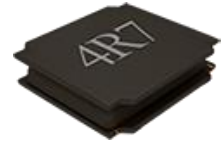


# Wire Wound SMD Power Inductors – WPN Series

Operating temperature range : -40°C~+125°C (Including self-heating)



## FEATURES

- Fe base metal material core provides large saturation current
- 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)
- Low DCR decreases power loss, small and slim take up less PCB real estate
- Automatic production ensures high quality and consistency

## APPLICATIONS

- Smart phone, set top box, VR, AR
- Notebooks, desktop computers, servers
- Portable gaming devices, personal navigation systems, personal multimedia devices

## PRODUCT IDENTIFICATION

**WPN**

①

**252012**

②

**H**

③

**2R2**

④

**M**

⑤

**T**

⑥

□□□

⑦

① Type	
WPN	Wire Wound SMD Power Inductor

③ Feature Type	
H	H Type
M	M Type
U	U Type
E	E Type
F	F Type
P	P Type
S	S Type
HS	HS Type

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

⑤ Inductance Tolerance	
N	±30%
M	±20%

② External Dimensions (LxWxH) [mm]	
201610	2.0x1.6x1.0
201612	2.0x1.6x1.2
252010	2.5x2.0x1.0
252012	2.5x2.0x1.2
3010	3.0x3.0x1.0
3012	3.0x3.0x1.2
4010	4.0x4.0x1.0
4012	4.0x4.0x1.2
4020	4.0x4.0x2.0

⑥ Packing	
T	Tape & Reel

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

# SHAPE AND DIMENSIONS

Fig.1

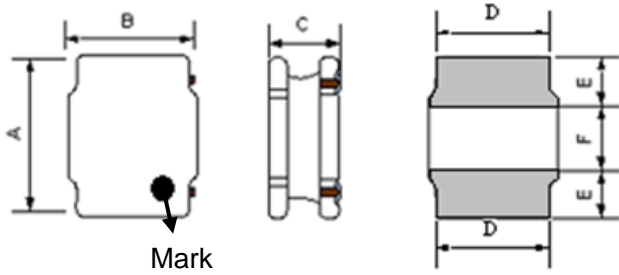


Fig.2

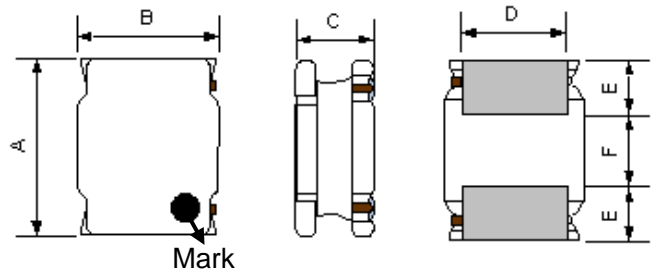


Fig.3

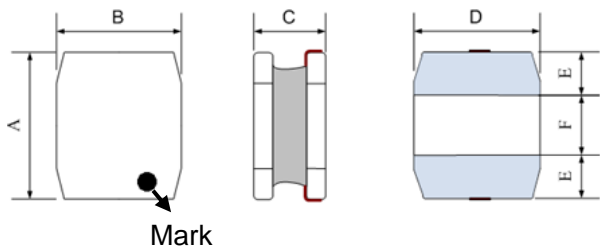


Fig.4

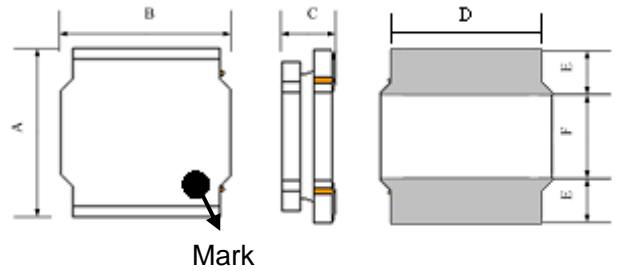
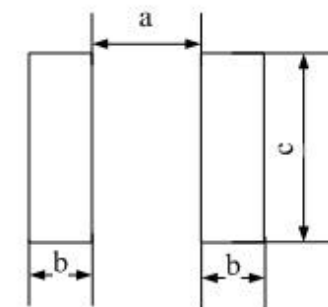
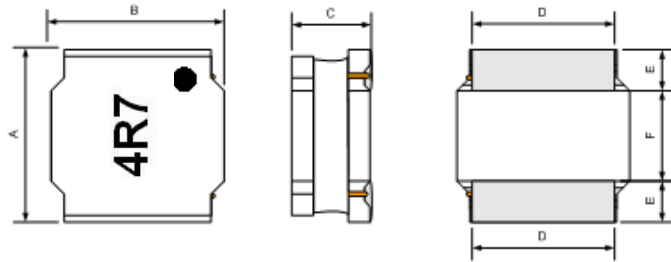


Fig.5



Recommended Land Pattern

Unit: mm

Series	Shape	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
WPN201610H/HS	Fig.1	2.0±0.2	1.6±0.2	1.0 Max.	1.5±0.2	0.6±0.2	0.8±0.2	0.7	0.7	1.7
WPN201610M	Fig.2	2.0±0.2	1.6±0.2	1.0 Max.	1.2±0.2	0.6±0.2	0.8±0.2	0.7	0.7	1.7
WPN201610U	Fig.3	2.0±0.2	1.6±0.2	1.0 Max.	1.6±0.2	0.6±0.2	0.8±0.2	0.7	0.7	1.7
WPN201610P	Fig.1	2.0±0.2	1.6±0.2	1.0/1.05 Max.	1.5±0.2	0.6±0.2	0.8±0.2	0.7	0.7	1.6
WPN201610S	Fig.1	2.0±0.2	1.6±0.2	1.0 Max.	1.5±0.2	0.6±0.2	0.8±0.2	0.7	0.7	1.6
WPN201612H	Fig.1	2.0±0.2	1.6±0.2	1.2 Max.	1.2±0.2	0.6±0.2	0.8±0.2	0.7	0.7	1.7
WPN252010H/HS	Fig.1	2.5±0.2	2.0±0.2	1.0 Max.	1.65±0.2	0.8±0.2	0.8±0.2	0.8	0.85	2.0
WPN252010U	Fig.3	2.5±0.2	2.0±0.2	1.0 Max.	2.0±0.2	0.6±0.2	1.3±0.2	1.2	0.8	2.0
WPN252010F	Fig.1	2.5±0.2	2.0±0.2	1.0 Max.	1.75±0.2	0.8±0.2	0.85±0.2	0.8	0.85	2.0
WPN252010P	Fig.1	2.5±0.2	2.0±0.2	1.0 Max.	1.75±0.2	0.8±0.2	0.85±0.2	0.8	0.85	2.0
WPN252010S	Fig.1	2.5±0.2	2.0±0.2	1.0 Max.	1.75±0.2	0.8±0.2	0.85±0.2	0.8	0.85	2.0
WPN252012H/HS	Fig.1	2.5±0.2	2.0±0.2	1.2 Max.	1.65±0.2	0.8±0.2	0.8±0.2	0.8	0.85	2.0
WPN252012E	Fig.1	2.5±0.2	2.0±0.2	1.2 Max.	1.65±0.2	0.8±0.2	0.8±0.2	0.8	0.85	2.0
WPN3010HS	Fig.4	3.0±0.2	3.0±0.2	1.0 Max.	2.6±0.2	0.75±0.2	1.5±0.2	1.5	0.8	3.2
WPN3012H/HS	Fig.4	3.0±0.2	3.0±0.2	1.2 Max.	2.6±0.2	0.75±0.2	1.5±0.2	1.5	0.8	3.2
WPN4010HS	Fig.5	4.0±0.2	4.0±0.2	1.0 Max.	3.1±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
WPN4012H/HS	Fig.5	4.0±0.2	4.0±0.2	1.2 Max.	3.1±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7
WPN4020H	Fig.5	4.0±0.2	4.0±0.2	2.0 Max.	3.1±0.2	0.95±0.2	2.1±0.2	1.9	1.1	3.7

