.74	0.82
WEC201610H6R8MT	6.8±20%	0.816	0.680	0.60	0.70	0.52	0.58
WEC201610H100MT	10±20%	1.020	0.850	0.50	0.55	0.45	0.50

## SPECIFICATIONS

### WEC201610U Series

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		A		A	
Symbol	L	DCR		Isat		Irms	
WEC201610U50NMT	0.05±20%	0.022	0.018	7.50	8.00	3.65	4.25
WEC201610UR10MT	0.10±20%	0.022	0.018	4.80	5.70	3.65	4.25
WEC201610UR16MT	0.16±20%	0.031	0.026	4.70	5.40	3.20	3.50
WEC201610UR24MT	0.24±20%	0.040	0.033	4.50	5.00	2.90	3.20
WEC201610UR33MT	0.33±20%	0.040	0.033	3.00	3.60	2.90	3.20
WEC201610UR47MT	0.47±20%	0.052	0.043	2.90	3.40	2.35	2.60
WEC201610UR47MTY0 1	0.47±20%	0.045	0.037	2.50	2.90	2.75	3.00
WEC201610UR68MT	0.68±20%	0.072	0.060	2.50	2.70	2.05	2.25
WEC201610U1R0MT	1.0±20%	0.072	0.060	1.30	1.50	2.05	2.25
WEC201610U2R2MT	2.2±20%	0.171	0.143	1.10	1.20	1.23	1.40

### WEC202012H Series

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		A		A	
Symbol	L	DCR		Isat		Irms	
WEC202012HR16MT	0.16±20%	0.031	0.026	5.20	5.80	2.50	2.75
WEC202012HR24MT	0.24±20%	0.042	0.035	4.70	5.20	2.20	2.40
WEC202012HR33MT	0.33±20%	0.042	0.035	3.50	4.00	2.20	2.40
WEC202012HR47MT	0.47±20%	0.050	0.042	3.55	3.75	2.00	2.20
WEC202012HR68MT	0.68±20%	0.060	0.050	2.95	3.10	1.80	2.00
WEC202012H1R0MT	1.0±20%	0.088	0.073	2.70	2.85	1.50	1.65
WEC202012H1R5MT	1.5±20%	0.112	0.093	2.00	2.20	1.30	1.45
WEC202012H2R2MT	2.2±20%	0.127	0.106	1.40	1.65	1.20	1.35
WEC202012H3R3MT	3.3±20%	0.276	0.230	1.20	1.35	0.85	0.95
WEC202012H4R7MT	4.7±20%	0.294	0.245	0.97	1.10	0.82	0.90
WEC202012H6R8MT	6.8±20%	0.479	0.399	0.82	0.92	0.64	0.70
WEC202012H100MT	10±20%	0.785	0.654	0.72	0.82	0.49	0.54
WEC202012H150MT	15±20%	1.368	1.140	0.55	0.65	0.38	0.42
WEC202012H180MT	18±20%	1.680	1.400	0.60	0.68	0.35	0.38
WEC202012H220MT	22±20%	1.680	1.400	0.40	0.50	0.35	0.38
WEC202012H330MT	33±20%	2.160	1.800	0.35	0.40	0.30	0.33

### WEC252010H Series

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		A		A	
Symbol	L	DCR		Isat		Irms	
WEC252010HR24MT	0.24±20%	0.034	0.028	3.60	4.40	2.75	3.00
WEC252010HR33MT	0.33±20%	0.043	0.036	3.80	4.60	2.40	2.65
WEC252010HR47MT	0.47±20%	0.044	0.037	2.40	2.80	2.40	2.65
WEC252010HR68MT	0.68±20%	0.061	0.051	2.75	3.10	2.10	2.35
WEC252010HR68MTY0 1	0.68±20%	0.061	0.051	2.75	3.10	2.10	2.35
WEC252010HR68MTY0 2	0.68±20%	0.065	0.055	3.20	3.50	2.10	2.30
WEC252010H1R0MT	1.0±20%	0.080	0.067	2.05	2.45	1.80	2.00
WEC252010H1R5MT	1.5±20%	0.108	0.090	1.70	2.05	1.55	1.70
WEC252010H2R2MT	2.2±20%	0.137	0.114	1.55	1.80	1.40	1.55

