

Wire Wound SMD Power Inductors – WPG-UF 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, TV, VR, AR
- Notebooks, Smart watch, servers
- Industrial instrument, Security equipment

PRODUCT IDENTIFICATION

WPG

①

201210

②

UF

③

2R2

④

M

⑤

T

⑥

□□□

⑦

① Type	
WPG	Wire Wound SMD Power Inductor

② External Dimensions (LxWxH) [mm]	
201210	2.0x1.25x1.0
201610	2.0x1.6x1.0
252010	2.5x2.0x1.0

③ Feature Type	
UF	Internal Code

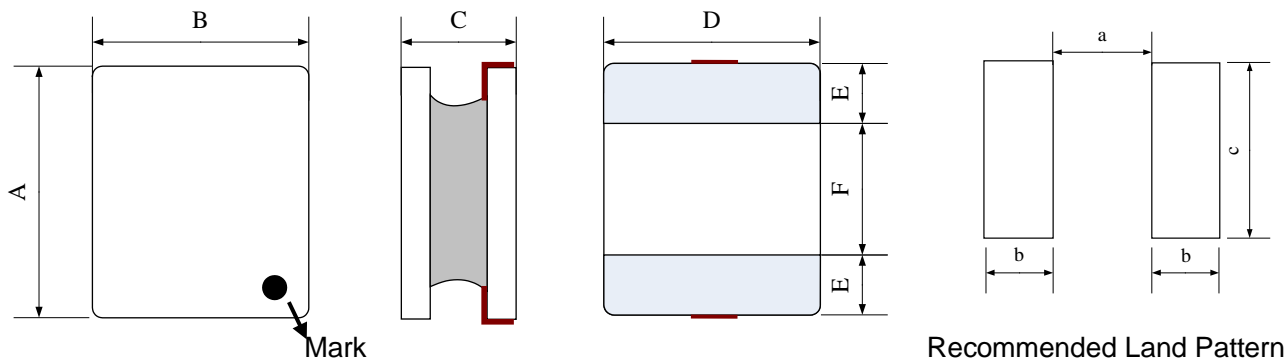
④ Nominal Inductance	
Example	Nominal Value
R47	0.47μH
2R2	2.2μH

⑥ Packing	
T	Tape & Reel

⑤ Inductance Tolerance	
N	±30%
M	±20%

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

SHAPE AND DIMENSIONS



Unit: mm

Series	A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
WPG201210UF	2.0±0.2	1.25±0.2	1.0 Max.	1.25±0.2	0.60±0.2	0.80±0.2	0.70	0.70	1.40
WPG201610UF	2.0±0.2	1.6±0.2	1.0 Max.	1.6±0.2	0.60±0.2	0.80±0.2	0.70	0.70	1.70
WPG252010UF	2.5±0.2	2.0±0.2	1.0 Max.	2.0±0.2	0.60±0.2	1.30±0.2	1.2	0.80	2.0

SPECIFICATIONS

WPG201210UF 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	
WPG201210UFR11MT	0.11±20%	0.013	0.011	209	9.60	10.5	5.50	6.35
WPG201210UFR24MT	0.24±20%	0.024	0.020	133	7.10	7.80	4.00	4.50
WPG201210UFR33MT	0.33±20%	0.034	0.028	118	6.00	6.60	3.40	3.80
WPG201210UFR47MT	0.47±20%	0.039	0.033	87	4.70	5.15	3.10	3.50
WPG201210UF1R0MT	1.0±20%	0.080	0.067	61	3.10	3.40	2.20	2.40

WPG201610UF 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	
WPG201610UFR24MT	0.24±20%	0.018	0.015	122	6.50	7.20	4.90	5.60
WPG201610UFR33MT	0.33±20%	0.022	0.018	98	6.00	6.60	4.75	5.15
WPG201610UFR47MT	0.47±20%	0.030	0.025	81	5.00	5.50	4.10	4.50
WPG201610UF1R0MT	1.0±20%	0.055	0.047	50	3.60	4.00	3.00	3.30
WPG201610UF2R2MT	2.2±20%	0.140	0.120	31	2.70	3.00	2.15	2.35

WPG252010UF 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	
WPG252010UFR24MT	0.24±20%	0.018	0.015	148	9.00	9.90	5.15	5.65
WPG252010UFR33MT	0.33±20%	0.022	0.018	115	8.20	9.00	4.70	5.15
WPG252010UFR47MT	0.47±20%	0.030	0.025	100	6.55	7.20	4.00	4.40

SPECIFICATIONS

WPG252010UF Series

Part Number	Inductance @1MHz,1V	DC Resistance		Self-resonant Frequency	Saturation Current		Heat Rating Current	
		Max.	Typ.		Min.	Max.	Typ.	Max.
Units	μH	Ω		MHz	A		A	
Symbol	L	DCR		S.R.F	Isat		Irms	
WPG252010UF1R0MT	1.0 \pm 20%	0.050	0.042	54	4.40	4.80	3.40	3.70
WPG252010UF1R5MT	1.5 \pm 20%	0.068	0.060	39	3.60	3.95	2.60	2.90
WPG252010UF2R2MT	2.2 \pm 20%	0.093	0.083	32	2.70	2.95	2.25	2.45
WPG252010UF3R3MT	3.3 \pm 20%	0.130	0.110	27	2.00	2.20	1.90	2.10
WPG252010UF4R7MT	4.7 \pm 20%	0.180	0.160	23	1.65	1.80	1.60	1.75

