SMD Type Ultra High Current Power Inductors   SMPI 0603HW-Series-K01

1. Features

1. Lowest height in this package footprint.
2. Shielded construction.
3. Lowest DCR/μH, in this package size.
4. Handles high transient current spikes without saturation.
5. Ultra low buzz noise, due to composite construction.
6. Frequency up to 5MHz.
7. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
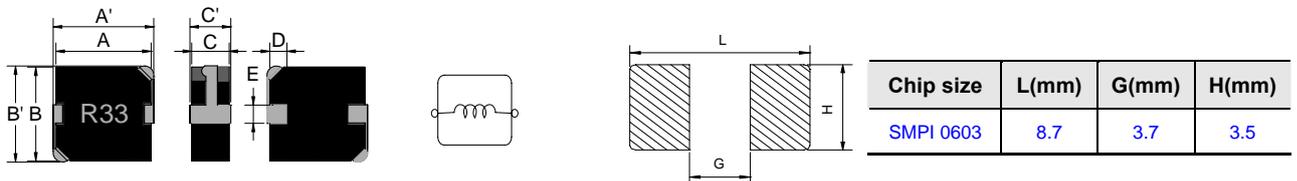
Halogen-free   Pb-free

2. Applications

Excellent for power line DC-DC conversion applications used in power switching,
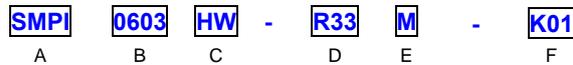personal computers and other handheld electronic equipment.

3. Dimensions

Recommended PC Board Pattern

Chip size	L(mm)	G(mm)	H(mm)
SMPI 0603	8.7	3.7	3.5

Series	A(mm)	A'(mm)	B(mm)	B'(mm)	C(mm)	C'(mm)	D(mm)	E(mm)
SMPI 0603	6.86±0.5	7.8 max.	6.47±0.5	7.0 max.	3.0 max.	3.2 max.	1.6±0.5	2.1±0.5

4. Part Numbering

SMPI	0603	HW	-	R33	M	-	K01
A	B	C		D	E		F

A: Series
B: Dimension   AxC
C: Type
D: Inductance   R33=0.33 uH
E: Inductance Tolerance   M=±20%; Coating Black, Marking White
F: Control S/N

5. Specification

Part Number	Inductance L0 (uH)±20% @ 0 A	I rms (A) typ.	I sat (A) typ.	DCR (mΩ) max.
SMPI 0603HW-R33M-K01	0.33	20.0	30	3.9
SMPI 0603HW-R47M-K01	0.47	17.5	26	4.2
SMPI 0603HW-R68M-K01	0.68	15.5	23	5.5
SMPI 0603HW-1R0M-K01	1.0	11.0	16	10
SMPI 0603HW-1R5M-K01	1.5	9.0	14	15
SMPI 0603HW-2R2M-K01	2.2	8.0	12	20
SMPI 0603HW-3R3M-K01	3.3	6.0	10	30
SMPI 0603HW-4R7M-K01	4.7	5.5	6.5	40
SMPI 0603HW-6R8M-K01	6.8	4.5	6.0	60
SMPI 0603HW-100M-K01	10.0	3.0	4.5	105

Note:

1. Test frequency : L0: 100KHz/1.0V
2. All test data referenced to 20℃ ambient.
3. Testing Instrument : L: HP4284A,CH11025,CH3302,CH1320 ,CH1320S LCR METER / Rdc:CH16502,Agilent33420A MICRO OHMMETER.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately △T≦40℃ without core loss.
5. Saturation Current (Isat) will cause L0 to drop approximately 30% typical.
6. The part temperature (ambient + temp rise) should not exceed 125℃ under worst case operating conditions.Circuit design,component,PCB trace size and thickness,airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
7. Special inquiries besides the above common used types can be met on your requirement.

6. Typical Performance Curves

SMPI0603HW-R33

SMPI0603HW-R47

SMPI0603HW-R68

SMPI0603HW-1R0

SMPI0603HW-1R5

SMPI0603HW-2R2

SMPI0603HW-3R3

SMPI0603HW-4R7

SMPI0603HW-6R8

SMPI0603HW-100