## SPECIFICATIONS

### WPN201610H Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		I <sub>rms</sub>	
WPN201610HR24MT	0.24±20%	0.040	0.033	145	4.50	5.50	3.00	3.45
WPN201610HR47MT	0.47±20%	0.049	0.041	102	4.00	4.70	2.70	3.10
WPN201610HR68MT	0.68±20%	0.065	0.057	77	3.50	4.00	2.50	2.80
WPN201610H1R0MT	1.0±20%	0.090	0.075	70	3.35	3.85	2.05	2.35
WPN201610H1R0MTY01	1.0±20%	0.070	0.060	65	2.60	3.05	2.20	2.55
WPN201610H1R5MT	1.5±20%	0.130	0.110	45	1.95	2.30	1.70	2.00
WPN201610H2R2MT	2.2±20%	0.170	0.142	39	1.90	2.15	1.45	1.70
WPN201610H4R7MT	4.7±20%	0.425	0.370	25	1.20	1.50	0.90	1.00
WPN201610H100MT	10±20%	0.826	0.688	15	0.80	0.95	0.65	0.75

### WPN201610HS Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		I <sub>rms</sub>	
WPN201610HS4R7MT	4.7±20%	0.425	0.370	25	1.50	1.70	0.90	1.00
WPN201610HS100MT	10±20%	0.826	0.688	15	0.95	1.10	0.65	0.75

### WPN201610M Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		I <sub>rms</sub>	
WPN201610MR24MT	0.24±20%	0.026	0.022	160	5.90	6.80	4.35	4.80
WPN201610MR33MT	0.33±20%	0.038	0.032	120	5.50	6.00	3.40	3.80
WPN201610MR47MT	0.47±20%	0.044	0.037	107	4.30	5.20	3.00	3.30
WPN201610MR68MT	0.68±20%	0.060	0.050	92	3.60	4.20	2.60	3.00
WPN201610M1R0MT	1.0±20%	0.090	0.075	52	3.35	3.85	2.05	2.35
WPN201610M2R2MT	2.2±20%	0.160	0.135	41	1.80	2.00	1.60	1.75

### WPN201610U Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		I <sub>rms</sub>	
WPN201610UR12MT	0.12±20%	0.015	0.012	250	9.50	11.00	5.60	6.50
WPN201610UR22MT	0.22±20%	0.022	0.017	159	6.00	6.70	4.50	5.20
WPN201610UR24MT	0.24±20%	0.022	0.017	143	5.60	6.70	4.50	5.20
WPN201610UR33MT	0.33±20%	0.025	0.022	121	5.50	6.00	4.10	4.70
WPN201610UR47MT	0.47±20%	0.033	0.028	110	4.50	5.00	3.60	4.10
WPN201610UR68MT	0.68±20%	0.045	0.037	78	3.20	3.70	3.10	3.60
WPN201610U1R0MT	1.0±20%	0.060	0.050	63	3.00	3.50	2.60	3.00
WPN201610U1R5MT	1.5±20%	0.110	0.095	50	2.80	3.20	2.00	2.30
WPN201610U2R2MT	2.2±20%	0.120	0.100	44	1.80	2.10	1.90	2.20
WPN201610U4R7MT	4.7±20%	0.288	0.240	21	1.30	1.50	1.25	1.45

## SPECIFICATIONS

### WPN201610P Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN201610PR33MT	0.33±20%	0.029	0.024	98	4.50	5.00	3.69	4.10
WPN201610PR47MT	0.47±20%	0.040	0.033	89	4.00	4.40	3.15	3.50
WPN201610P1R0MT	1.0±20%	0.069	0.060	56	2.61	2.91	2.26	2.60
WPN201610P2R2MT	2.2±20%	0.150	0.135	36	1.71	1.90	1.50	1.70

### WPN201610S Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN201610SR24MTY01	0.24±20%	0.026	0.020	157	6.20	7.00	5.15	5.75
WPN201610SR33MT	0.33±20%	0.030	0.021	104	6.10	6.70	3.60	4.40
WPN201610SR47MT	0.47±20%	0.042	0.023	92	5.30	6.10	3.75	4.00
WPN201610SR68MT	0.68±20%	0.060	0.045	76	3.60	4.20	3.05	3.50
WPN201610S1R0MT	1.0±20%	0.070	0.048	54	3.30	3.90	3.00	3.20
WPN201610S1R5MT	1.5±20%	0.114	0.095	42	2.50	2.70	2.30	2.60
WPN201610S2R2MT	2.2±20%	0.155	0.117	38	2.45	2.60	1.90	2.10

### WPN201612H Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN201612HR24MT	0.24±20%	0.023	0.019	116	5.85	6.75	4.50	5.20
WPN201612HR33MT	0.33±20%	0.031	0.026	95	5.15	6.00	3.85	4.45
WPN201612HR47MT	0.47±20%	0.041	0.034	84	3.95	4.60	3.40	3.90
WPN201612H1R0MT	1.0±20%	0.059	0.049	60	2.70	3.10	2.70	3.00
WPN201612H1R5MT	1.5±20%	0.109	0.091	42	1.90	2.35	2.10	2.45
WPN201612H2R2MT	2.2±20%	0.146	0.122	32	1.70	2.00	1.80	2.05

