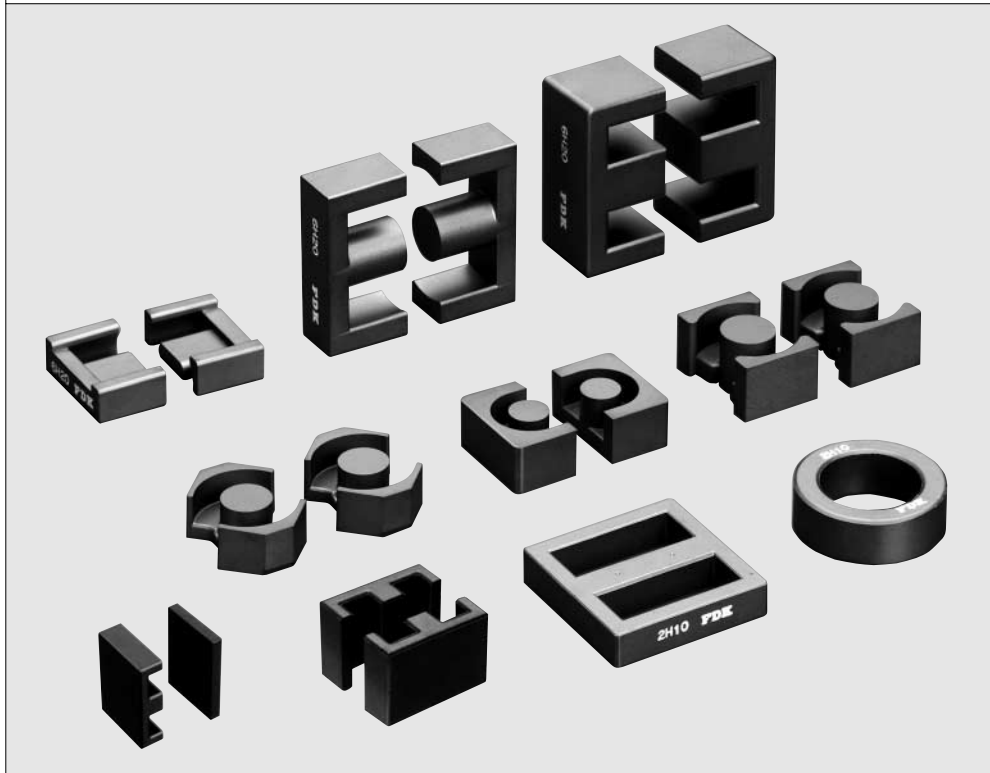




FERRITE CORES FOR TRANSFORMER & CHOKE COIL



An introduction to FDK's ferrite cores

As a total manufacturer of ferrite products, FDK has developed diverse types of ferrite material and core, which satisfy the latest demands from electronics market. This catalogue presents a comprehensive list of FDK's ferrite cores for various application such as transformer & choke coils for switching power supply, common mode noise suppression coils, pulse transformer for telecommunication equipments etc.

In this Year 2000 Edition catalogue, following materials (including new materials) are introduced:

- ① 6H series material : for transformer & choke coils for switching power supply
- ② 7H series material : for transformer & choke coils for high-frequency(over 500 kHz) switching power supply
- ③ 2H series material : for common mode noise suppression coils and pulse transformers for telecommunications

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Standard material characteristics (Power material)

Property	Symbol	Condition	Unit	6H10	6H20	6H40	6H41	6H42	7H10	7H20															
AC initial permeability	μ_i	0.1 MHz	—	2500	2300	2400	2500	3400	1500	1000															
Saturation magnetic flux density	Bs (1000 A/m)	23 °C	mT	510	510	530	530	530	480	480															
		100 °C		390	390	430	430	430	380	380															
Residual magnetic flux density	Br	23 °C	mT	110	130	110	110	110	150	130															
Coercivity	Hc	23 °C	A/m	13	13	10	10	10	30	25															
Relative loss factor	$\tan\delta/\mu_i$	0.1 MHz	$\times 10^{-6}$	<5	<5	<3	<3	<3	<5	<4															
											Core loss	200 mT	25 kHz	kW/m ³	23 °C	—	—	90	75	60	—	—			
															40 °C	—	—	75	60	50	—	—			
															60 °C	65	80	60	50	40	—	—			
															80 °C	55	65	50	40	45	—	—			
															100 °C	80	55	40	45	55	—	—			
															23 °C	—	—	650	550	450	—	—			
													100 kHz	kW/m ³	40 °C	—	—	550	450	350	—	—			
															60 °C	450	550	450	350	300	—	—			
															80 °C	400	450	350	300	325	—	—			
															100 °C	500	400	300	325	375	—	—			
															50 mT	500 kHz	kW/m ³	60 °C	—	—	—	—	—	100	50
																		80 °C	—	—	—	—	—	80	40
													100 °C	—				—	—	—	—	100	50		
60 °C	—	—	—	—	—	400	200																		
1 MHz	kW/m ³	80 °C	—	—	—	—	—	400	200																
		100 °C	—	—	—	—	—	500	250																
		Temperature coefficient	$\alpha_{\mu r}$	20 °C~80 °C	$\times 10^{-6}$	8	8	8	8	8	8														
		Curie temperature	Tc	—	°C	>200	>200	>200	>200	>200	>200														
Resistivity	ρ	—	$\Omega \cdot m$	3	3	2	2	2	5	5															
Apparent density	d	—	$\times 10^3 \text{ kg/m}^3$	4.8	4.8	4.9	4.9	4.9	4.8	4.8															

Note: 1) The values were obtained with toroidal cores (FR25/15/5).
 2) The values were obtained at 23±2 °C unless otherwise specified.
 3) Initial permeability was measured at 10kHz, 0.8A/m.

Standard material 6H Series

6H series are FDK's standard power material with low core loss and high saturation flux density, and are suitable for wide range of transformers and choke coils for switching power supply.

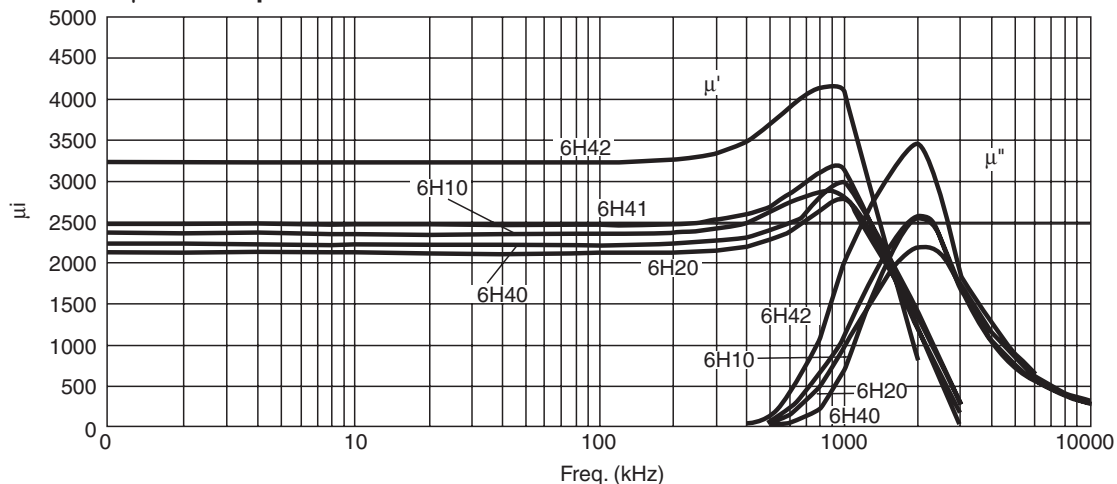
6H20 is standard material with superb characteristics and high cost performance. 6H10 has higher permeability than 6H20 in room temperature, and is suitable for ungapped cores for FF type transformers.

In addition to above, FDK has developed new materials with lower core loss and higher magnetic flux density, which satisfies latest requirements of digital and mobile electronics.

Core loss of new 6H40 material is around 25 % lower than that of standard 6H20, and is suitable for transformers and choke coils for flat, low profile power supplies and AC/DC adaptors of electronic equipments (such as notebook PCs), which strictly require low temperature rise.

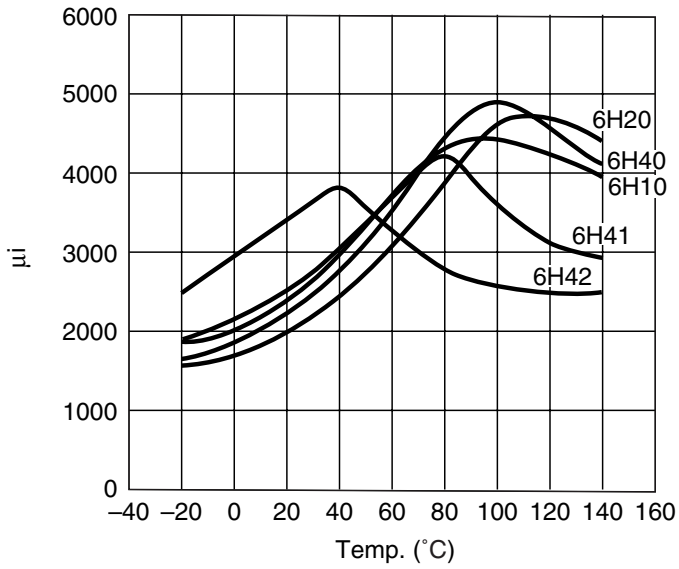
For transformers and choke coils of mobile electronic equipments, FDK has developed 6H41 material (bottom temperature of core loss curve 80 °C) and 6H42 (bottom temperature 50 °C), which enables low operation temperature of transformers. (This is key point for mobile equipments, which have frequent contact with human body.)

● μ_i vs. Freq.

