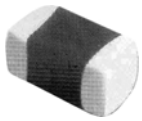
Multilayer Chip Power Inductor – MPH Series

Operating Temp. : -40℃~+85℃



FEATURES

- High DC bias current due to trench technology
- Low profile and thin thickness
- Monolithic structure for high reliability
- Excellent solderability and high heat resistance
- No cross coupling due to magnetic shield

APPLICATIONS

- DC-DC converter circuits for mobile phones, DSCs, DVCs, HDDs, PDAs, etc.

PRODUCT IDENTIFICATION

MPH **201210** **S** **4R7** **M** **T**

① ② ③ ④ ⑤ ⑥

①

Type	
MPH	Chip Power Inductor

②

External Dimensions (L×W×H) (mm)	
201210	2.0×1.25×1.0
201610	2.0×1.6×1.0
252010	2.5×2.0×1.0

③

Feature Type	
S	Standard

④

Nominal Inductance	
Example	Nominal Value
R47	0.47μH
4R7	4.7μH

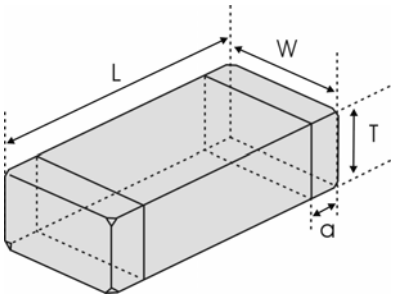
⑤

Inductance Tolerance	
M	±20%
N	±30%

⑥

Packing	
T	Tape & Reel

SHAPE AND DIMENSIONS



Unit: mm [inch]

Type	L	W	T	a
201210	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.25±0.2 [.049±.008]	0.9±0.1 [.035±.004]	0.5±0.3 [.020±.012]
201610	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	1.6±0.2 [.063±.008]	0.9±0.1 [.035±.004]	0.5±0.3 [.020±.012]
252010	2.5±0.2 [.098±.008]	2.0 (+0.3, -0.1) [.079 (+.012, -.004)]	0.9±0.1 [.035±.004]	0.5±0.3 [.020±.012]

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SPECIFICATIONS

MPH201210 TYPE

Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Temperature Rise Current Max.	Saturation Current Typ.	Thickness
Units	μH	MHz	MHz	Ω	mA	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	Irms*	Isat*	T
MPH201210SR47□T	0.47	1	100	0.08±25%	1500	1200	0.9±0.1 [.035±.004]
MPH201210S1R0□T	1.0	1	60	0.11±25%	1300	1150	
MPH201210S1R5□T	1.5	1	50	0.16±25%	1100	800	
MPH201210S2R2□T	2.2	1	40	0.20±25%	900	500	
MPH201210S3R3□T	3.3	1	30	0.20±25%	900	350	
MPH201210S4R7□T	4.7	1	30	0.25±25%	800	280	

MPH201610 TYPE

Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Temperature Rise Current Max.	Saturation Current Typ.	Thickness
Units	μH	MHz	MHz	Ω	mA	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	Irms*	Isat*	T
MPH201610SR47□T	0.47	1	100	0.08±25%	1500	1600	0.9±0.1 [.035±.004]
MPH201610S1R0□T	1.0	1	70	0.09±25%	1400	1200	
MPH201610S1R5□T	1.5	1	60	0.11±25%	1200	700	
MPH201610S2R2□T	2.2	1	50	0.11±25%	1200	500	
MPH201610S3R3□T	3.3	1	40	0.12±25%	1200	330	
MPH201610S4R7□T	4.7	1	30	0.14±25%	1100	220	

MPH252010 TYPE

Part Number	Inductance	L Test Freq.	Min. Self-resonant Frequency	DC Resistance	Temperature Rise Current Max.	Saturation Current Typ.	Thickness
Units	μH	MHz	MHz	Ω	mA	mA	mm [inch]
Symbol	L	Freq.	S.R.F	DCR	Irms*	Isat*	T
MPH252010SR47□T	0.47	1	105	0.04±25%	1800	1500	0.9±0.1 [.035±.004]
MPH252010S1R0□T	1.0	1	70	0.06±25%	1600	1400	
MPH252010S1R5□T	1.5	1	65	0.07±25%	1500	1200	
MPH252010S2R2□T	2.2	1	55	0.08±25%	1300	850	
MPH252010S3R3□T	3.3	1	30	0.10±25%	1200	450	
MPH252010S4R7□T	4.7	1	25	0.11±25%	1100	320	

※□: Please specify the inductance tolerance code (M=±20%, N=±30%).
※Irms : DC current causes temperature rise of 40℃ from 20℃ ambient.
※Isat : DC current at which the inductance drops approximate 30% from its value without current.

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