### WPN252010H Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252010HR33MT	0.33±20%	0.039	0.033	117	4.80	5.50	3.50	4.05
WPN252010HR47MT	0.47±20%	0.045	0.038	80	4.40	5.20	3.20	3.70
WPN252010HR68MT	0.68±20%	0.059	0.049	65	3.20	3.60	2.75	3.20
WPN252010H1R0MT	1.0±20%	0.076	0.063	46	3.10	3.50	2.50	2.90
WPN252010H1R5MT	1.5±20%	0.106	0.088	40	2.60	3.00	2.00	2.30
WPN252010H2R2MT	2.2±20%	0.155	0.129	26	1.90	2.20	1.50	1.80
WPN252010H3R3MT	3.3±20%	0.235	0.196	24	1.60	1.80	1.20	1.40
WPN252010H4R7MT	4.7±20%	0.276	0.230	19	1.30	1.50	1.10	1.30
WPN252010H100MT	10±20%	0.500	0.435	12	0.90	1.00	0.80	0.90

## SPECIFICATIONS

### WPN252010HS Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252010HS4R7MT	4.7±20%	0.276	0.230	19	1.30	1.50	1.10	1.30
WPN252010HS4R7MTY01	4.7±20%	0.290	0.250	19	1.55	1.80	1.05	1.20
WPN252010HS100MT	10±20%	0.500	0.435	12	1.10	1.30	0.80	0.90

### WPN252010U Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252010UR16MT	0.16±20%	0.020	0.016	214	10.0	12.0	5.00	5.80
WPN252010UR24MT	0.24±20%	0.025	0.021	149	8.50	10.0	4.40	5.10
WPN252010UR33MT	0.33±20%	0.025	0.021	117	6.00	6.70	4.40	5.10
WPN252010UR47MT	0.47±20%	0.030	0.025	92	5.30	5.80	4.00	4.60
WPN252010UR68MT	0.68±20%	0.043	0.036	67	5.20	5.70	3.30	3.80
WPN252010U1R0MT	1.0±20%	0.050	0.042	54	4.10	4.60	3.10	3.60
WPN252010U1R5MT	1.5±20%	0.076	0.063	41	3.00	3.40	2.40	2.80
WPN252010U2R2MT	2.2±20%	0.096	0.080	34	2.60	2.90	2.05	2.40
WPN252010U4R7MT	4.7±20%	0.240	0.200	22	1.90	2.20	1.40	1.60

### WPN252010F Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252010FR24MT	0.24 ± 20%	0.025	0.021	/	10.4	11.6	4.40	5.10
WPN252010FR33MT	0.33 ± 20%	0.025	0.021	/	6.00	6.70	4.40	5.10
WPN252010FR47MT	0.47 ± 20%	0.030	0.025	/	5.30	6.00	4.00	4.60
WPN252010FR68MT	0.68 ± 20%	0.043	0.036	/	5.20	5.70	3.30	3.80
WPN252010F1R0MT	1.0 ± 20%	0.060	0.050	/	4.20	4.80	2.85	3.30
WPN252010F2R2MT	2.2 ± 20%	0.156	0.130	/	3.10	3.50	1.60	1.90

### WPN252010P Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252010PR33MT	0.33 ± 20%	0.026	0.021	97	6.00	6.60	4.00	4.40
WPN252010PR47MT	0.47 ± 20%	0.032	0.027	79	4.50	5.00	3.51	3.90
WPN252010P1R0MT	1.0 ± 20%	0.065	0.045	54	3.15	3.50	2.70	3.00
WPN252010P2R2MT	2.2 ± 20%	0.125	0.099	31	2.16	2.40	2.07	2.30

## SPECIFICATIONS

### WPN252010S Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252010SR33MT	0.33±20%	0.026	0.017	97	7.00	7.80	4.50	5.00
WPN252010SR47MT	0.47±20%	0.032	0.023	79	6.00	6.60	4.20	4.80
WPN252010SR68MT	0.68±20%	0.050	0.040	62	5.00	5.60	3.80	4.40
WPN252010S1R0MT	1.0±20%	0.065	0.041	54	4.00	4.40	3.00	3.20
WPN252010S1R5MT	1.5±20%	0.105	0.085	45	2.60	3.00	2.70	3.05
WPN252010S2R2MT	2.2±20%	0.130	0.088	31	3.00	3.30	2.05	2.30

### WPN252012H Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252012HR24MT	0.24±20%	0.023	0.019	117	6.50	7.80	4.05	4.70
WPN252012HR33MT	0.33±20%	0.028	0.023	104	5.30	6.20	3.70	4.30
WPN252012HR47MT	0.47±20%	0.035	0.029	89	4.90	5.60	3.45	4.00
WPN252012HR68MT	0.68±20%	0.043	0.036	67	3.70	4.30	3.15	3.60
WPN252012H1R0MT	1.0±20%	0.054	0.048	52	3.60	4.20	3.00	3.40
WPN252012H1R5MT	1.5±20%	0.072	0.060	38	2.90	3.50	2.40	2.80
WPN252012H2R2MT	2.2±20%	0.120	0.100	32	2.60	3.00	1.90	2.15
WPN252012H2R2MTY01	2.2±20%	0.102	0.085	36	2.90	3.30	2.10	2.40
WPN252012H3R3MT	3.3±20%	0.163	0.136	25	1.70	2.10	1.80	2.05
WPN252012H4R7MT	4.7±20%	0.260	0.225	23	1.60	1.90	1.25	1.45
WPN252012H6R8MT	6.8±20%	0.366	0.305	16	1.15	1.35	0.95	1.10
WPN252012H100MT	10±20%	0.480	0.435	14	1.10	1.35	0.85	1.00

### WPN252012HS Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252012HS4R7MT	4.7±20%	0.260	0.225	23	1.70	1.90	1.25	1.45
WPN252012HS100MT	10±20%	0.480	0.435	14	1.10	1.35	0.85	1.00

### WPN252012E Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN252012ER33MT	0.33±20%	0.026	0.020	107	8.00	9.00	4.50	5.10
WPN252012ER47MT	0.47±20%	0.032	0.026	92	7.00	8.00	4.10	4.70
WPN252012E1R0MT	1.0±20%	0.044	0.037	52	4.50	5.00	3.50	3.90