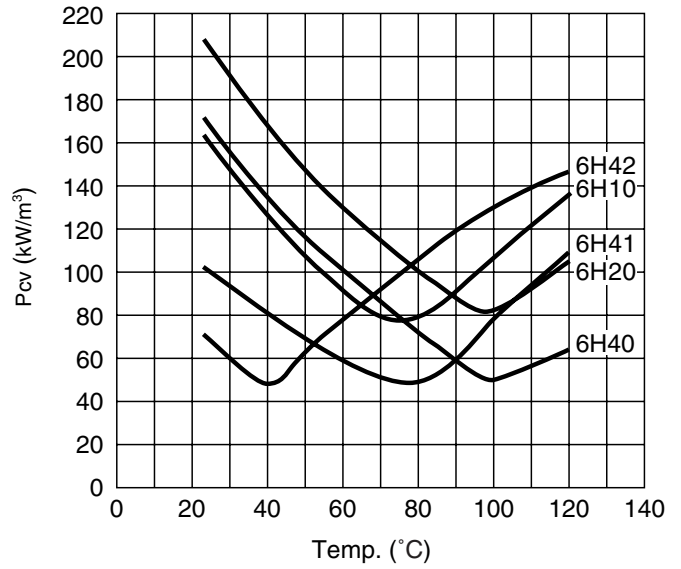


Standard material 6H Series

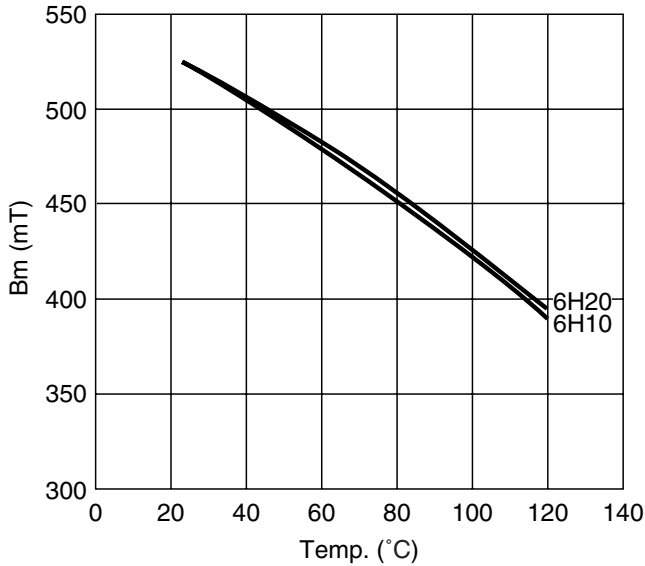
● **mi vs. Temp.**



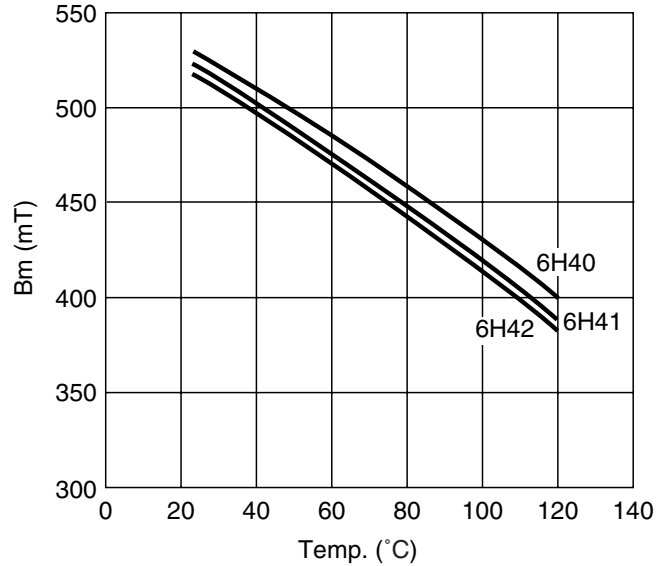
● **Pcv vs. Temp. 50kHz, 150 mT**



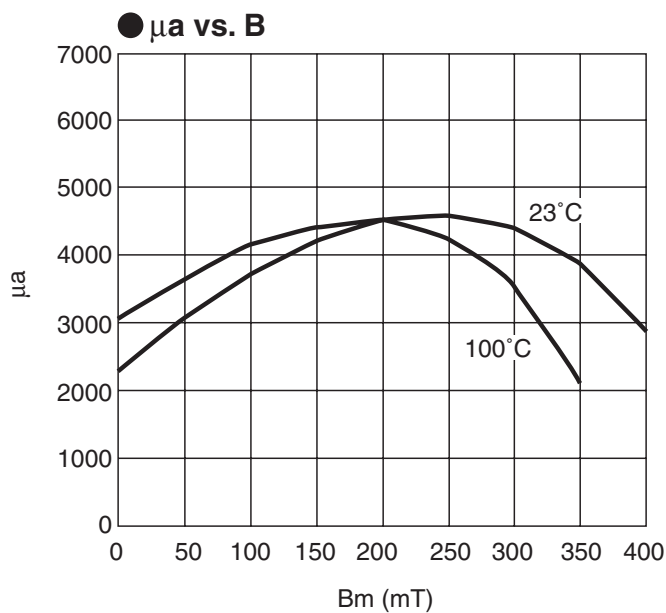
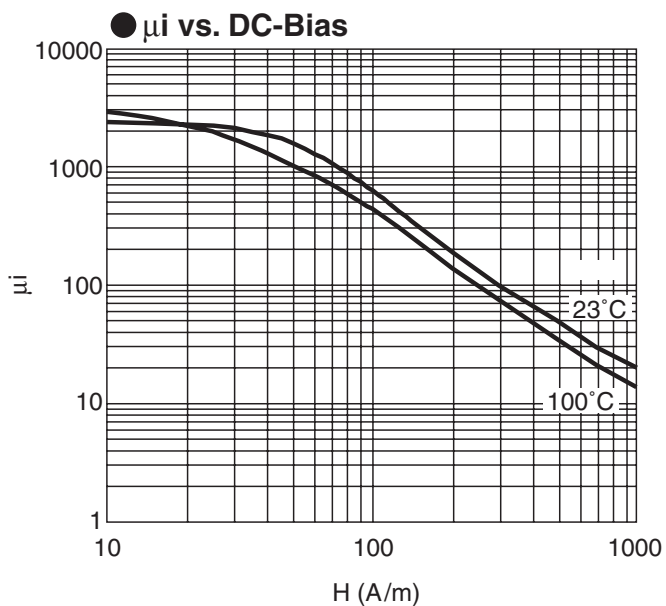
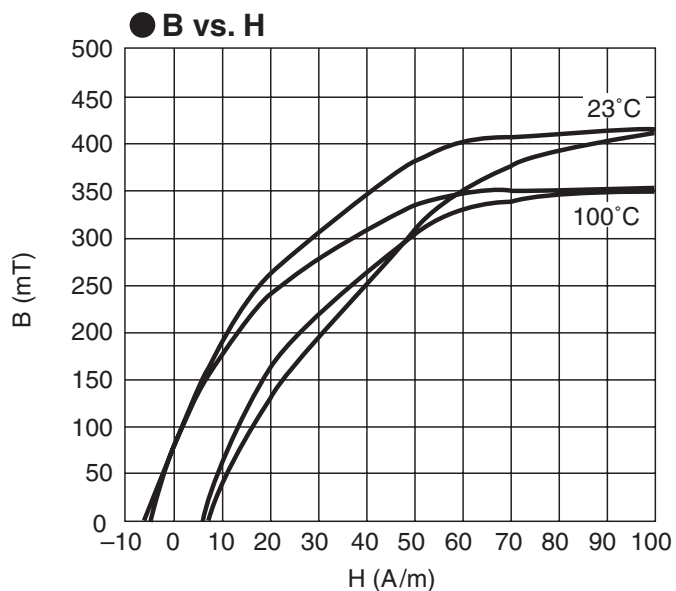
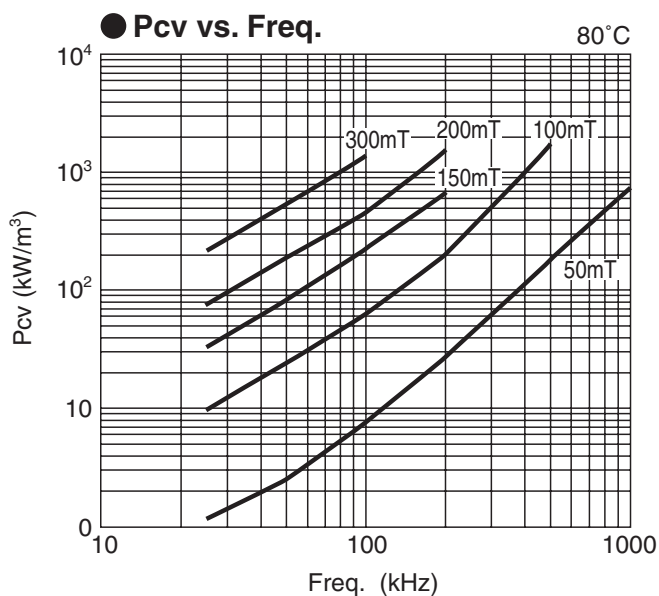
● **Bm vs. Temp.**



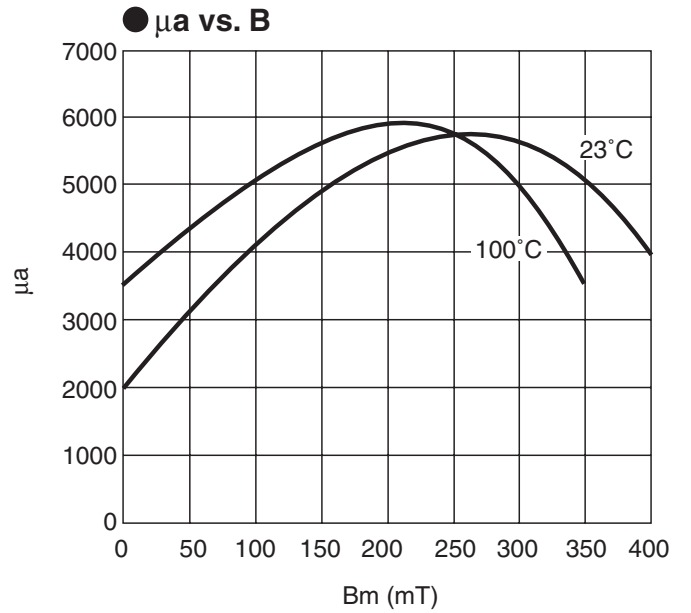
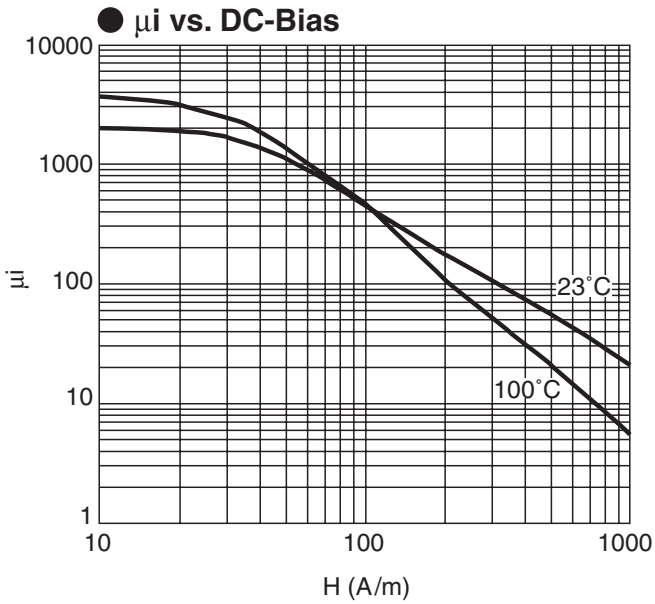
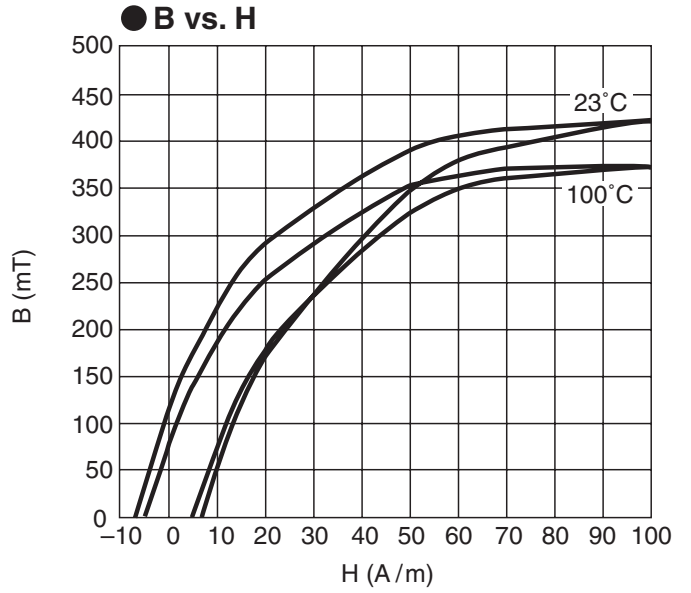
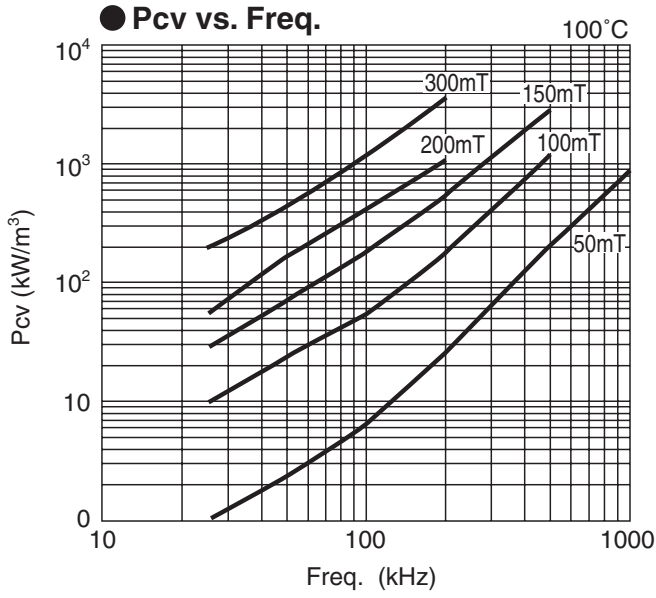
● **Bm vs. Temp.**