## SPECIFICATIONS

### WEC252010H Series

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		A		A	
Symbol	L	DCR		Isat		Irms	
WEC252010H6R8MT	6.8±20%	0.451	0.376	0.82	0.95	0.76	0.84
WEC252010H100MT	10±20%	0.584	0.487	0.65	0.75	0.67	0.74
WEC252010H150MT	15±20%	0.954	0.795	0.55	0.65	0.50	0.55
WEC252010H220MT	22±20%	1.548	1.290	0.45	0.55	0.40	0.45
WEC252010H330MT	33±20%	1.548	1.290	0.25	0.30	0.40	0.45

### WEC252012H Series

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		A		A	
Symbol	L	DCR		Isat		Irms	
WEC252012HR16MT	0.16±20%	0.022	0.018	6.50	7.20	4.05	4.50
WEC252012HR24MT	0.24±20%	0.022	0.018	4.00	4.75	4.05	4.50
WEC252012HR33MT	0.33±20%	0.029	0.024	4.00	4.70	3.35	3.70
WEC252012HR47MT	0.47±20%	0.036	0.030	3.70	4.10	3.00	3.30
WEC252012HR47MTY0 1	0.47±20%	0.038	0.032	4.90	5.20	2.90	3.20
WEC252012HR68MT	0.68±20%	0.061	0.051	3.00	3.30	2.10	2.30
WEC252012HR68MTY0 1	0.68±20%	0.042	0.035	3.20	3.50	2.50	2.70
WEC252012HR68MTY0 2	0.68±20%	0.060	0.051	3.80	4.20	2.10	2.30
WEC252012H1R0MT	1.0±20%	0.044	0.037	1.70	1.90	2.20	2.40
WEC252012H1R0MTY0 3	1.0±20%	0.043	0.037	2.40	2.60	2.40	2.60
WEC252012H1R2MT	1.2±20%	0.078	0.065	2.20	2.50	1.95	2.10
WEC252012H1R5MT	1.5±20%	0.078	0.065	2.00	2.35	1.95	2.10
WEC252012H2R2MT	2.2±20%	0.096	0.080	1.80	1.95	1.80	1.95
WEC252012H3R3MT	3.3±20%	0.144	0.120	1.15	1.25	1.40	1.50
WEC252012H4R7MT	4.7±20%	0.210	0.175	1.10	1.20	1.12	1.25
WEC252012H6R8MT	6.8±20%	0.360	0.300	0.80	1.00	0.95	1.05
WEC252012H100MT	10±20%	0.522	0.435	0.70	0.85	0.79	0.87
WEC252012H150MT	15±20%	1.000	0.830	0.65	0.75	0.57	0.63
WEC252012H180MT	18±20%	1.000	0.830	0.50	0.65	0.57	0.63
WEC252012H220MT	22±20%	1.090	0.910	0.45	0.55	0.54	0.60
WEC252012H330MT	33±20%	1.840	1.530	0.35	0.40	0.42	0.46
WEC252012H470MT	47±20%	2.220	1.850	0.25	0.30	0.30	0.35

### WEC3012H Series

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		A		A	
Symbol	L	DCR		Isat		Irms	
WEC3012H1R0MT	1.0±20%	0.040	0.032	2.20	2.50	2.30	2.50
WEC3012H1R0MTY0 2	1.0±20%	0.056	0.047	2.80	3.20	1.90	2.00
WEC3012H2R2MT	2.2±20%	0.090	0.075	1.50	1.80	1.40	1.60
WEC3012H3R3MT	3.3±20%	0.134	0.112	1.23	1.55	1.40	1.60
WEC3012H100MT	10±20%	0.372	0.310	0.75	0.90	0.75	0.80
WEC3012H100MTY01	10±20%	0.495	0.413	1.00	1.10	0.90	1.00
WEC3012H220MT	22±20%	0.840	0.700	0.50	0.60	0.50	0.55