## SPECIFICATIONS

### WPN3010HS Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN3010HS100MT	10±20%	0.432	0.360	16	1.00	1.20	1.20	1.40

### WPN3012H Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN3012HR33MT	0.33±20%	0.027	0.023	107	7.20	8.90	4.20	4.85
WPN3012HR47MT	0.47±20%	0.033	0.028	86	6.80	8.00	3.90	4.50
WPN3012HR68MT	0.68±20%	0.042	0.035	63	5.80	6.80	3.40	3.9
WPN3012H1R0MT	1.0±20%	0.054	0.045	51	4.20	5.40	2.70	3.10
WPN3012H1R5MT	1.5±20%	0.074	0.064	37	3.40	4.10	2.50	2.90
WPN3012H2R2MT	2.2±20%	0.108	0.090	28	2.80	3.35	2.05	2.35
WPN3012H3R3MT	3.3±20%	0.155	0.129	25	2.20	2.60	1.70	2.00
WPN3012H4R7MT	4.7±20%	0.235	0.196	20	2.00	2.50	1.30	1.50
WPN3012H6R8MT	6.8±20%	0.340	0.290	16	1.60	1.90	1.10	1.25
WPN3012H100MT	10±20%	0.474	0.395	12	1.20	1.45	1.00	1.15

### WPN3012HS Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN3012HS4R7MT	4.7±20%	0.235	0.196	21	2.00	2.50	1.30	1.50
WPN3012HS100MT	10±20%	0.474	0.395	12	1.35	1.65	1.00	1.15
WPN3012HS100MTY01	10±20%	0.415	0.360	17	1.90	2.15	1.35	1.55
WPN3012HS150MT	15±20%	0.635	0.550	13	1.55	1.75	1.10	1.25

### WPN4010HS Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN4010HS4R7MT	4.7±20%	0.197	0.164	28	1.95	2.30	1.85	2.10
WPN4010HS6R8MT	6.8±20%	0.260	0.217	20	1.50	1.75	1.55	1.75
WPN4010HS100MT	10±20%	0.335	0.280	10	1.40	1.65	1.40	1.60

### WPN4012H Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN4012HR33MT	0.33±20%	0.032	0.027	113	10.30	11.50	4.30	4.90
WPN4012HR47MT	0.47±20%	0.041	0.034	96	9.10	9.90	3.80	4.40
WPN4012HR68MT	0.68±20%	0.041	0.034	70	5.50	6.35	3.80	4.40
WPN4012H1R0MT	1.0±20%	0.059	0.049	55	5.70	6.60	3.20	3.70
WPN4012H1R0MTY01	1.0±20%	0.049	0.041	56	4.50	5.30	3.60	4.20

## SPECIFICATIONS

### WPN4012H Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN4012H1R2MT	1.2±20%	0.059	0.049	48	4.00	4.80	3.20	3.70
WPN4012H1R5MT	1.5±20%	0.070	0.058	38	3.90	4.60	2.90	3.30
WPN4012H2R2MT	2.2±20%	0.079	0.066	28	2.80	3.30	2.70	3.10
WPN4012H3R3MT	3.3±20%	0.125	0.104	23	2.80	3.30	2.10	2.50
WPN4012H4R7MT	4.7±20%	0.166	0.138	19	2.30	2.60	1.90	2.20
WPN4012H6R8MT	6.8±20%	0.226	0.188	17	1.60	2.20	1.60	1.85
WPN4012H100MT	10±20%	0.335	0.279	12	1.55	1.85	1.30	1.50
WPN4012H220MT	22±20%	0.679	0.566	7	1.05	1.30	0.90	1.05

### WPN4012HS Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN4012HS4R7MT	4.7±20%	0.162	0.135	28	2.60	3.00	2.05	2.35
WPN4012HS100MT	10±20%	0.276	0.230	12	1.80	2.10	1.55	1.75

### WPN4020H Series

Part Number	Inductance	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
	@1MHz,1V	Max.	Typ.	Min.	Max.	Typ.	Max.	Typ.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPN4020HR22MT	0.22±20%	0.013	0.011	108	18.70	22.00	8.20	9.50
WPN4020HR47MT	0.47±20%	0.022	0.018	72	13.40	15.50	6.40	7.40
WPN4020HR68MT	0.68±20%	0.022	0.018	57	8.70	11.10	6.40	7.40
WPN4020H1R0MT	1.0±20%	0.026	0.022	37	8.70	11.10	5.80	6.70
WPN4020H1R5MT	1.5±20%	0.036	0.030	30	7.70	9.60	5.20	6.00
WPN4020H2R2MT	2.2±20%	0.048	0.040	25	6.10	7.60	4.30	5.00
WPN4020H3R3MT	3.3±20%	0.072	0.060	19	4.70	5.90	3.45	4.00
WPN4020H4R7MT	4.7±20%	0.108	0.090	17	4.00	4.90	2.85	3.30
WPN4020H6R8MT	6.8±20%	0.156	0.130	13	3.00	4.20	2.40	2.80
WPN4020H100MT	10±20%	0.216	0.180	11	2.80	3.50	2.00	2.35

※1: All test data is referenced to 20°C ambient;

※2: Rated current: Isat or Irms, whichever is smaller;

※3: For WPN2016 & WPN2520 size inductors, absolute maximum voltage: DC 25V; For WPN30 & WPN40 size inductors, absolute maximum voltage: DC 40V;

※Isat: DC current at which the inductance drops approximate 30% from its value without current;

※Irms: DC current that causes the temperature rise ( $\Delta T = 40^{\circ}\text{C}$ ) from 20°C ambient.

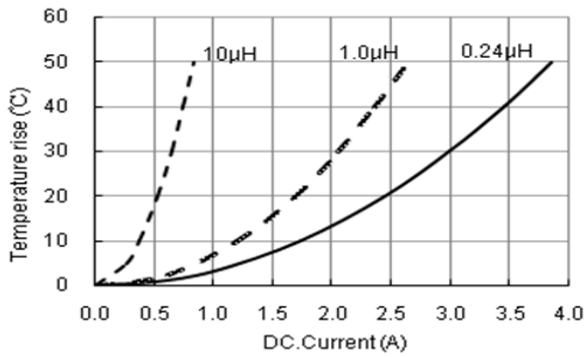
※WPN-HS series is processed with surface coating technology, coated by the resin of high voltage insulation level coating on the core surface evenly by automatic equipment, to improve the voltage insulation and corrosion resistance of the core.



