

SMD Power Inductor

TMPC1005H-Series(G)-D

1. Features

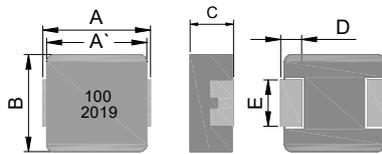
1. Low loss realized with low DCR.
2. High performance realized by metal dust core.
3. Ultra low buzz noise, due to composite construction.
4. 100% Lead(Pb)-Free & Halogen-Free and RoHS compliant.
5. Operating temperature -40~+125°C(Including self - temperature rise)



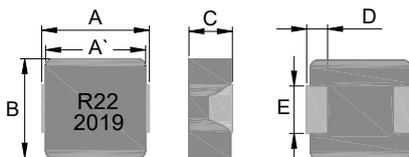
2. Applications

Commercial applications

3. Dimensions



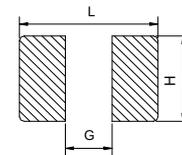
leadframe



non-leadframe



Recommend PC Board Pattern



Series	A(mm)	A'(mm)	B(mm)	C(mm)	D(mm)	E(mm)
TMPC1005H	11.0±0.5	10.0±0.3	10.0±0.3	4.8±0.2	2.3±0.3	3.0±0.3

L(mm)	G(mm)	H(mm)
13.6	5.4	3.5

Note: 1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.15mm and above.

4. Part Numbering



A: Series
 B: Dimension
 C: Type
 D: Inductance
 E: Inductance Tolerance
 F: Code

BxC
 Carbonyl powder
 100=10.0uH
 K=±10%, L=±15%, M=±20%, N=±25%, Y=±30%.
 Marking: Black.100 and 2019(20 YY, 19 WW, follow production date).

5. Specification

Part Number	Inductance L0 (uH)±20%	I rms (A)	I sat (A)	DCR (mΩ) Typ. @25°C	DCR (mΩ) Max. @25°C	Type
TMPC1005H-R10MG-D	0.10	47	100	0.40	0.45	non-leadframe
TMPC1005H-R22MG-D	0.22	45	70	0.45	0.5	non-leadframe
TMPC1005H-R56MG-D	0.56	26.5	43	1.3	1.5	non-leadframe
TMPC1005H-1R0MG-D	1.00	22	30	2.8	3.5	non-leadframe
TMPC1005H-1R5MG-D	1.50	19	27	3.5	4.1	non-leadframe
TMPC1005H-2R2MG-D	2.20	16	24	5.4	6.0	leadframe
TMPC1005H-3R3MG-D	3.30	14	22	9.0	10.4	leadframe
TMPC1005H-4R7MG-D	4.70	13	19	10	12.5	leadframe
TMPC1005H-5R6MG-D	5.60	10	16	14	16.8	leadframe
TMPC1005H-6R8MG-D	6.80	9.5	15	16.5	21	leadframe
TMPC1005H-8R2MG-D	8.20	9.0	14.5	18.5	24	leadframe
TMPC1005H-100MG-D	10.0	8.0	13.5	25	29	leadframe
TMPC1005H-150MG-D	15.0	5.5	9.5	37	45	leadframe
TMPC1005H-220MG-D	22.0	5.0	9.0	50	60	leadframe
TMPC1005H-330MG-D	33.0	4.3	7.5	80	92	leadframe
TMPC1005H-470MG-D	47.0	3.8	6.5	125	145	leadframe

Note:

1. Test frequency : Ls : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Testing Instrument(or equ.) : Agilent 4284A, E4991A, 4339B, KEYSIGHT E4980A/AL, chroma3302, 3250, 16502.
4. Heat Rated current (Irms) : will cause the coil temperature rise approximately ΔT of 40°C.
5. Saturation current (Isat) : will cause L0 to drop approximately 30%.
6. The part temperature (ambient + temp rise) should not exceed 125°C 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. I rms Testing : temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.
8. Rated DC current : the lower value of I rms and Isat

6. Typical Performance Curves

