

SMD Power Inductor

FMIM201610AV-Series(G)

1. Features

1. Low loss 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. High reliability-complied with AEC-Q200.

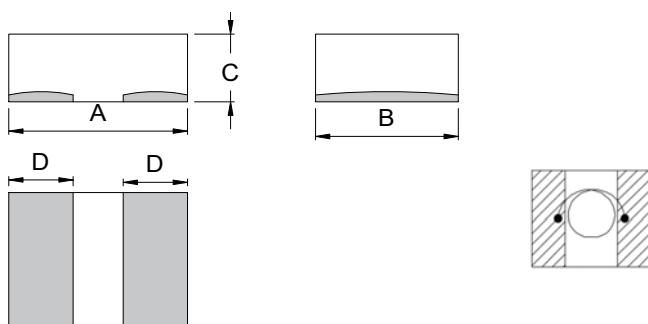
AEC-Q200



2. Applications

Automotive applications.

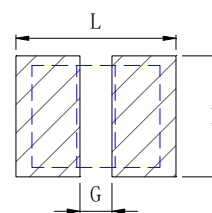
3. Dimensions



A	B	C	D
2.0 ± 0.3	1.6 ± 0.3	0.8 ± 0.2	0.7 ± 0.3

Unit: mm

Recommend PC Board Pattern



L	G	H
2.5	0.5	1.9

Note:

1. PCB layout is referred to standard IPC-7351B.
2. The above PCB layout reference only.

4. Part Numbering

FMIM	201610	AV	-	R33	MG
A	B	C		D	E

A: Series

B: Dimension

C: Material

D: Inductance

E: Inductance Tolerance

AxBxC

R33=0.33uH

M=±20%, G: Coating

Anti-static packaging

5. Specification

Part Number	Inductance (uH) $\pm 20\%$ @ 0 A DC	Irms (A)		Isat (A)		DCR (mΩ)		Q 100KHz (Min)	SRF (MHz) Typ	Impulse Voltage
		Typ	Max	Typ	Max	Typ	Max			
FMIM201610AV-R10MG	0.10	8.0	7.0	9.0	8.0	7.5	9.0	3	250	25V
FMIM201610AV-R15MG	0.15	7.5	6.5	8.5	7.5	10.0	12.0	5	210	25V
FMIM201610AV-R22MG	0.22	7.0	6.0	8.0	7.0	10.5	12.6	5	140	25V
FMIM201610AV-R24MG	0.24	6.5	5.5	7.7	6.7	18.0	20.5	2	130	25V
FMIM201610AV-R33MG	0.33	5.7	5.2	7.0	6.2	21.0	26.0	2	112	25V
FMIM201610AV-R47MG	0.47	5.3	4.7	6.0	5.3	28.0	32.0	3	82	25V
FMIM201610AV-R56MG	0.56	4.6	4.0	5.2	4.6	31.0	37.2	3	80	25V
FMIM201610AV-R68MG	0.68	4.0	3.4	5.0	4.4	44.0	50.0	3	78	25V
FMIM201610AV-1R0MG	1.00	3.6	3.2	4.4	3.8	49.0	59.0	3	60	25V
FMIM201610AV-1R5MG	1.50	2.6	2.3	3.0	2.7	80.0	96.0	3	52	25V
FMIM201610AV-2R2MG	2.20	2.3	2.0	2.65	2.45	130.0	150.0	3	42	25V
FMIM201610AV-4R7MG	4.70	1.4	1.2	2.1	1.9	265.0	318.0	3	32	25V

Note:

1. Test frequency : L_s : 100KHz /1.0V.
2. All test data referenced to 25℃ ambient.
3. Testing Instrument(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℃.
5. Saturation current (Isat) will cause L0 to drop approximately 30%.
6. The part temperature (ambient + temp rise) should not exceed 150℃ 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.
8. Rated DC current: The lower value of Irms and Isat.
9. Rated voltage 25V DC, the application of voltage depends on many factors, over voltage may cause components failure、high temperature、and burn-out, user needs to verify for appropriate usage

6. Typical Performance Curves