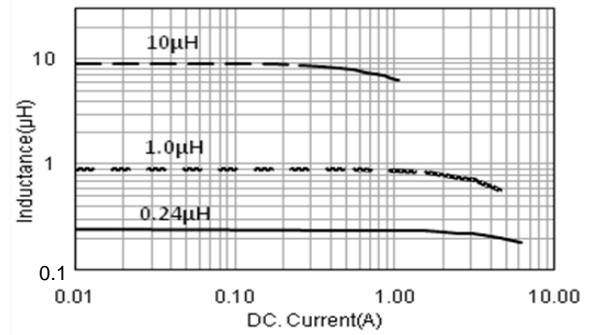
# TYPICAL ELECTRICAL CHARACTERISTICS

## WPN201610H Series

Temperature vs. DC Current Characteristics

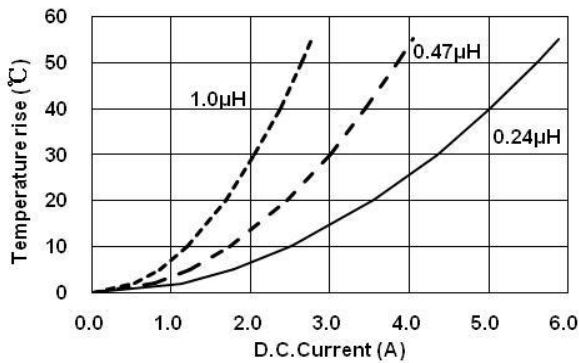


Inductance vs. DC Current Characteristics

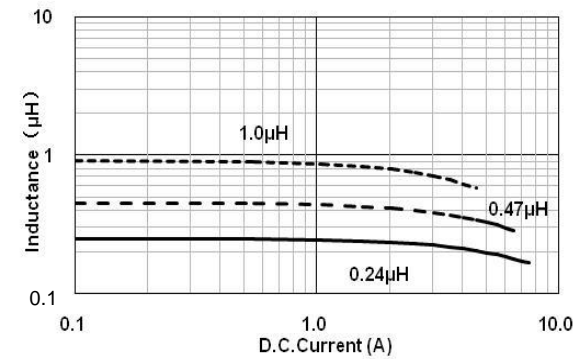


## WPN201610M Series

Temperature vs. DC Current Characteristics

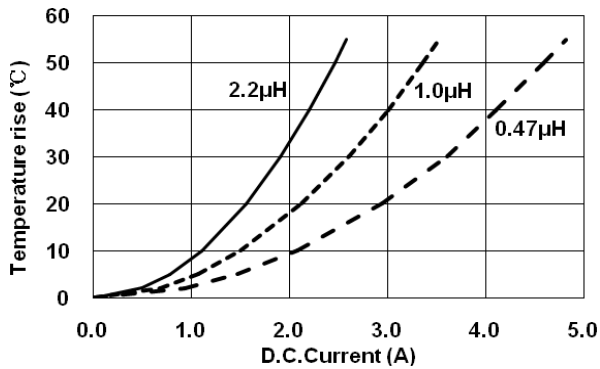


Inductance vs. DC Current Characteristics

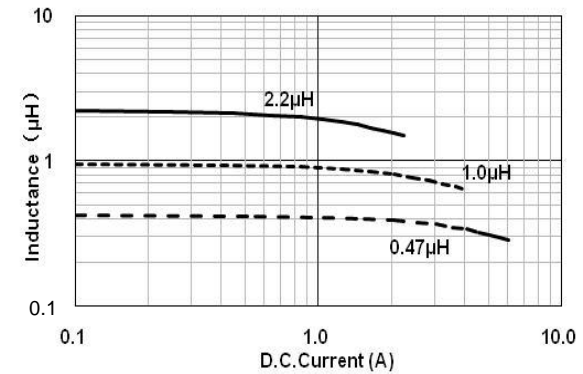


## WPN201610U Series

Temperature vs. DC Current Characteristics



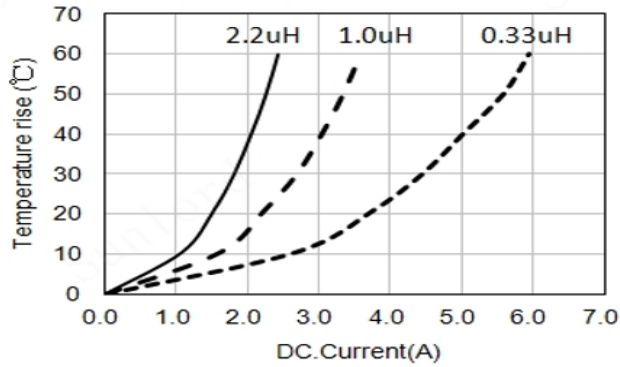
Inductance vs. DC Current Characteristics