6H10

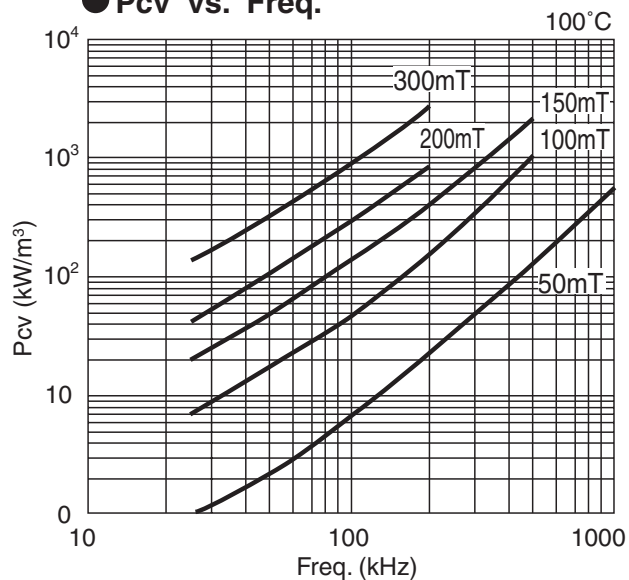


6H20

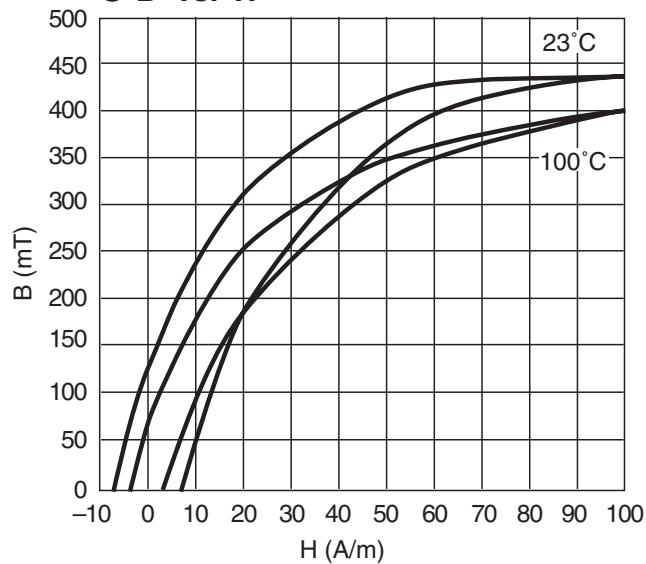


6H40

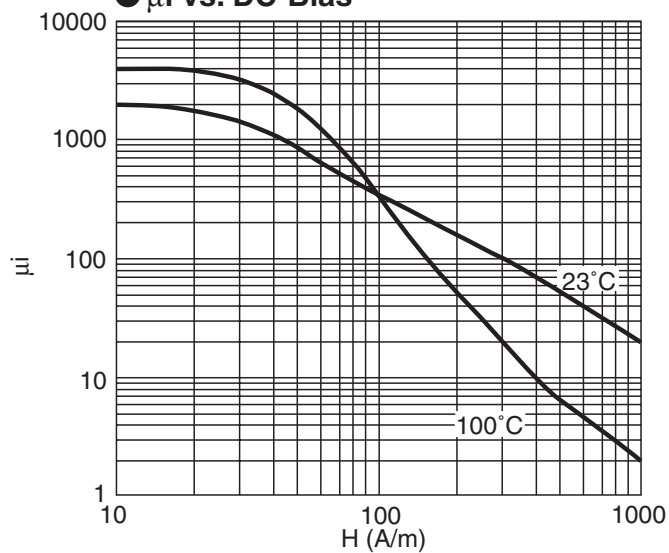
● **P_{cv} vs. Freq.**



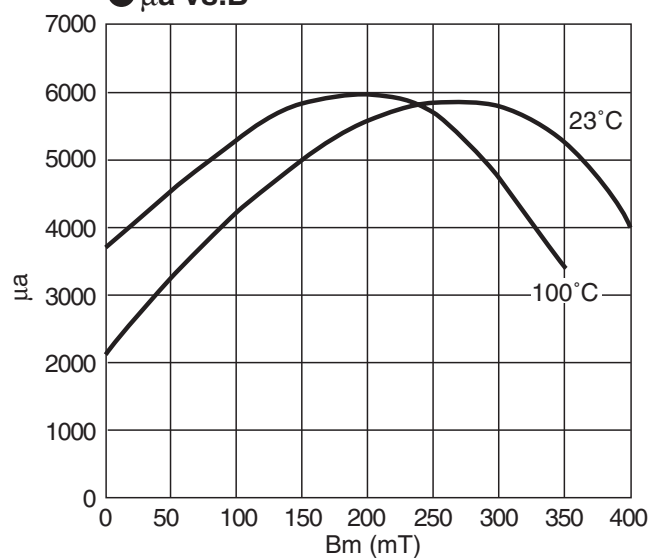
● **B vs. H**



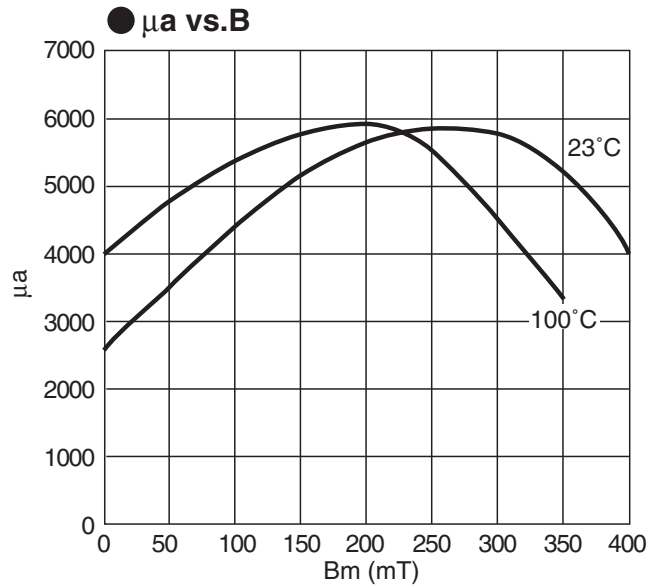
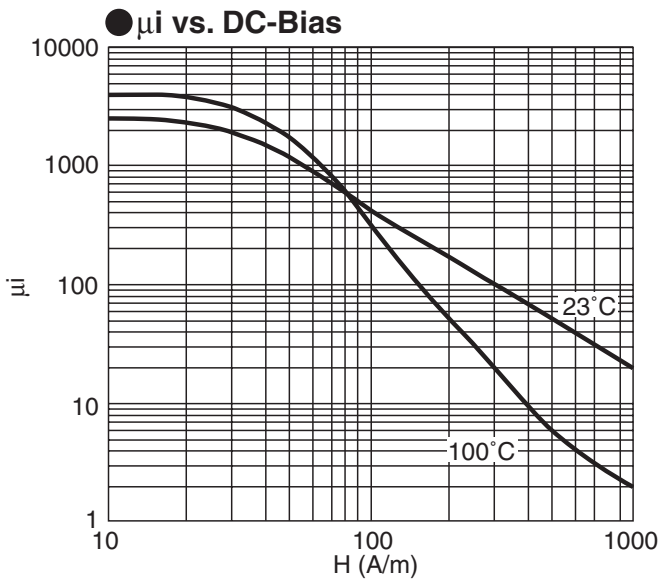
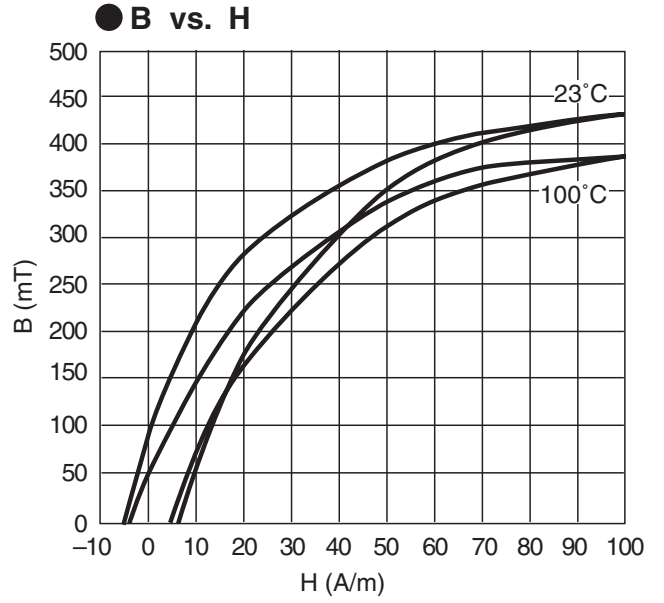
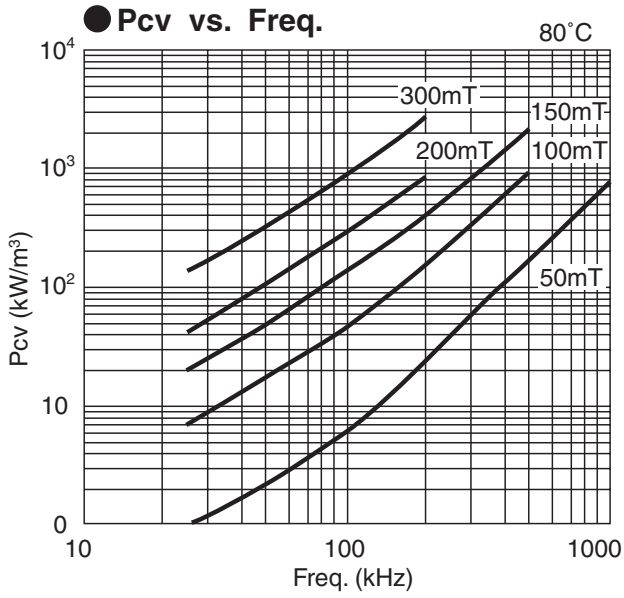
● **μ_i vs. DC-Bias**