## SPECIFICATIONS

Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		A		A	
Symbol	L	DCR		Isat		Irms	
WEC3015HR22MT	0.22±20%	0.022	0.018	6.00	6.80	3.00	3.50
WEC3015HR24MT	0.24±20%	0.022	0.018	5.50	5.50	3.00	3.50
WEC3015HR47MT	0.47±20%	0.022	0.018	2.40	2.80	3.00	3.50
WEC3015HR55MT	0.55±20%	0.019	0.016	2.40	2.70	3.05	3.55
WEC3015H1R0MT	1.0±20%	0.040	0.033	2.70	3.00	2.20	2.50
WEC3015H1R5MT	1.5±20%	0.048	0.040	2.00	2.30	2.00	2.30
WEC3015H2R2MT	2.2±20%	0.060	0.050	1.50	1.70	1.80	2.05
WEC3015H3R3MT	3.3±20%	0.084	0.070	1.30	1.50	1.50	1.70
WEC3015H3R9MT	3.9±20%	0.115	0.096	1.30	1.60	1.30	1.50
<b>WEC3015H4R7MT</b>	<b>4.7±20%</b>	<b>0.115</b>	<b>0.096</b>	<b>1.10</b>	<b>1.20</b>	<b>1.30</b>	<b>1.50</b>
WEC3015H6R8MT	6.8±20%	0.144	0.120	0.80	0.90	1.16	1.35
WEC3015H100MT	10±20%	0.276	0.230	0.75	0.90	0.84	0.97
WEC3015H150MT	15±20%	0.360	0.300	0.60	0.70	0.73	0.84
WEC3015H220MT	22±20%	0.540	0.450	0.52	0.60	0.60	0.70
WEC3015H260MT	26±20%	0.768	0.640	0.40	0.50	0.45	0.55
WEC3015H330MT	33±20%	1.090	0.910	0.50	0.55	0.50	0.55
WEC3015H470MT	47±20%	1.250	1.040	0.35	0.42	0.45	0.50

### WEC4012H Series

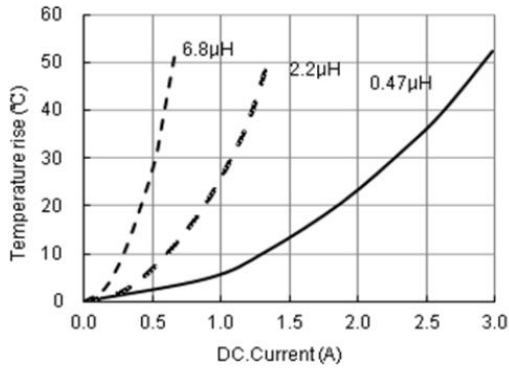
Part Number	Inductance	DC Resistance		Saturation Current		Heat Rating Current	
	@0.1MHz,1V	Max.	Typ.	Max.	Typ.	Max.	Typ.
Units	$\mu\text{H}$	$\Omega$		A		A	
Symbol	L	DCR		Isat		Irms	
WEC4012HR33NT	0.33±30%	0.031	0.026	5.50	6.30	2.90	3.35
WEC4012HR47NT	0.47±30%	0.032	0.027	3.50	4.20	2.90	3.20
WEC4012HR82NT	0.82±30%	0.042	0.035	3.00	3.50	2.50	2.90
WEC4012H1R0NT	1.0±30%	0.050	0.042	2.80	3.30	2.20	2.50
WEC4012H1R5NT	1.5±30%	0.050	0.042	2.10	2.20	2.20	2.50
WEC4012H1R8NT	1.8±30%	0.066	0.055	2.10	2.40	2.00	2.30
WEC4012H2R2MT	2.2±20%	0.066	0.055	1.70	1.80	2.00	2.30
WEC4012H2R7MT	2.7±20%	0.084	0.070	1.90	2.20	1.70	2.00
WEC4012H3R3MT	3.3±20%	0.084	0.070	1.40	1.70	1.70	2.00
WEC4012H3R6MT	3.6±20%	0.090	0.075	1.20	1.60	1.70	2.00
WEC4012H4R3MT	4.3±20%	0.108	0.090	1.20	1.50	1.50	1.80
WEC4012H4R7MT	4.7±20%	0.108	0.090	1.20	1.30	1.50	1.80
WEC4012H5R1MT	5.1±20%	0.132	0.110	1.20	1.40	1.40	1.60
WEC4012H5R6MT	5.6±20%	0.132	0.110	1.10	1.40	1.40	1.60
WEC4012H6R8MT	6.8±20%	0.150	0.125	0.90	1.10	1.30	1.60
WEC4012H100MT	10±20%	0.204	0.170	0.80	0.90	1.10	1.30
WEC4012H100MTY01	10±20%	0.240	0.200	0.90	1.10	1.00	1.10
WEC4012H120MT	12±20%	0.312	0.260	0.85	1.00	0.90	1.00
WEC4012H150MT	15±20%	0.312	0.260	0.65	0.80	0.90	1.00
WEC4012H180MT	18±20%	0.432	0.360	0.65	0.80	0.78	0.90
WEC4012H220MT	22±20%	0.460	0.380	0.50	0.65	0.78	0.90
WEC4012H270MT	27±20%	0.672	0.560	0.50	0.60	0.63	0.73
WEC4012H330MT	33±20%	0.756	0.630	0.45	0.55	0.57	0.68
WEC4012H360MT	36±20%	0.756	0.630	0.40	0.50	0.57	0.68
WEC4012H390MT	39±20%	1.188	0.990	0.55	0.62	0.47	0.54