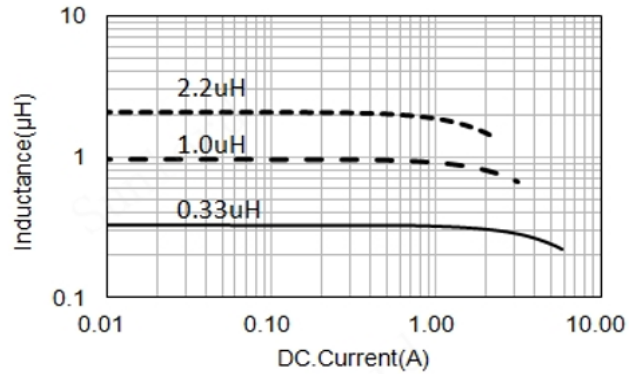
# TYPICAL ELECTRICAL CHARACTERISTICS

## WPN201610P Series

Temperature vs. DC Current Characteristics

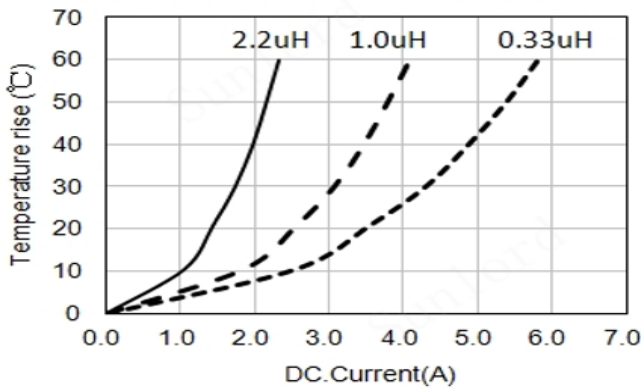


Inductance vs. DC Current Characteristics

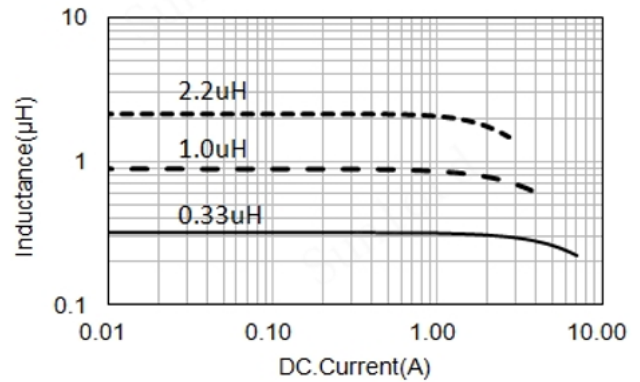


## WPN201610S Series

Temperature vs. DC Current Characteristics

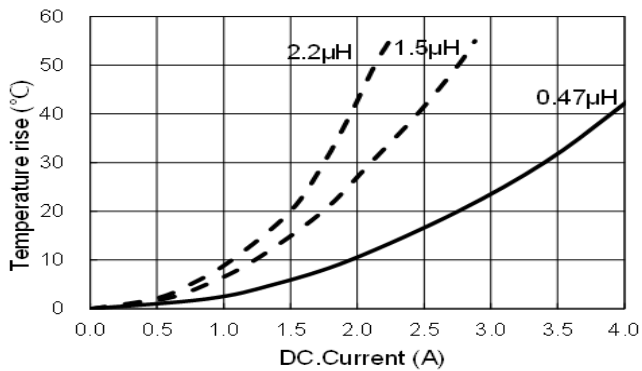


Inductance vs. DC Current Characteristics

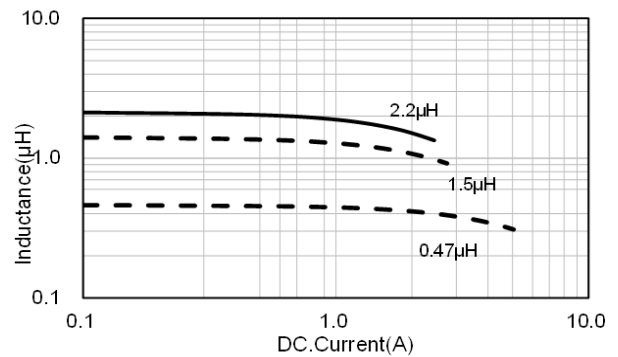


## WPN201612H Series

Temperature vs. DC Current Characteristics

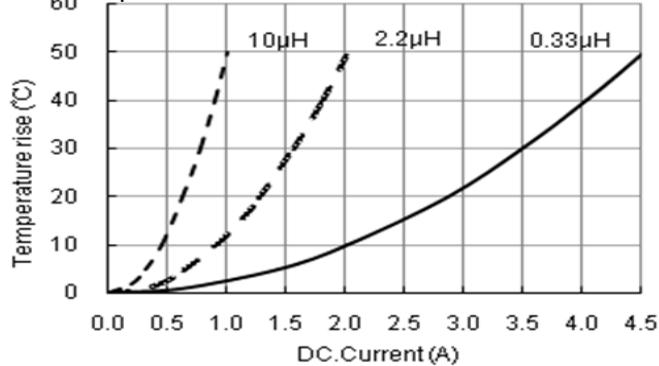


Inductance vs. DC Current Characteristics

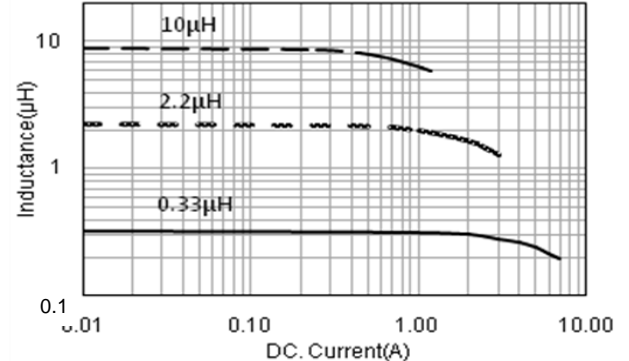


## WPN252010H Series

Temperature vs. DC Current Characteristics



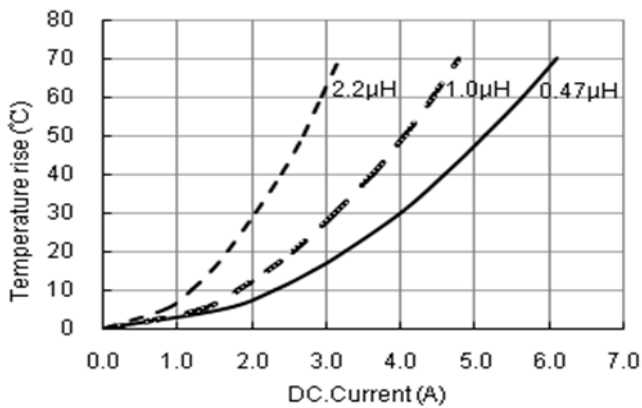
Inductance vs. DC Current Characteristics