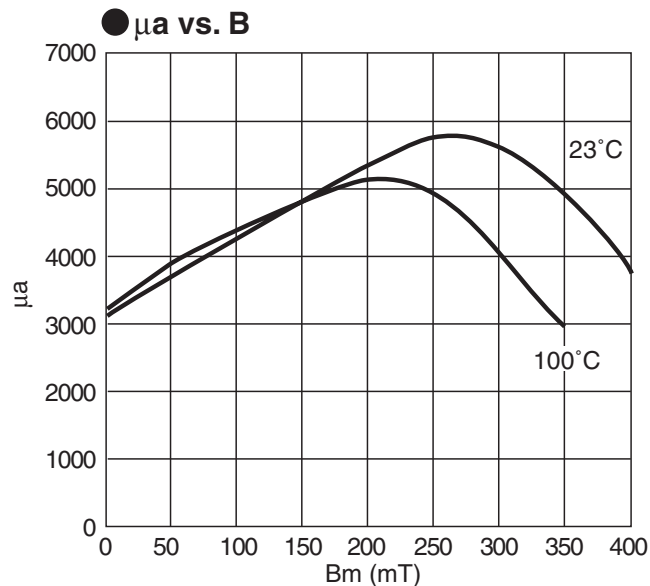
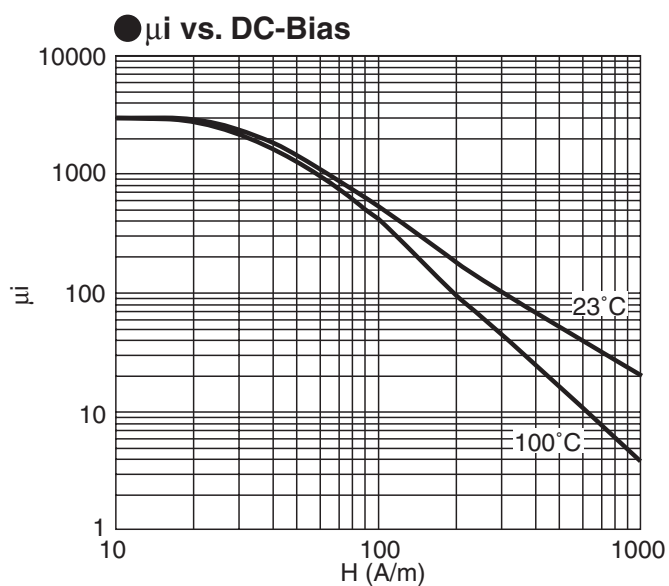
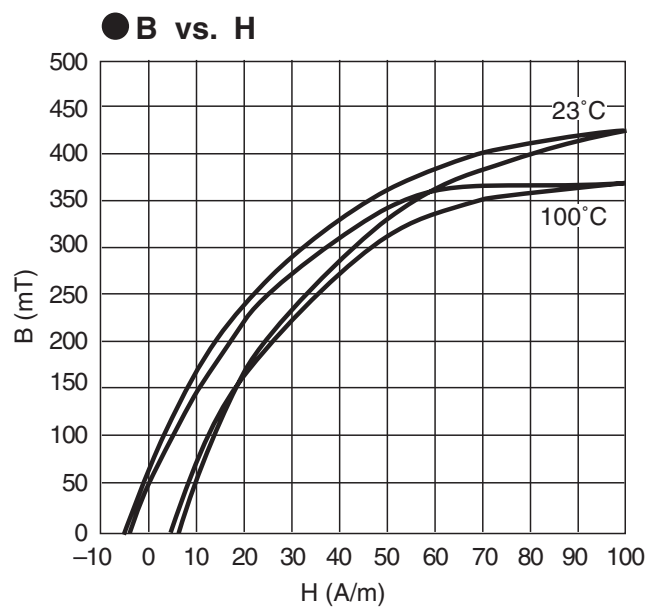
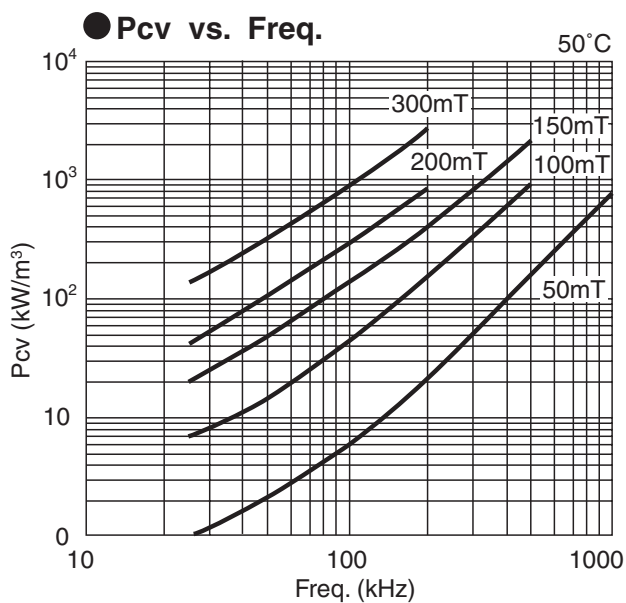
● **μ_a vs. B**



6H41



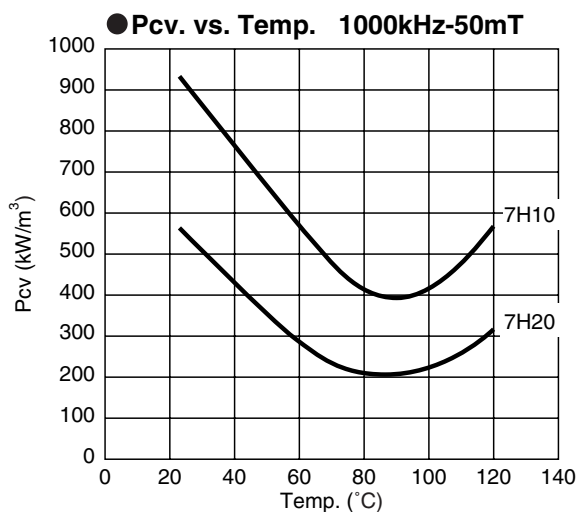
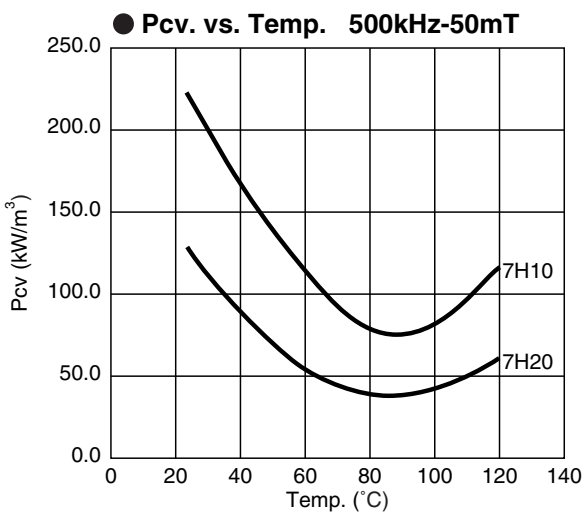
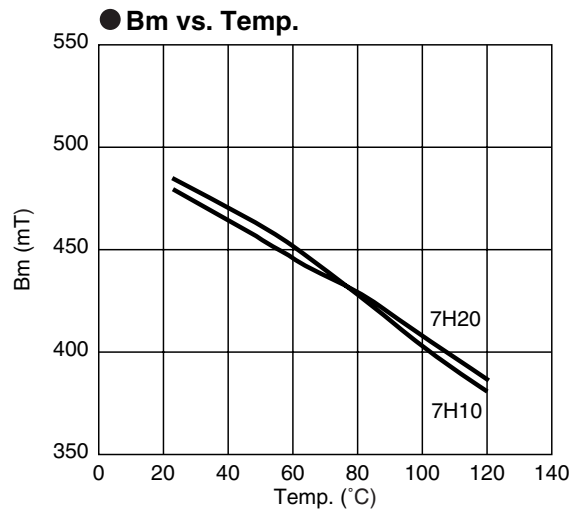
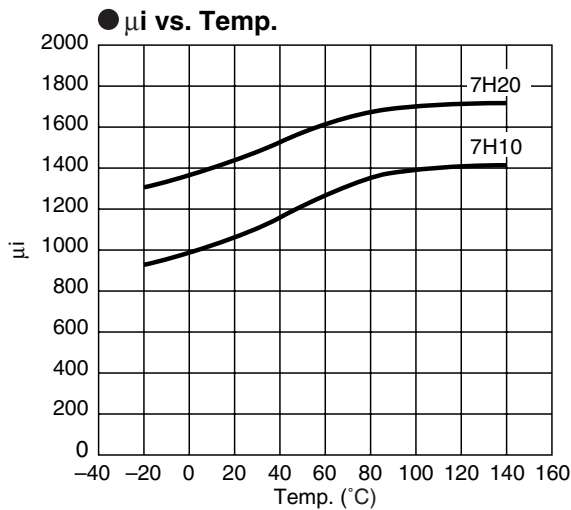
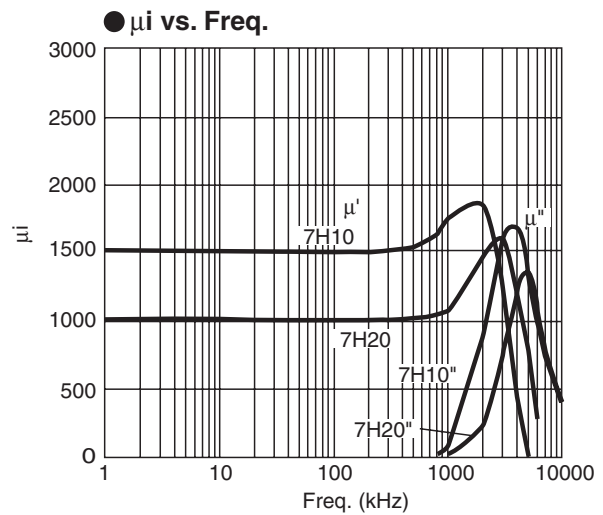
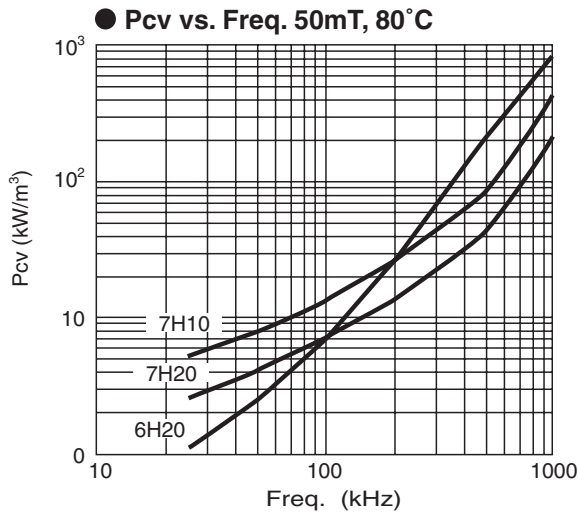
6H42