# SPECIFICATIONS

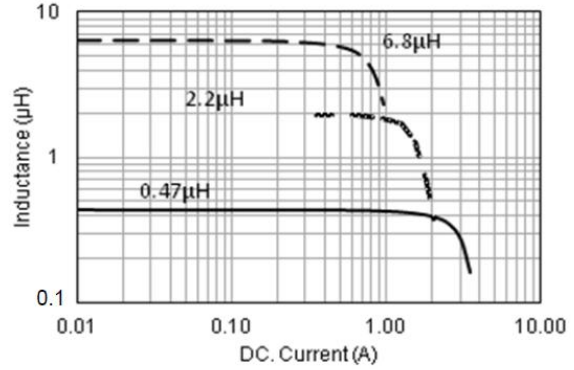
## TYPICAL ELECTRICAL CHARACTERISTICS

WEC 201610H Series

Temperature vs. DC Current Characteristics



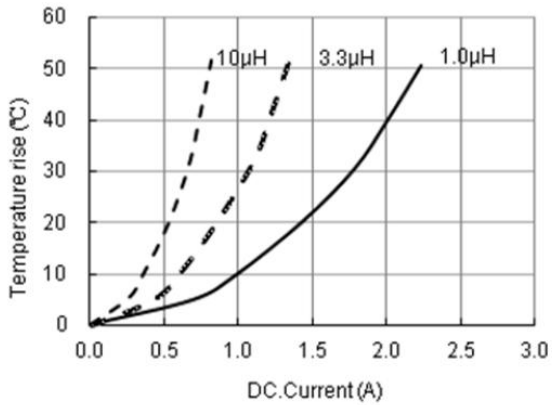
Inductance vs. DC Current Characteristics



