SMD Power Inductor

TMPV1054SV-Series(N)-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 and RoHS compliant.
5. High reliability -Reliability test complied to AEC-Q200.

AEC-Q200

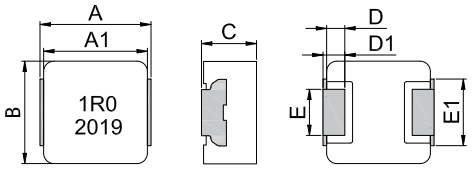
Halogen-free

RoHS

2. Applications

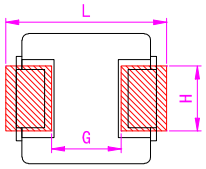
Automotive applications.

3. Dimensions



Series	A(mm)	A1(mm)	B(mm)	C(mm)	D(mm)	D1(mm)	E(mm)	E1(mm)
TMPV1054SV	11.0±0.3	10.1±0.3	10.0±0.3	5.1±0.3	2.0±0.3	2.3±0.3	4.5±0.3	6.6±0.3

Recommend PC Board Pattern



L(mm)	G(mm)	H(mm)
12.3	5.5	5.0

Note: 1.PCB layout is referred to standard IPC-7351B
2. The above PCB layout reference only.
3. Recommend solder paste thickness at 0.15mm and above.

4. Part Numbering

TMPV	1054	SV	-	1R0	M	-	N	-	D
A	B	C		D	E		F		G

A: Series	
B: Dimension	BxC
C: Type	Standard.
D: Inductance	1R0=1.0uH
E: Inductance Tolerance	K=±10%，L=±15%，M=±20%，N=±25%，Y=±30%
F、G: Code	Marking direction cannot decide polarity. Marking: Black.1R0 and 2019(20:YY,19:WW, follow production date).

5. Specification

Part Number	Inductance L0 A(uH) ±20%	Heat Rating Current DC ※ Irms(A)	Saturation Current DC I sat (A)	DCR (mΩ) Typ	DCR (mΩ) Max
TMPV1054SV-1R0MN-D	1.00	30.0	37.0	2.3	2.76
TMPV1054SV-1R2MN-D	1.20	27.0	29.0	3.0	3.6
TMPV1054SV-1R5MN-D	1.50	25.0	28.0	3.6	4.3
TMPV1054SV-1R8MN-D	1.80	24.0	26.0	3.9	4.6
TMPV1054SV-2R2MN-D	2.20	23.0	25.0	4.1	4.9
TMPV1054SV-3R3MN-D	3.30	18.7	20.0	6.2	7.2
TMPV1054SV-4R7MN-D	4.70	14.5	17.0	9.0	10.0
TMPV1054SV-6R8MN-D	6.80	12.3	15.3	12.4	14.0
TMPV1054SV-100MN-D	10.0	9.0	13.0	20.0	23.0
TMPV1054SV-150MN-D	15.0	7.6	9.2	26.3	30.3
TMPV1054SV-330MN-D	33.0	5.0	7.6	66.0	75.3

Note:

1. Test frequency : Ls : 100KHz /1.0V.
2. All test data referenced to 25℃ 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 △T of 40℃
5. Saturation Current (Isat) will cause L0 to drop approximately 30%.
6. The part temperature (ambient + temp rise) should not exceed 165℃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. Irms 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.

6. Typical Performance Curves