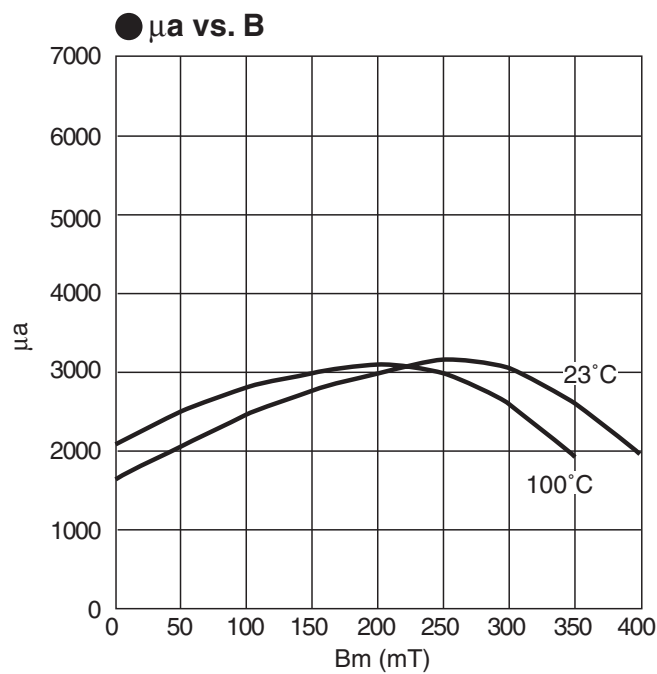
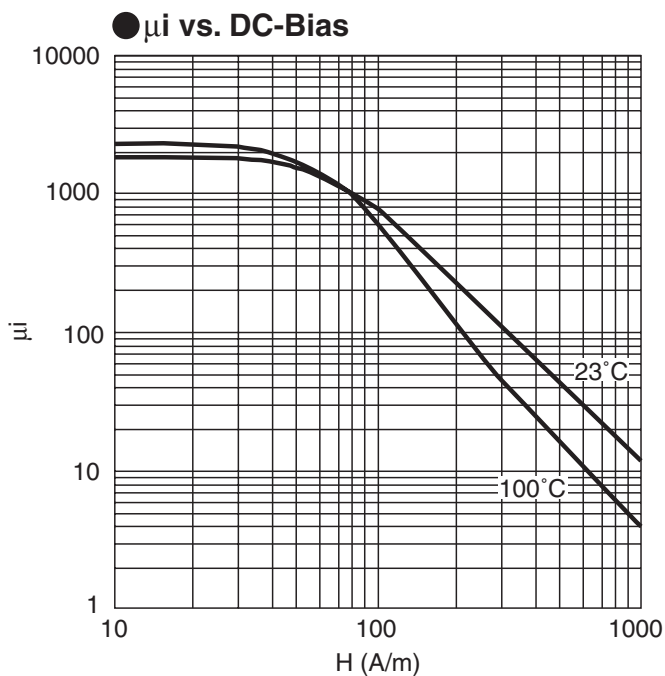
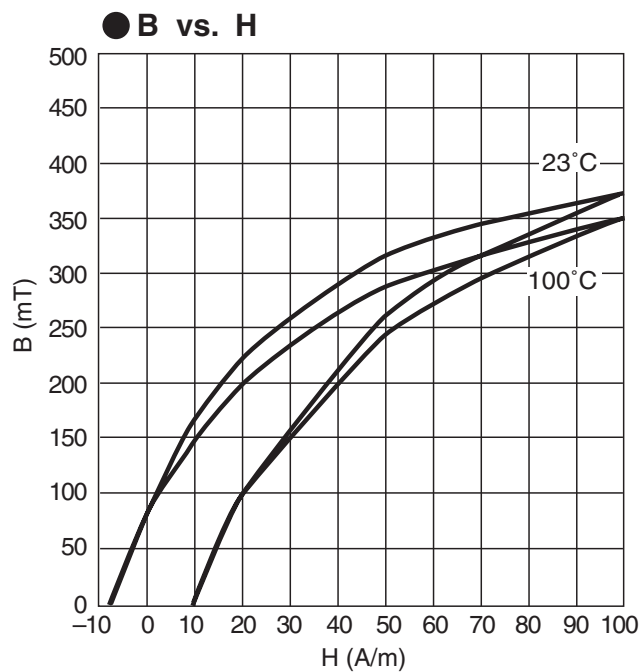
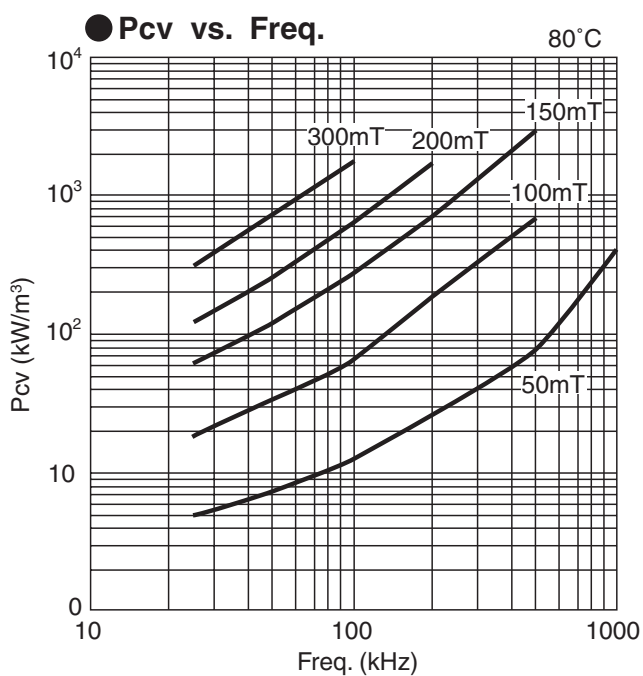
High frequency material 7H Series

7H series are power material with advantage of low core loss in high frequency range, and suitable for transformers and choke coils of high frequency switching power supply.

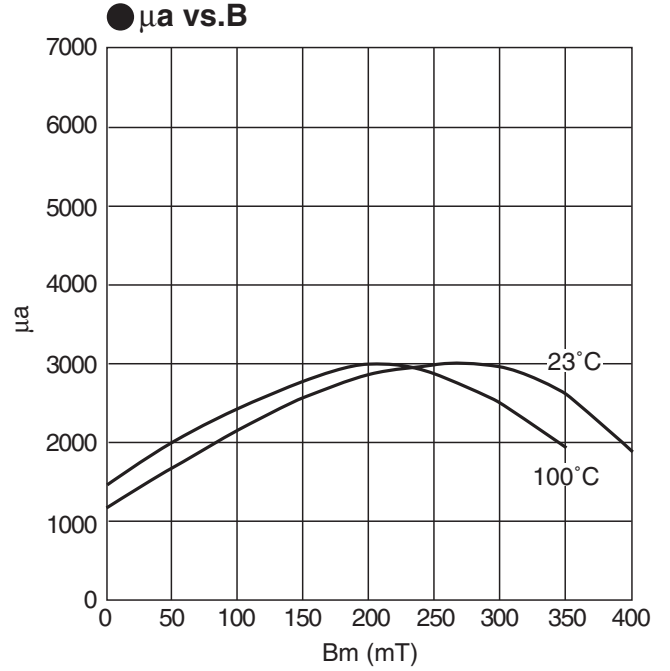
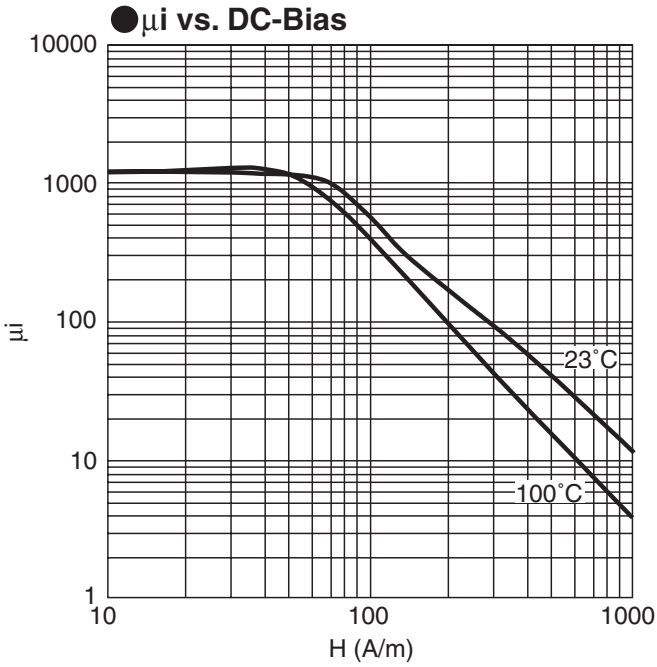
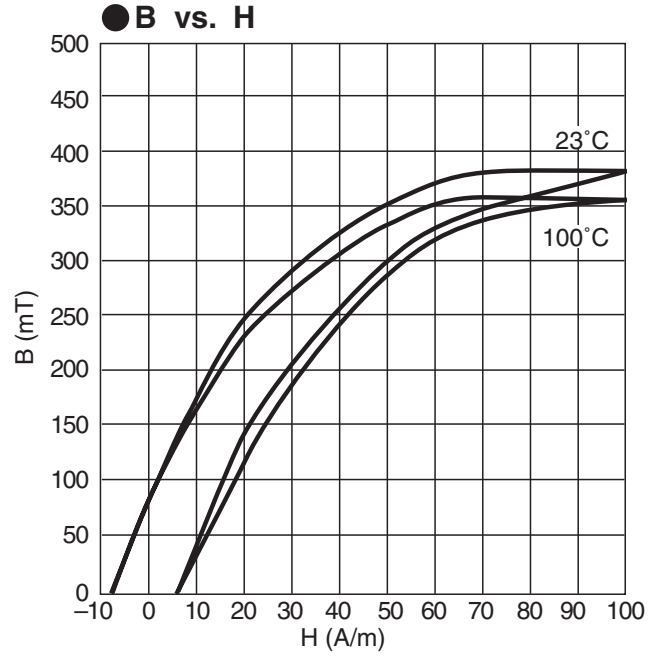
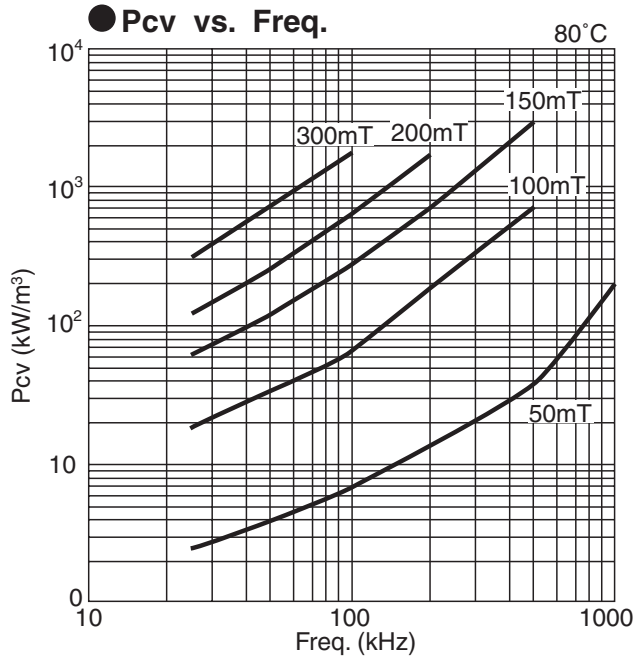
7H10 is suitable for switching frequency over 500 kHz. Latest material 7H20 is suitable still higher frequency over 1000 kHz, and its core loss is around 50 % lower than 7H10.



7H10



7H20



Standard material characteristics (High μ material)

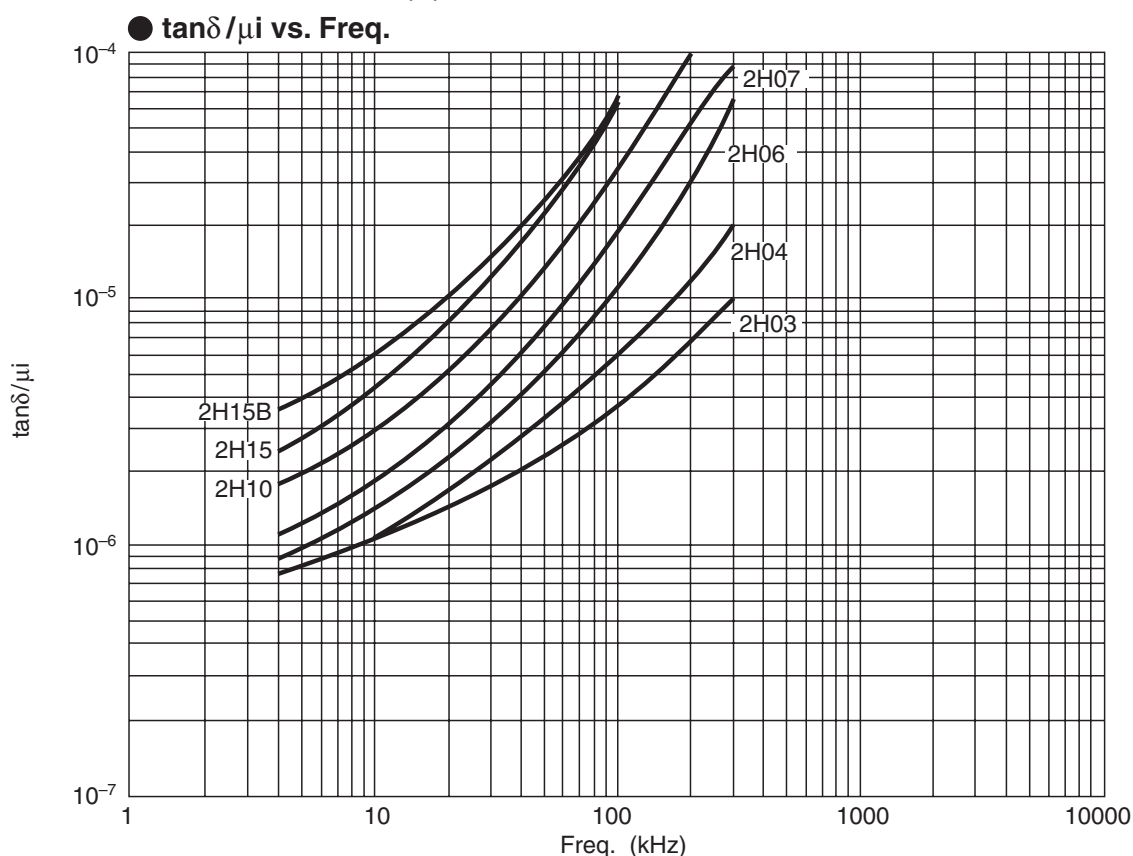
Property	Symbol	Condition	Unit	2H03	2H04	2H06	2H07	2H10	2H15	2H15B
AC initial permeability	μ_i	0.01 MHz	—	2500 ($\pm 20\%$)	4500 ($\pm 20\%$)	6500 ($\pm 20\%$)	7500 ($\pm 20\%$)	10000 ($\pm 20\%$)	15000 ($\pm 20\%$)	10000 ($\pm 20\%$)
Relative loss factor	$\tan\delta/\mu_i$	—	$\times 10^{-6}$	<4 (100 kHz)	<10 (100 kHz)	<30 (100 kHz)	<5 (10 kHz)	<7 (10 kHz)	<10 (10 kHz)	<10 (10 kHz)
Temperature coefficient	$\alpha_{\mu r}$	-30°C~20°C	$\times 10^{-6}$	—	0~2.0	0~2.0	0~1.5	0~1.5	0.5~2.5	-1~1
		20°C~55°C		—	—	—	—	—	—	—
		20°C~70°C		—	0~2.0	0~2.0	-0.5~1.5	-0.5~1.5	-0.5~1.5	-0.5~2.0
Saturation magnetic flux density	Bs	1000 A/m 23 °C	mT	470	420	420	410	400	370	370
Residual magnetic flux density	Br	23 °C	mT	100	80	80	60	60	50	50
Coercivity	Hc	23 °C	A/m	12.8	8	8	4	3	2	2
Hysteresis material constant	ηB	0.01 MHz	510 ⁻⁶ /mT	—	<0.8	<0.8	<0.6	<1.0	<1.0	<1.0
Disaccommodation factor	DF	—	$\times 10^{-6}$	—	<3.0	<3.0	<3.0	<2.0	<2.0	<2.0
Curie temperature	Tc	—	°C	>200	>140	>140	>130	>120	>100	>100
Resistivity	ρ	—	$\Omega \cdot m$	1	1	0.2	0.1	0.01	0.01	0.01
Apparent density	d	—	$\times 10^3$ kg/m ³	4.8	4.8	4.8	4.9	4.9	5.0	5.0

Note: 1) The values were obtained with toroidal cores (FR25/15/5).
 2) The values were obtained at 23±2 °C unless otherwise specified.
 3) Initial permeability was measured at 10kHz, 0.8A/m.

2H Series

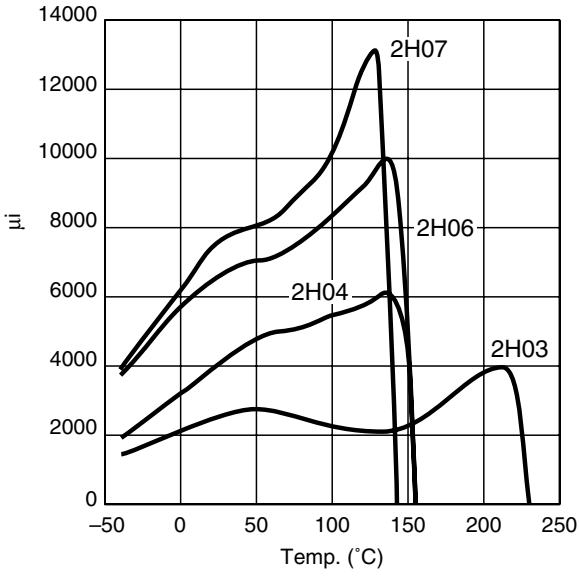
2H series are high permeability material with μ 2500~15000, which are suitable for common mode noise suppressor (conforming FCC, VDE, VCCI regulation) and for interface (pulse) transformers of digital telecommunication network systems. 2H07 ($\mu=7000$) and 2H10 ($\mu=10000$) are FDK's standard high permeability materials with superb characteristics and cost performance, and suitable for common mode noise suppressors. 2H10 shows superior characteristics in frequency lower than 500 kHz and suitable for noise suppression.

2H15 ($\mu=15000$) and 2H15B ($\mu=10000$) are the latest super permeability materials for interface (pulse) transformers. 2H15 is suitable for pulse transformers of telecommunication equipments for indoor use. 2H15B has specially stable temperature characteristics, and its permeability curve remains flat in temperature range from -30 °C up to +85 °C, thus makes it suitable for pulse transformers of telecommunication equipments of outdoor use.

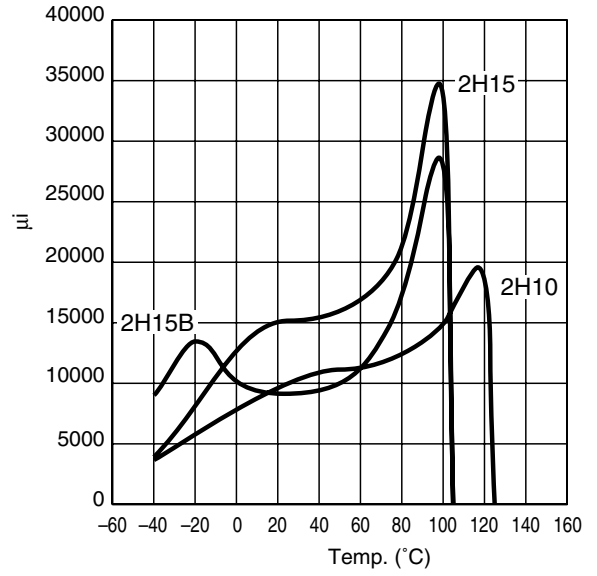


2H Serise

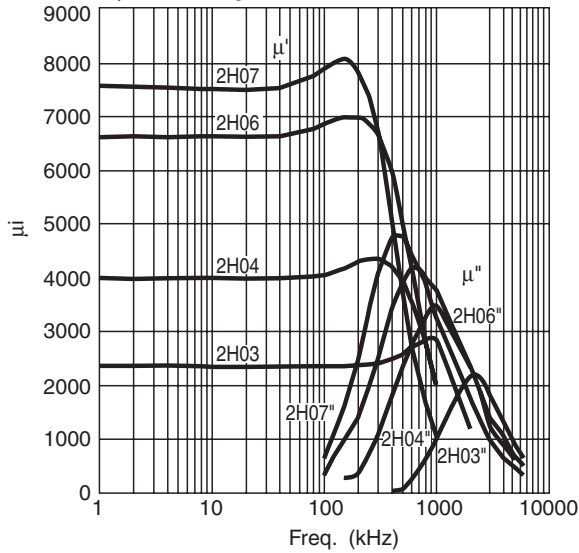
● μ_i vs. Temp.