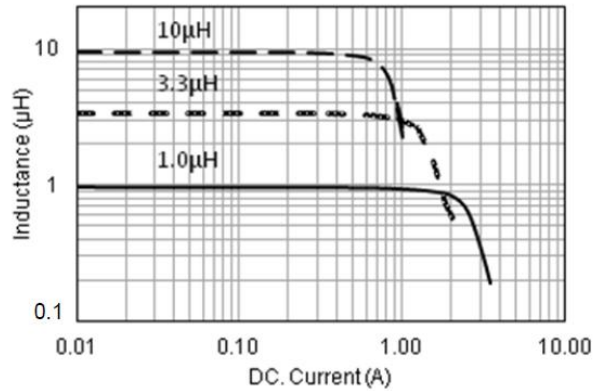
## TYPICAL ELECTRICAL CHARACTERISTICS

WEC252010H Series

Temperature vs. DC Current Characteristics

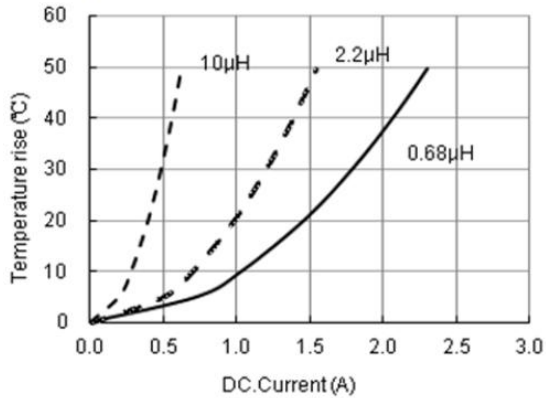


Inductance vs. DC Current Characteristics

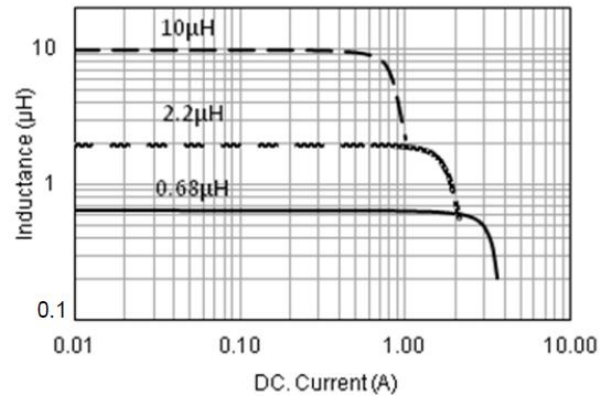


WEC202012H Series

Temperature vs. DC Current Characteristics



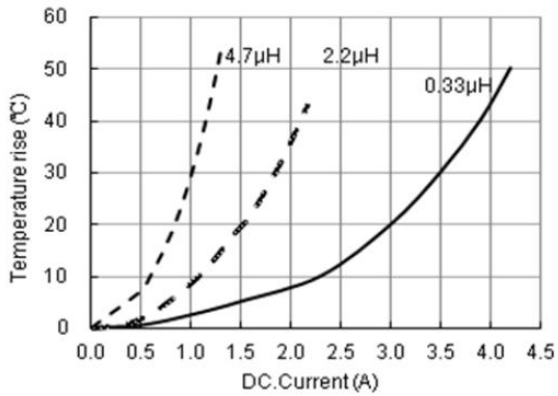
Inductance vs. DC Current Characteristics



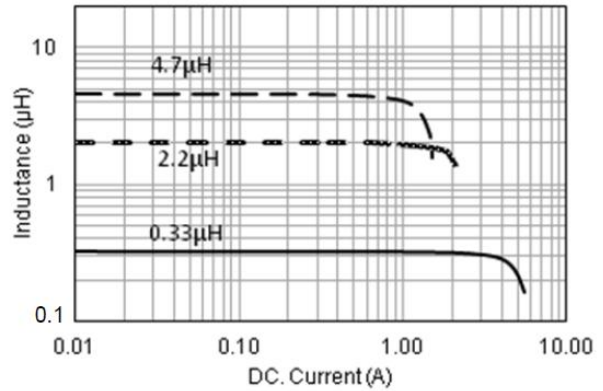
# SPECIFICATIONS

## WEC252012H Series

Temperature vs. DC Current Characteristics

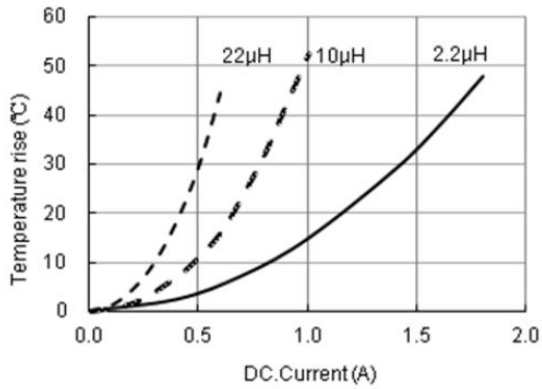


Inductance vs. DC Current Characteristics

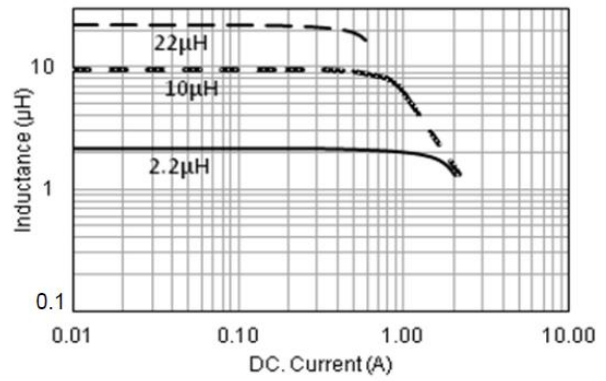


## WEC3012H Series

Temperature vs. DC Current Characteristics



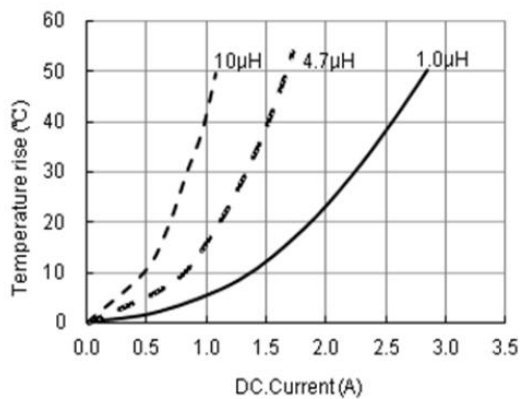
Inductance vs. DC Current Characteristics