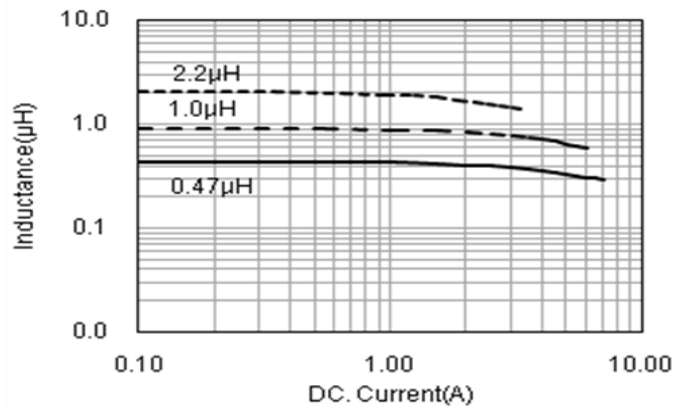
# TYPICAL ELECTRICAL CHARACTERISTICS

WPN252010U Series

Temperature vs. DC Current Characteristics

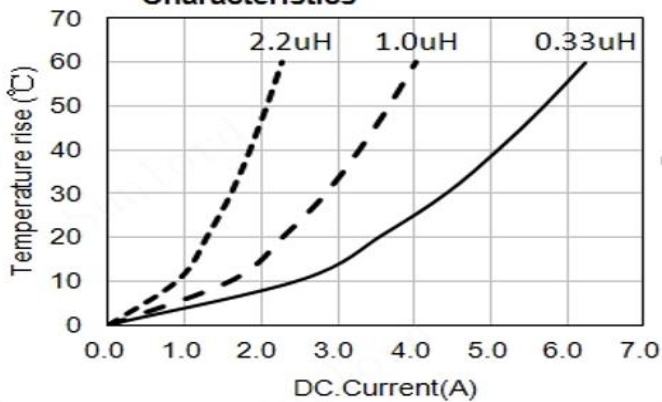


Inductance vs. DC Current Characteristics

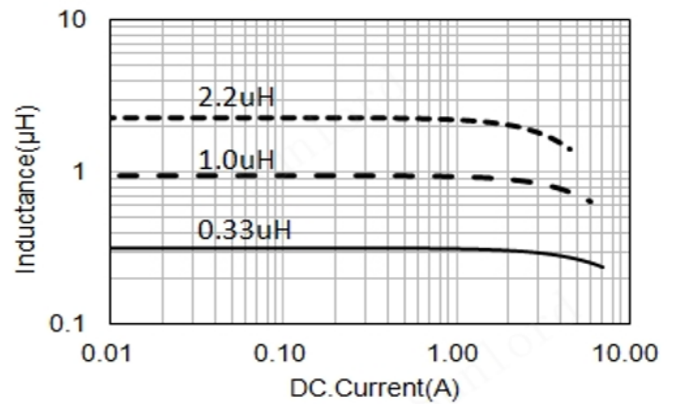


WPN252010F Series

Temperature vs. DC Current Characteristics

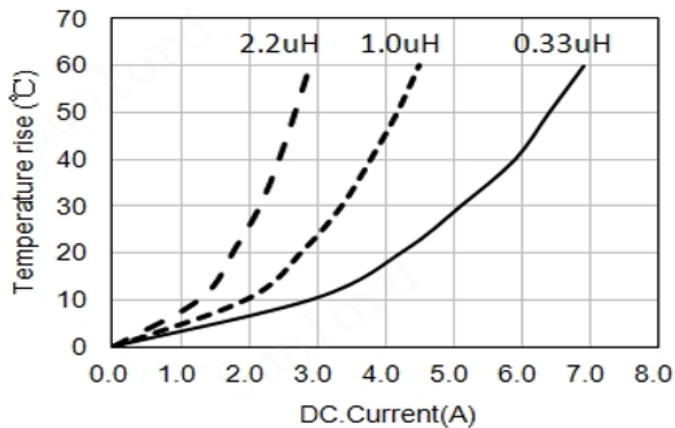


Inductance vs. DC Current Characteristics

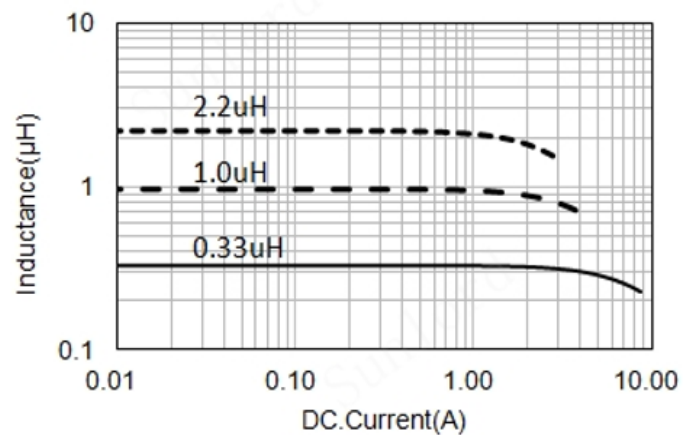


WPN252010P Series

Temperature vs. DC Current Characteristics



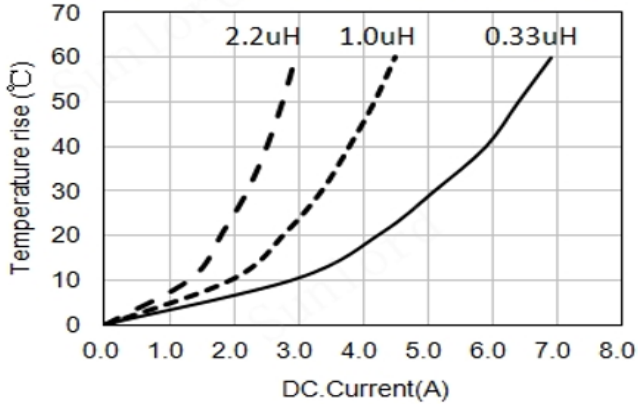
Inductance vs. DC Current Characteristics



