

Common Mode Chokes

For DC and single-phase power lines

Single-phase FM-A coils

FM-A series single-phase common mode chokes are a cost reduced version of FM series (P.10) that use a new manufacturing process and new structure.



Single-phase FM-A coils

Table 1. Standard Specifications

Item	Specification
Rated voltage	AC250V or DC250V
Insulation voltage rating	AC2kV for 1min. or AC2.4kV for 3 sec. (line - line)
Insulation resistance	Over 100MΩ after applying DC500V for 1min. (line - line)
Insulation grade	Class B (130°C)
Temperature rise	According to each specification
Operating temperature range	-40°C – +130°C (including temperature rise)

• No Ozone Layer Depleting Chemicals are used in these products or in their manufacturing process.

* Note 1: The temperature rise in Table 1 is a projected value based on temperature increase by the heat from DC resistance of the coil when the rated current (DC or 50/60Hz) in Table 2 is conducted.

* Note 2: The temperature rise is affected by the mounting condition on the circuit board and the amount of harmonic distortion on the load current. Please make sure that the temperatures of the coil and the terminals are not exceeded the operating temperature range.

Table 2. Product code, part number and specifications

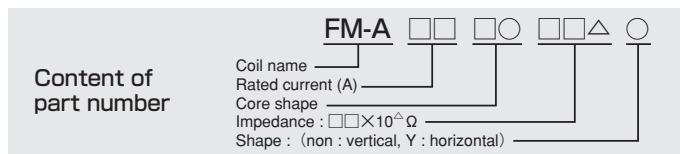
Product code	P/N	Rated current (A)	Z (kΩ)		Wire Diameter (mm)	Finished dimensions (mm)					Weight (g) TYP.	DC Resistance (mΩ) MAX.	Temp.rise (°C)	Shape
			100kHz MIN.	100kHz REF.		A MAX.	B MAX.	C MAX.	F REF.	G REF.				
F1AH0221	FM-A083V692	8	6.9	8.1	1.4	34	30.5	37	10	26	64	25	45	Fig.5
F1AH0222	FM-A103V402	10	4.0	4.7	1.6	36	30.5	37	10	26	63	15	45	Fig.5
F1AH0225	FM-A104V103	10	10.0	11.8	1.6	42	32	43	10	28	102	19	45	Fig.5
F1AH0786	FM-A153V332	15	3.3	3.9	1.7	38	33	37	18	16	70	12	60	Fig.5
F1AH0226	FM-A154V442	15	4.4	5.2	1.9	42	32	44	10	28	98	9	45	Fig.5
F1AH0787	FM-A154V722	15	7.2	8.5	1.7	42	32	44	10	28	102	14	60	Fig.5
F1AH0227	FM-A204V262	20	2.6	3.1	2.2	44	32	44	20	28	102	6	45	Fig.5
F1AH0788	FM-A205V852	20	8.5	10.0	2.2	57	43	60	18	34	202	12	60	Fig.5
F1AH0228	FM-A254V132	25	1.3	1.6	2.4	44	32	45	20	28	95	4	45	Fig.5
F1AH0231	FM-A255V242	25	2.4	2.9	2.6	52	43	55	18	34	163	5	45	Fig.5
F1AH0232	FM-A305V212	30	2.1	2.5	3.0	57	43	60	18	34	188	3	45	Fig.5
F1AH0782	FM-A054V173Y	5	17.0	20.9	1.0	43	34	—	15	35	75	60	30	Fig.6
F1AH0237	FM-A083V692Y	8	6.9	8.1	1.4	38	32	—	13	30	64	25	45	Fig.6
F1AH0780	FM-A083V942Y	8	9.4	11.0	1.3	39	34	—	13	30	66	33	50	Fig.6
F1AH0783	FM-A084V173Y	8	17.0	20.9	1.3	43	34	—	15	35	98	38	45	Fig.6
F1AH0238	FM-A103V402Y	10	4.0	4.7	1.6	38	33	—	13	30	63	15	45	Fig.6
F1AH0241	FM-A104V103Y	10	10.0	11.8	1.6	43	35	—	15	35	102	19	45	Fig.6
F1AH0781	FM-A153V332Y	15	3.3	3.9	1.7	38	33	—	13	30	70	12	60	Fig.6
F1AH0242	FM-A154V442Y	15	4.4	5.2	1.9	43	35	—	15	35	98	9	45	Fig.6
F1AH0784	FM-A154V722Y	15	7.2	8.5	1.7	43	34	—	15	35	102	14	60	Fig.6
F1AH0785	FM-A205V852Y	20	8.5	10.0	2.2	57	45	—	40	27	202	12	60	Fig.6

• UL94V-0 certified resin is used for the case and the base plate

• Lead free type coils are also available.

P/N for lead free type has "PF" at the last digits. The above table does not show product code for lead free type. Please contact us for the code.

• Custom made coils are also available.



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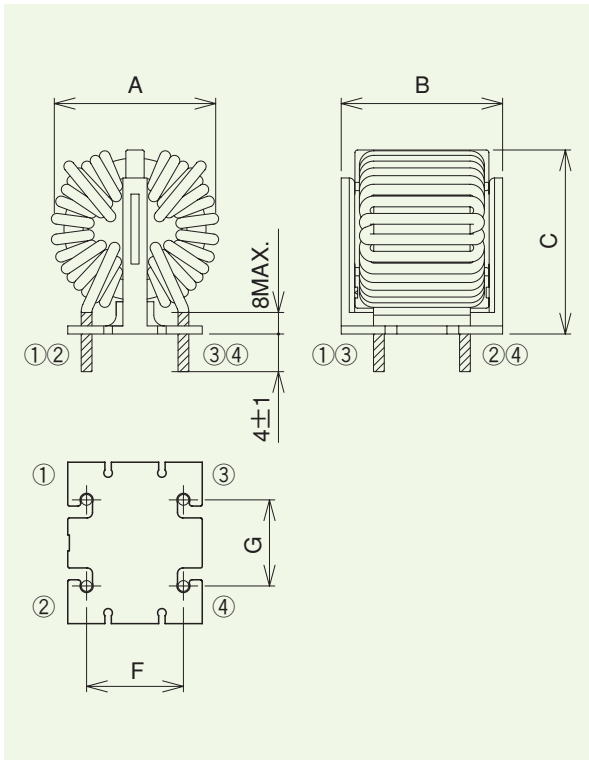


Figure 5. FM-A□□□V□□□

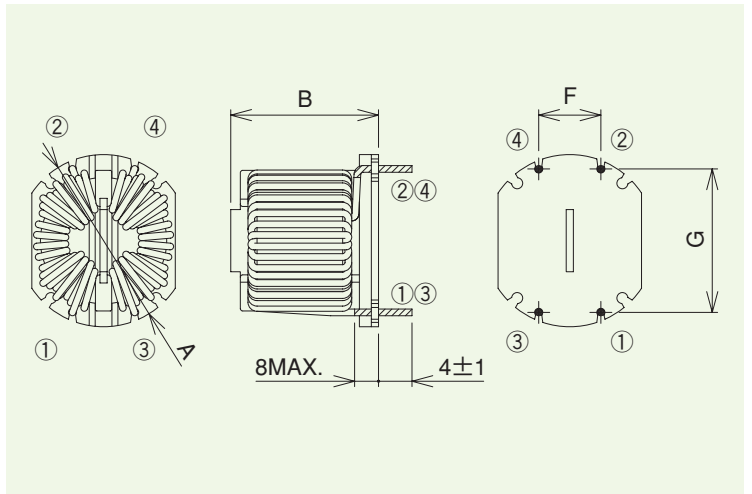


Figure 6. FM-A□□□V□□□Y

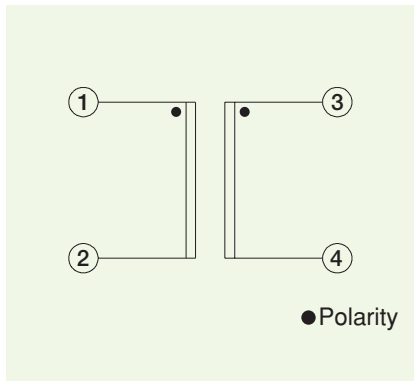


Figure 7. Circuit diagram

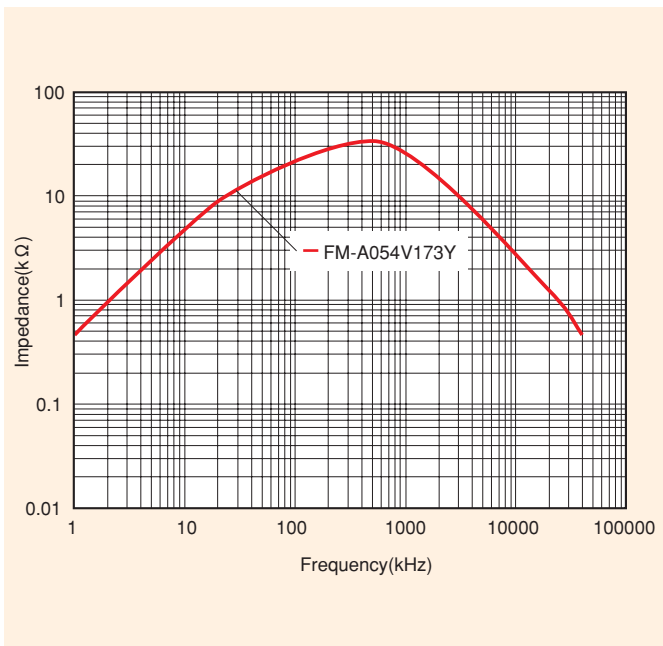


Figure 8. Frequency dependence of impedance for single-phase FM-A coils with rated current 5A

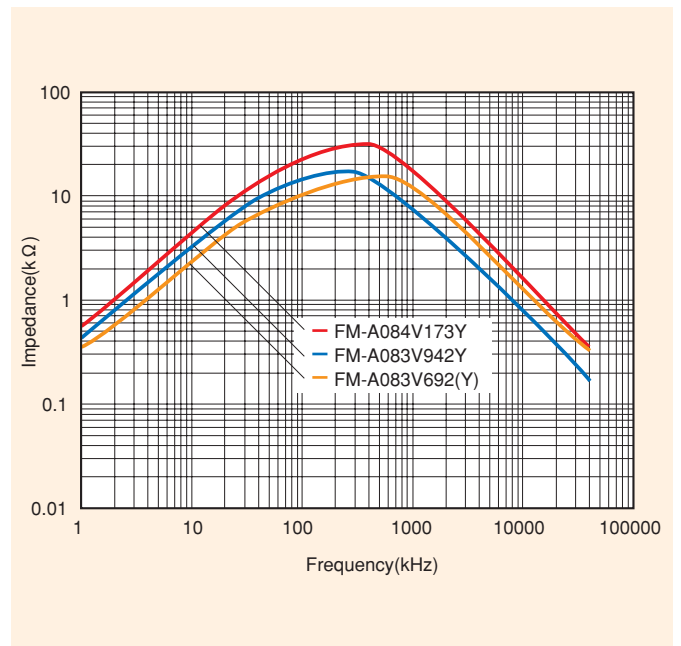


Figure 9. Frequency dependence of impedance for single-phase FM-A coils with rated current 8A



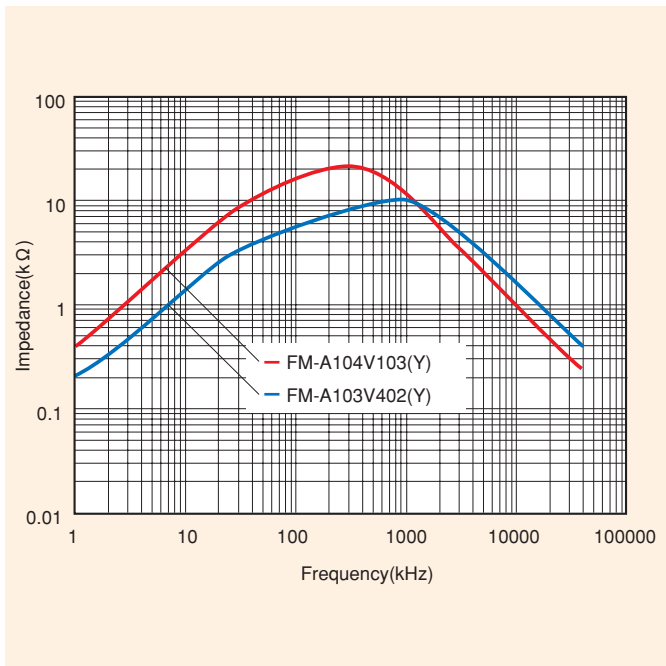


Figure 10. Frequency dependence of impedance for single-phase FM-A coils with rated current 10A