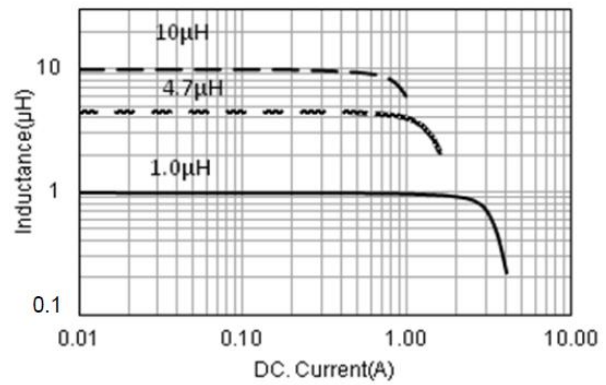
# TYPICAL ELECTRICAL CHARACTERISTICS

## WEC3015H Series

Temperature vs. DC Current Characteristics



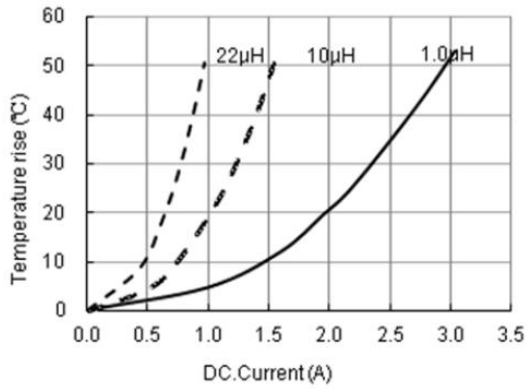
Inductance vs. DC Current Characteristics