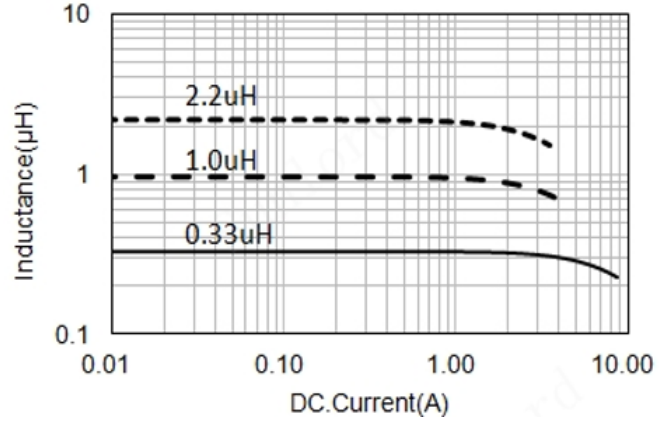
# TYPICAL ELECTRICAL CHARACTERISTICS

WPN252010S Series

Temperature vs. DC Current Characteristics

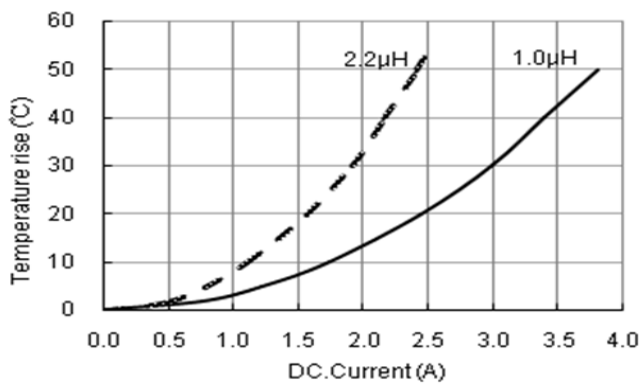


Inductance vs. DC Current Characteristics

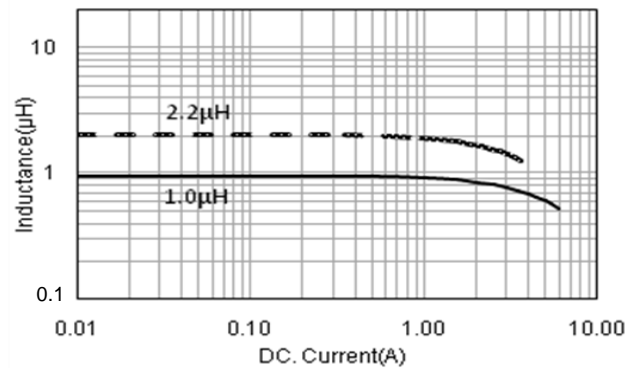


WPN252012H Series

Temperature vs. DC Current Characteristics

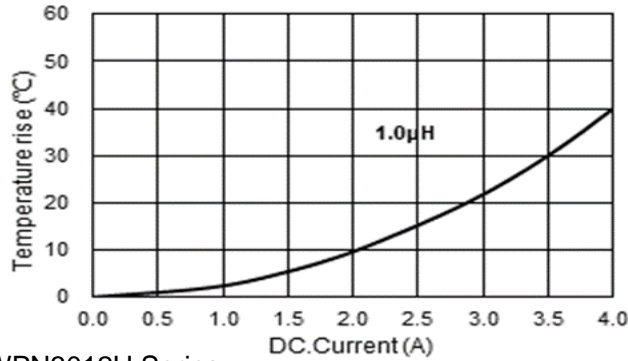


Inductance vs. DC Current Characteristics

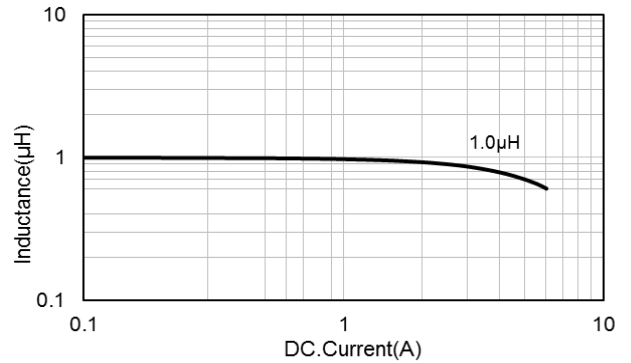


WPN252012E Series

Temperature vs. DC Current Characteristics

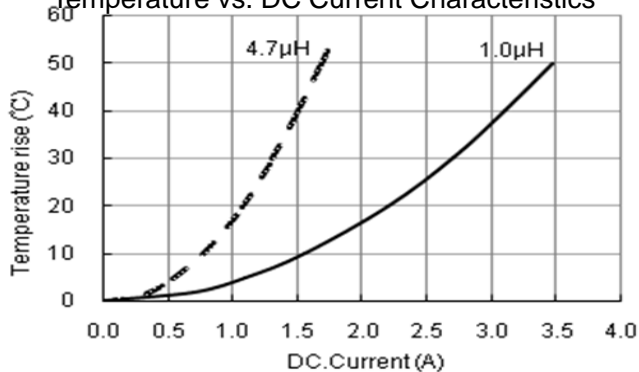


Inductance vs. DC Current Characteristics

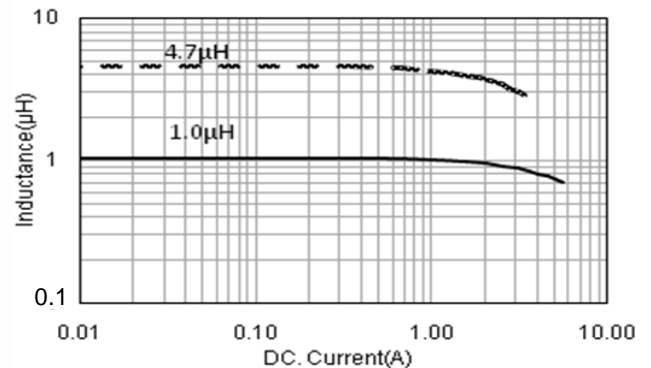


WPN3012H Series

Temperature vs. DC Current Characteristics



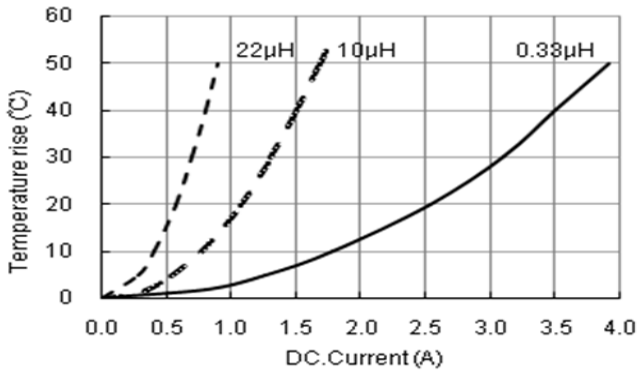
Inductance vs. DC Current Characteristics



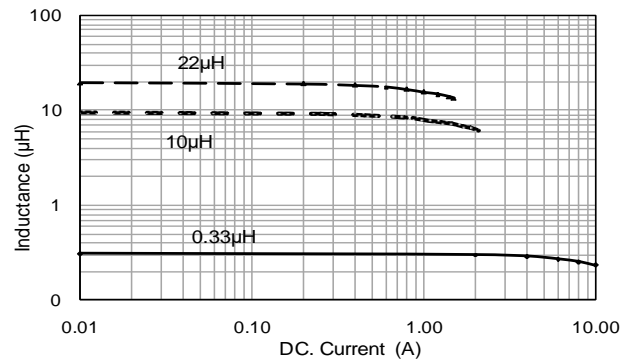
# TYPICAL ELECTRICAL CHARACTERISTICS

## WPN4012H Series

Temperature vs. DC Current Characteristics

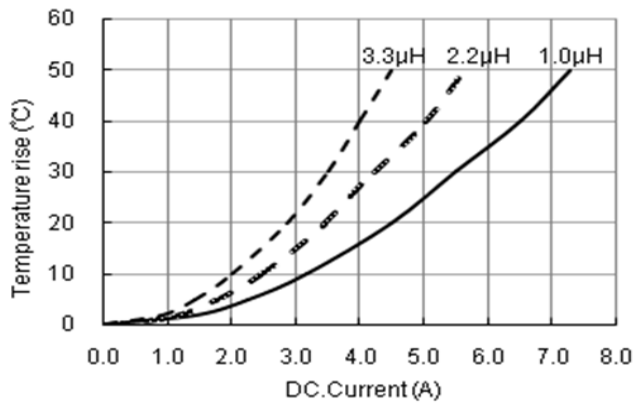


Inductance vs. DC Current Characteristics



## WPN4020H Series

Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics