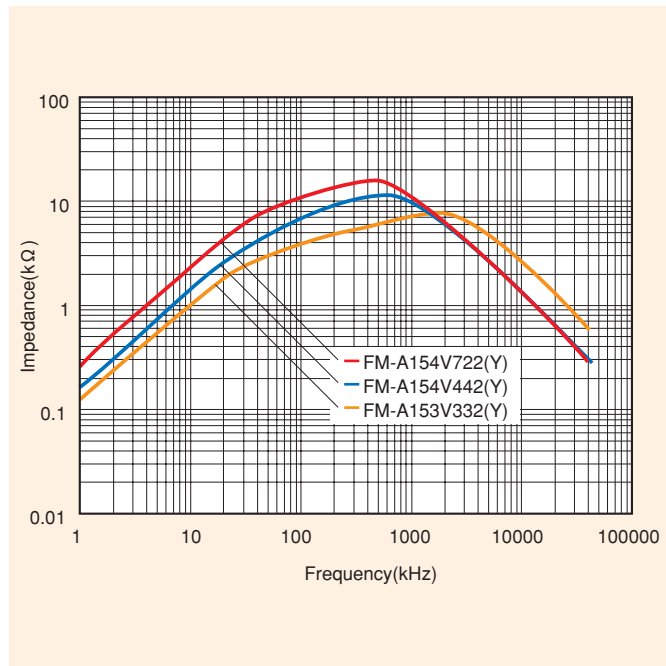


Figure 11. Frequency dependence of impedance for single-phase FM-A coils with rated current 15A

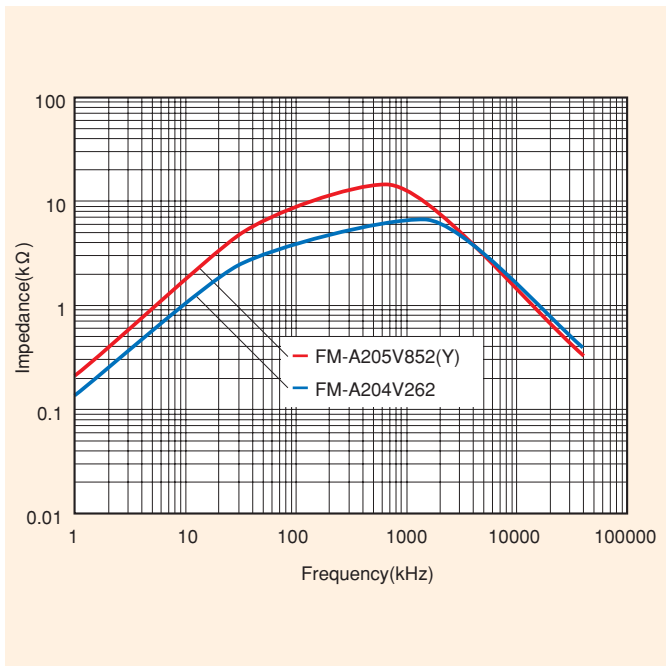


Figure 12. Frequency dependence of impedance for single-phase FM-A coils with rated current 20A

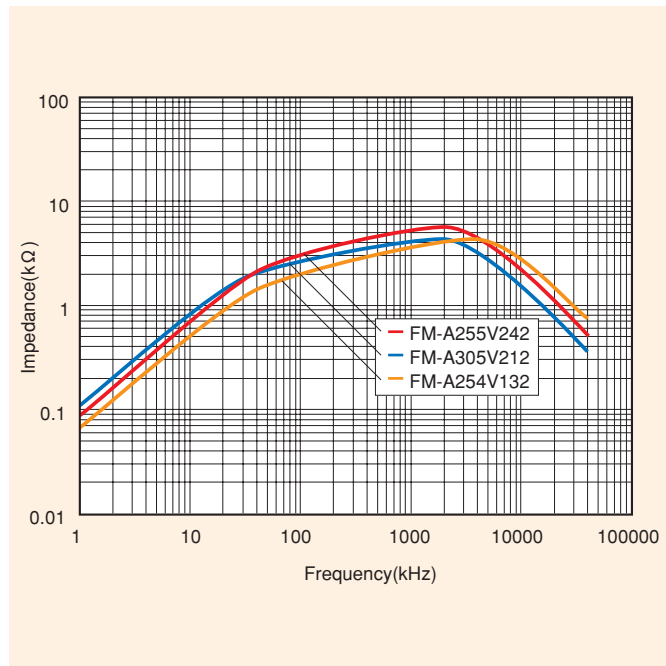


Figure 13. Frequency dependence of impedance for single-phase FM-A coils with rated current 25A-30A