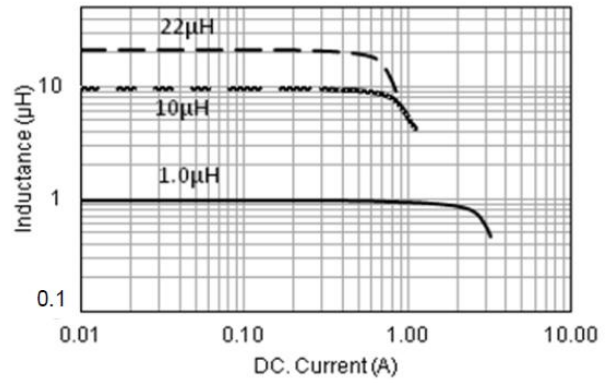
# SPECIFICATIONS

## WEC4012H Series

Temperature vs. DC Current Characteristics

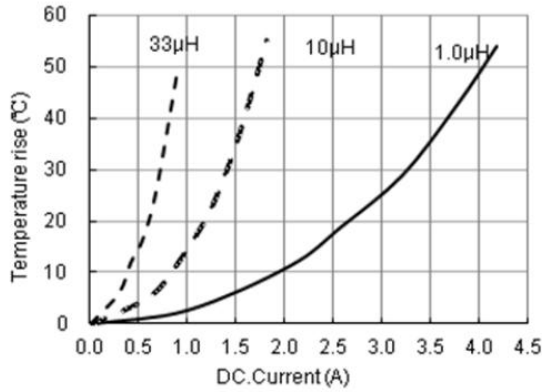


Inductance vs. DC Current Characteristics

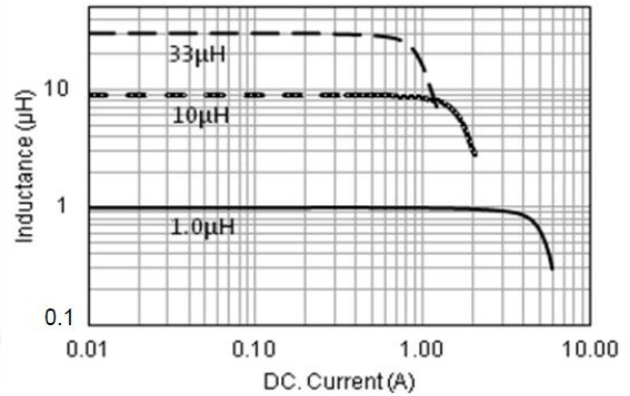


## WEC4018H Series

Temperature vs. DC Current Characteristics



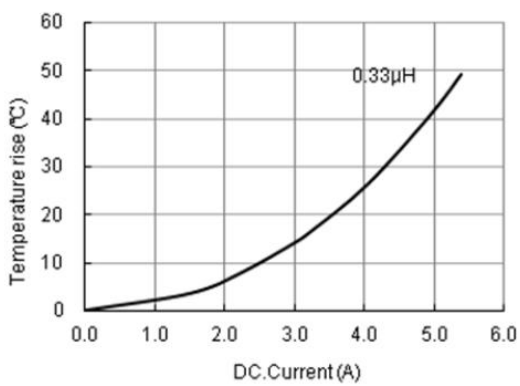
Inductance vs. DC Current Characteristics



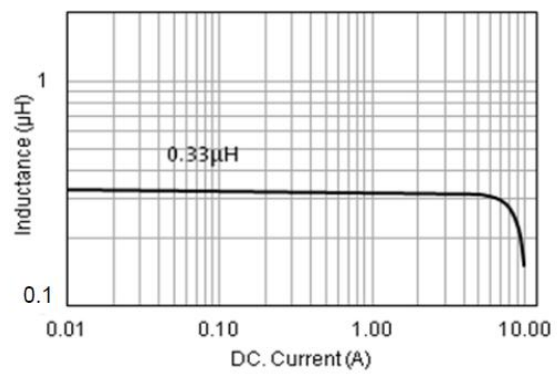
# TYPICAL ELECTRICAL CHARACTERISTICS

## WEC4020H Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics

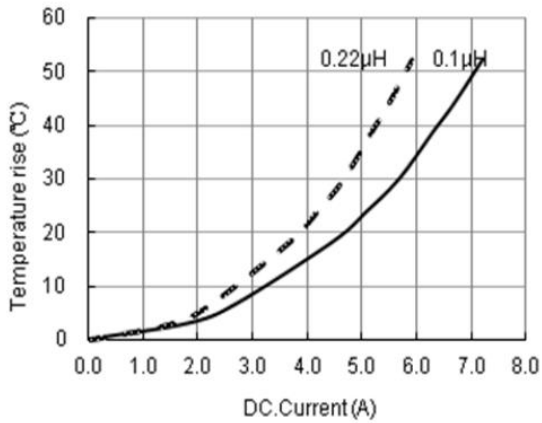




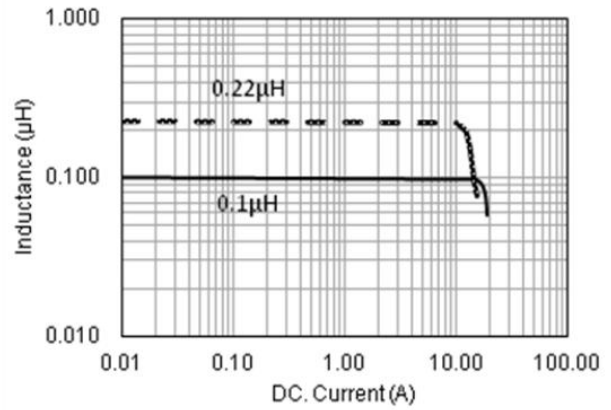
# SPECIFICATIONS

## WEC4030H Series

Temperature vs. DC Current Characteristics

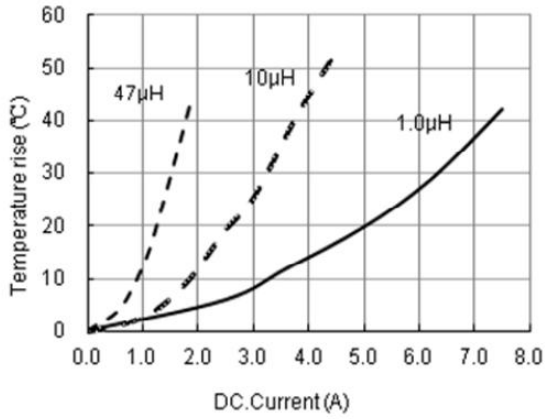


Inductance vs. DC Current Characteristics



## WEC8030H Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics