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

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

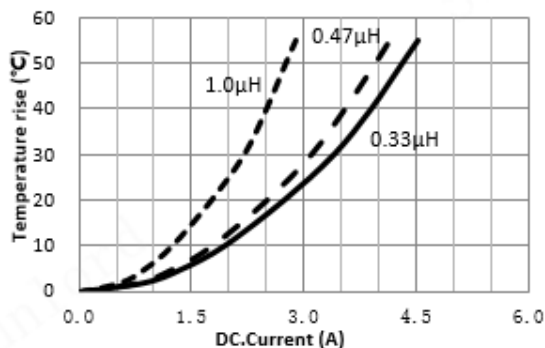
※3: Isat: DC current at which the inductance drops approximate 30% from its value without current;

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

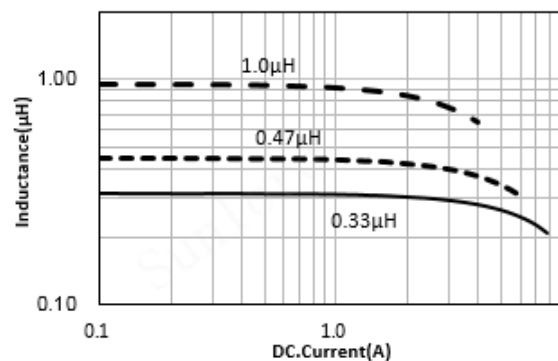
TYPICAL ELECTRICAL CHARACTERISTICS

WPG201210UF Series

Temperature vs. DC Current Characteristics

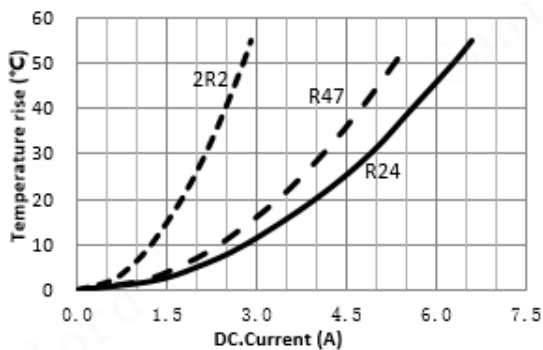


Inductance vs. DC Current Characteristics

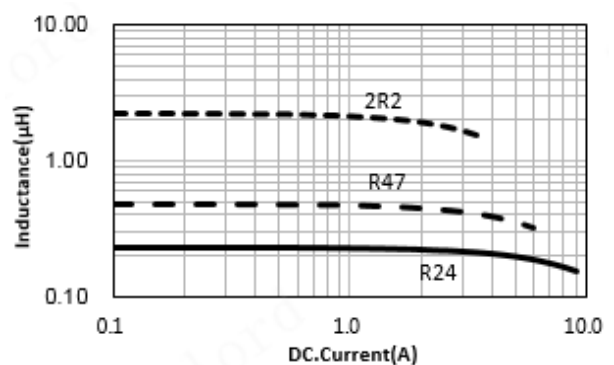


WPG201610UF Series

Temperature vs. DC Current Characteristics

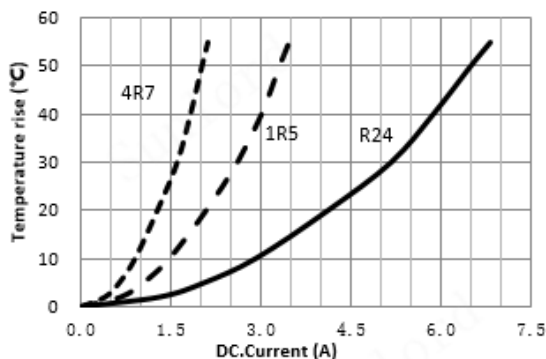


Inductance vs. DC Current Characteristics

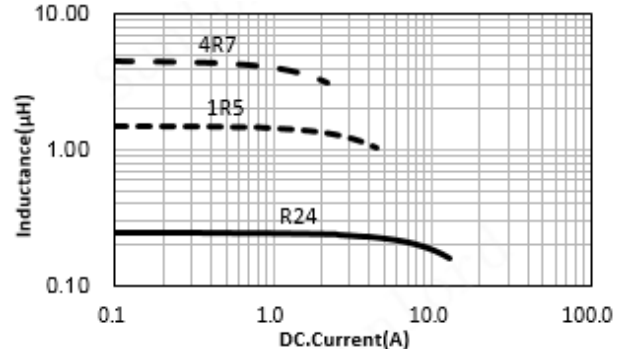


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Temperature vs. DC Current Characteristics



Inductance vs. DC Current Characteristics



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