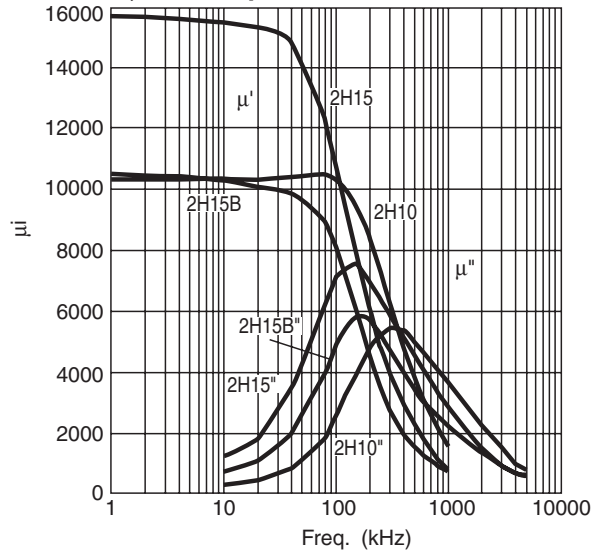
● μ_i vs. Temp.

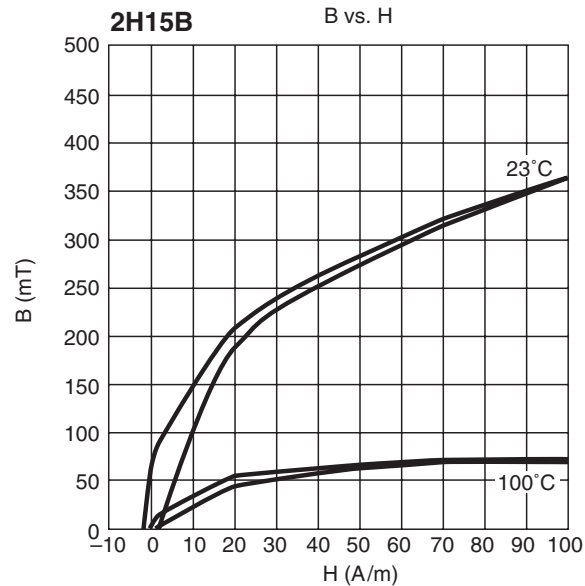
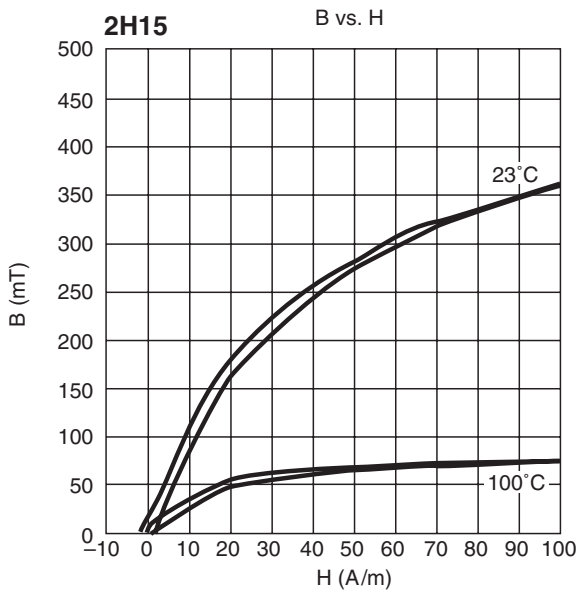
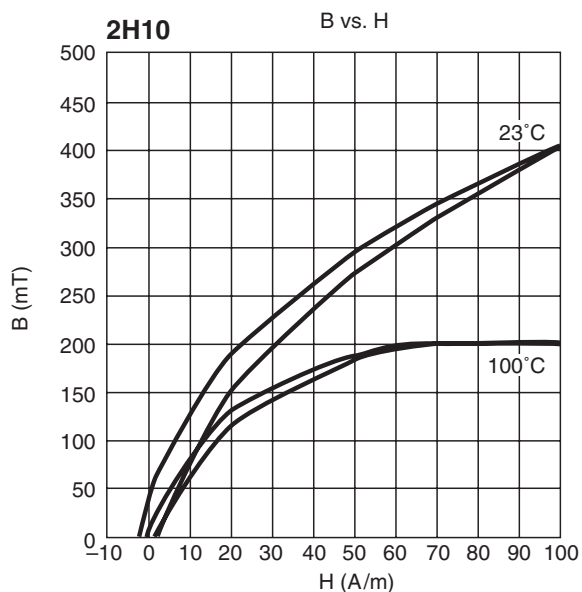
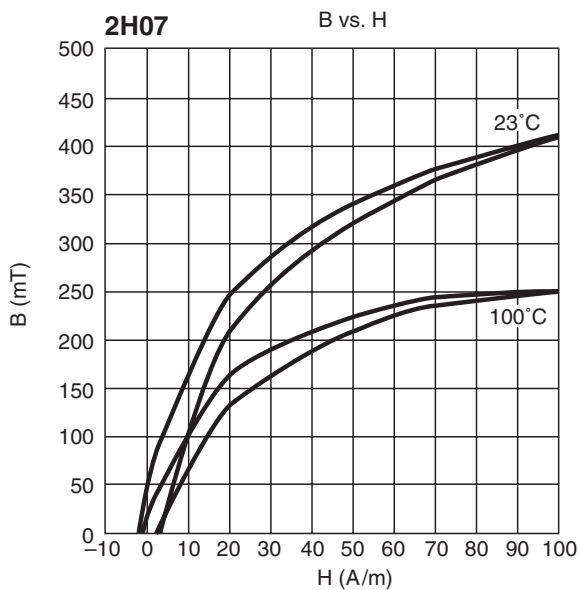
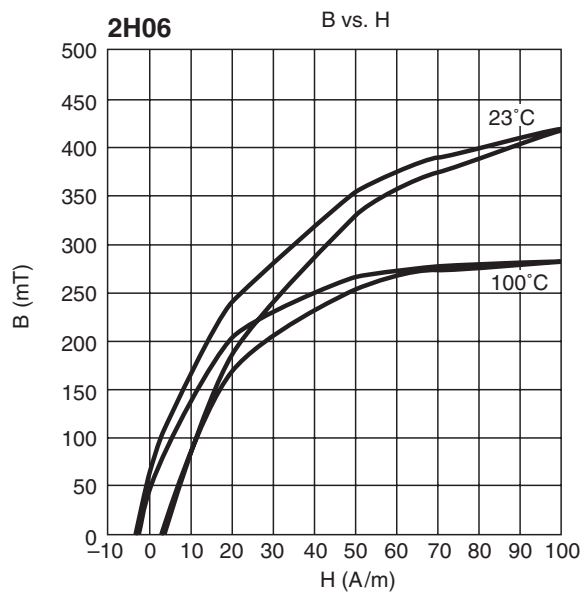
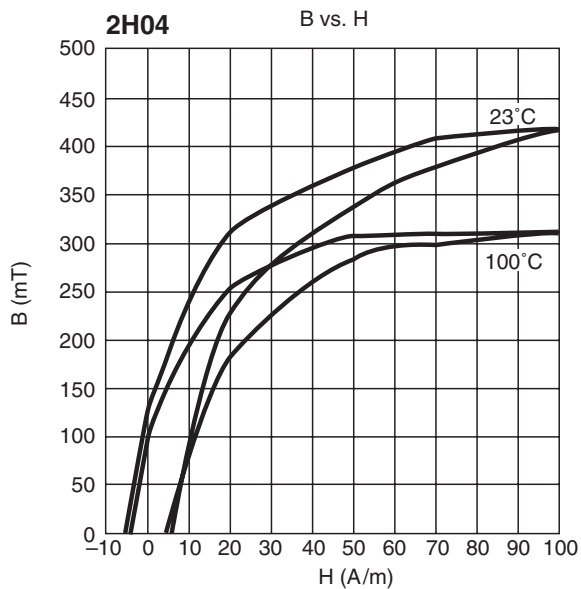


● μ_i vs. Freq.

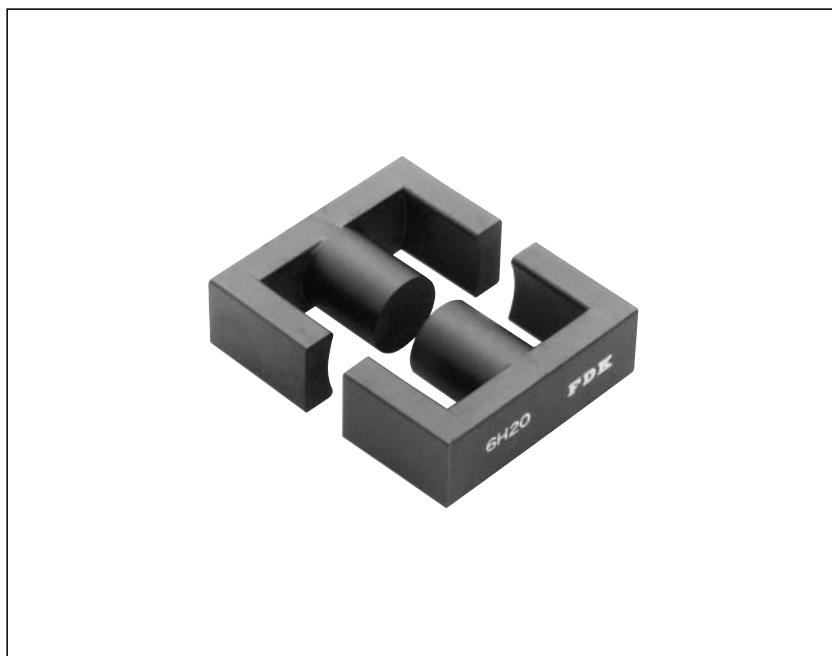


● μ_i vs. Freq.





Conventional type EER CORES (ETD)



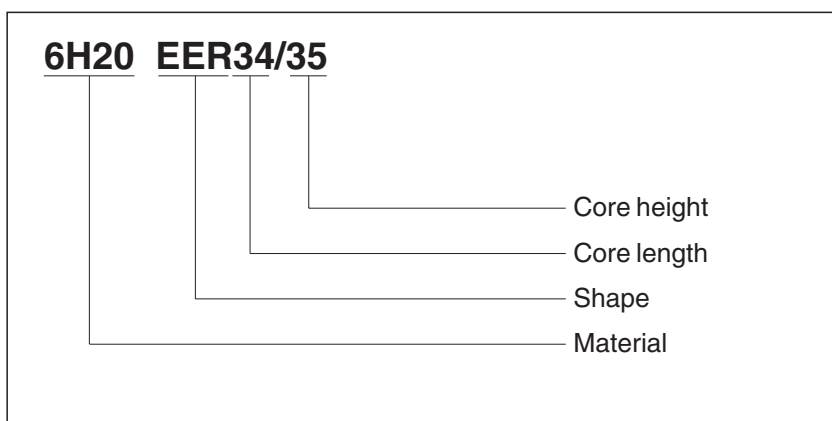
Features

- ① Wire winding is made easier by the cylindrical shape of the leg.
- ② A large surface area.
- ③ ETD standard models available.

Applications

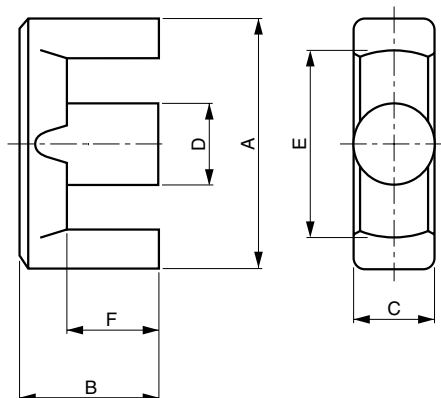
Switching regulators, choke coils, etc.

Designation



Conventional type EER CORES (ETD)

Summary



Product code	General standard		Dimensions (mm)					
	IEC	JIS	A	B	C	D	E	F
EER26/19B		FEER25.5A	25.5±0.5	9.3±0.2	7.5±0.2	7.2±0.15	19.8—0	6.2±0.1
EER28/18			28.6±0.5	8.5±0.25	11.4±0.25	9.9 ^{+0.2} _{-0.15}	21.2—0	5.25±0.25
EER28/28		FEER28.5A	28.6±0.5	14.0±0.2	11.4±0.25	9.9±0.2	21.2—0	9.6 ^{+0.3} _{-0.2}
EER28/34		FEER28.5B	28.6±0.5	16.9±0.25	11.4±0.25	9.9±0.25	21.2—0	12.6±0.3
EER29/20			30.6 ⁺⁰ _{-1.4}	10.1±0.2	9.8 ⁺⁰ _{-0.6}	9.8 ⁺⁰ _{-0.6}	22.0 ^{+1.4} ₋₀	6.1±0.2
EER29/32	ETD29	FEER29.8	30.6 ⁺⁰ _{-1.4}	16.0 ⁺⁰ _{-0.4}	9.8 ⁺⁰ _{-0.6}	9.8 ⁺⁰ _{-0.6}	22.0 ^{+1.4} ₋₀	10.7 ^{+0.6} ₋₀
EER34/26T			34.0 ^{+1.0} _{-0.6}	13.0±0.12	11.1 ⁺⁰ _{-0.6}	11.1 ⁺⁰ _{-0.6}	25.6 ^{+1.4} ₋₀	7.8±0.12
EER34/35	ETD34	FEER34.2	35.0 ⁺⁰ _{-1.6}	17.3±0.2	11.1 ⁺⁰ _{-0.6}	11.1 ⁺⁰ _{-0.6}	25.6 ^{+1.4} ₋₀	11.8 ^{+0.6} ₋₀
EER35/26			35.0±0.5	13.0±0.3	11.3±0.3	11.3±0.3	25.6—0	8.0±0.3
EER35/31			35.0±0.5	15.5±0.3	11.3±0.2	11.3±0.2	25.6—0	10.5±0.3
EER35/41		FEER35A	35.0±0.5	20.7±0.3	11.3±0.3	11.3±0.3	25.6—0	14.7±0.3
EER39/28			39.0±0.4	14.2±0.2	12.8±0.25	12.8±0.25	28.6—0	9.0±0.25
EER39/44		FEER39	39.0±0.4	22.2±0.2	12.8±0.25	12.8±0.25	28.6—0	17.0±0.25
EER39/45			39.0±0.4	22.7±0.2	12.8±0.25	12.8 ^{+0.2} _{-0.25}	28.6—0	17.0 ^{+0.3} _{-0.1}
EER39/40	ETD39	FEER39.1	40.0 ⁺⁰ _{-1.8}	19.8±0.2	12.8 ⁺⁰ _{-0.6}	12.8 ⁺⁰ _{-0.6}	29.3 ^{+1.6} ₋₀	14.2 ^{+0.8} ₋₀
EER40/18			40.0±0.7	9.0 ⁺⁰ _{-0.2}	13.3±0.3	13.3±0.3	28.8—0	4.0±0.15
EER40/45			40.0±0.7	22.4±0.3	13.3±0.3	13.3±0.3	28.8—0	15.4±0.3
EER40/55		FEER40	40.0±1.0	27.3±0.4	13.3±0.3	13.3±0.3	29.5±1.0	20.3±0.4
EER42/36			42.0±0.5	18.0±0.2	15.2±0.3	15.2±0.25	31.0±0.5	12.0±0.3
EER42/42		FEER42	42.0±0.5	21.2±0.2	15.2±0.25	15.2±0.25	31.0±0.5	15.0 ^{+0.5} ₋₀
EER42/42D			42.0±0.5	21.2±0.2	20.0 ⁺⁰ _{-0.8}	17.3±0.25	31.8—0	15.0 ^{+0.5} ₋₀
EER42/42B			42.0±0.5	21.6±0.2	15.2±0.25	15.2±0.25	31.0±0.5	15.5 ^{+0.3} _{-0.1}
EER42/45A			42.0±0.6	22.4±0.2	15.2±0.25	15.2±0.25	30.4—0	15.4±0.3
EER42/45			42.0±0.6	22.4±0.2	15.5 ^{+0.25} _{-0.5}	15.5 ^{+0.25} _{-0.5}	29.4—0	15.4±0.3
EER42/49			42.0±0.5	24.7±0.2	19.6±0.4	17.3±0.25	31.8—0	18.5 ^{+0.5} ₋₀
EER42/43			43.0 ⁺⁰ _{-1.7}	21.8 ⁺⁰ _{-0.4}	15.0 ⁺⁰ _{-0.6}	15.0 ⁺⁰ _{-0.6}	30.4 ^{+1.2} ₋₀	15.6 ^{+0.7} ₋₀
EER44/45	ETD44	FEER44	45.0 ⁺⁰ _{-2.0}	22.3±0.2	15.2 ⁺⁰ _{-0.6}	15.2 ⁺⁰ _{-0.6}	32.5 ^{+1.6} ₋₀	16.1 ^{+0.8} ₋₀
EER48/41			49.0 ⁺⁰ _{-2.0}	21.2 ⁺⁰ _{-1.2}	20.9±0.4	18.0±0.3	37.2 ^{+1.1} ₋₀	14.7 ^{+0.6} ₋₀
EER49/48			49.0±0.5	23.9±0.3	17.2±0.25	17.2±0.25	36.3—0	15.4±0.2
EER49/54			49.0±0.5	26.8 ^{+0.4} ₋₀	17.2±0.25	17.2±0.25	36.3—0	18.3 ^{+0.4} ₋₀
EER49/55			49.0±0.6	27.5±0.3	17.2±0.4	17.2 ^{+0.2} _{-0.25}	36.4—0	19.0±0.2
EER49/62		FEER49	49.0±0.5	31.0 ^{+0.5} _{-0.1}	17.2±0.4	17.2±0.2	36.4—0	22.5 ^{+0.4} ₋₀
EER49/49	ETD49	FEER48.7	49.8 ⁺⁰ _{-2.2}	24.9 ⁺⁰ _{-0.4}	16.7 ⁺⁰ _{-0.6}	16.7 ⁺⁰ _{-0.6}	36.1 ^{+1.8} ₋₀	17.7 ^{+0.8} ₋₀

Conventional type EER CORES

Product code	Magnetic parameter								AL (nH)	
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	6H20	2H10
EER26/19B	1.07	47.5	44.4	2110	44.2	42.5L	79.4	11.0	1920(±25%)	—
EER28/18	0.598	47.2	78.9	3720	77.0	77.0C	62.0	19.5	3500(±25%)	—
EER28/28	0.728	62.9	86.3	5430	77.0	77.0C	113	27.8	3000(±25%)	—
EER28/34	0.868	74.3	85.6	6360	77.0	77.0C	148	32.4	2600(±25%)	—
EER29/20	0.695	51.2	73.7	3770	70.9	70.9C	80.5	18.9	3000(±25%)	—
EER29/32	0.947	72.0	76.0	5740	70.9	70.9C	145	28.2	2300(±25%)	—
EER34/26T	0.654	62.4	95.4	5960	91.6	91.6C	121	31.8	4000(±25%)	—
EER34/35	0.815	79.0	97.0	7670	91.6	91.6C	188	38.0	2800(±25%)	—
EER35/26	0.569	61.5	108	6620	100	100C	118	35.0	3700(±25%)	—
EER35/31	0.677	72.4	107	7740	100	100C	156	38.9	3600(±25%)	—
EER35/41	0.817	90.1	110	9930	100	100C	218	52.7	2800(±25%)	—
EER39/28	0.525	70.4	134	9410	129	129C	146	51.0	4200(±25%)	—
EER39/44	0.759	101	133	13500	129	129C	279	68.0	2700(±25%)	—
EER39/45	0.750	102	136	13900	129	129C	277	69.7	3100(±25%)	—
EER39/40	0.741	92.6	125	11600	123	123C	257	57.2	2800(±25%)	—
EER40/18	0.346	48.5	140	6780	139	130B	64.8	36.2	5170(±25%)	—
EER40/45	0.634	97.2	153	14900	139	139C	249	75.9	3600(±25%)	—
EER40/55	0.768	117	152	17800	139	139C	329	89.0	2800(±25%)	—
EER42/36	0.459	83.6	182	15200	181	181C	190	78.0	4500(±25%)	—
EER42/42	0.527	96.3	183	17600	181	179B	242	92.5	4400(±25%)	—
EER42/42D	0.423	98.5	233	23000	235	233B	225	113	5300(±25%)	—
EER42/42B	0.531	97.7	184	17940	184	182B	246	91.0	4000(±25%)	—
EER42/45A	0.523	99.9	191	19100	181	181C	243	95.0	4800(±25%)	—
EER42/45	0.483	97.3	202	19600	189	189C	219	95.0	4800(±25%)	—
EER42/49	0.469	109	233	25400	235	231B	282	129	5000(±25%)	—
EER42/43	0.573	99.0	173	17100	170	165B	261	87.7	4100(±25%)	—
EER44/45	0.592	104	175	18000	174	173B	304	90.8	4000(±25%)	—
EER48/41	0.392	99.5	254	25300	254	251B	297	126	5800(±25%)	—
EER49/48	0.481	111	231	25500	232	228L	305	139	5600(±25%)	—
EER49/54	0.526	123	234	28800	232	228L	366	152	4400(±25%)	—
EER49/55	0.534	125	234	29300	232	228L	376	152	4400(±25%)	—
EER49/62	0.556	134	242	32500	232	230L	449	167	4300(±25%)	—
EER49/49	0.542	115	211	24200	209	209C	375	128	4400(±25%)	—

Conventional type EE CORES



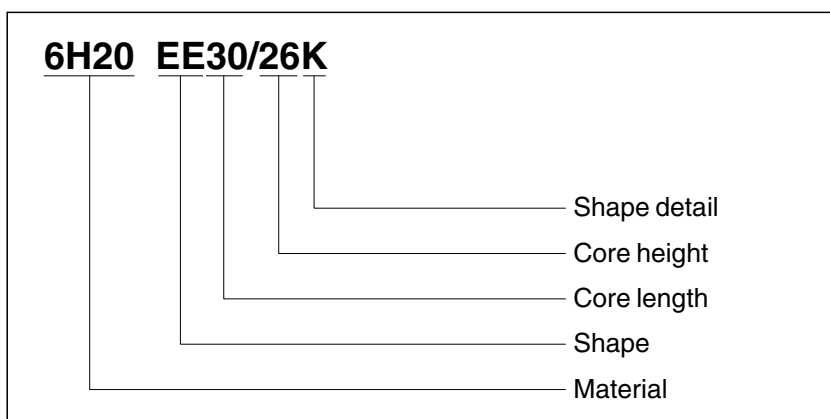
Features

- ① Customers are invited to select the most suitable products from a wide selection of shapes.

Applications

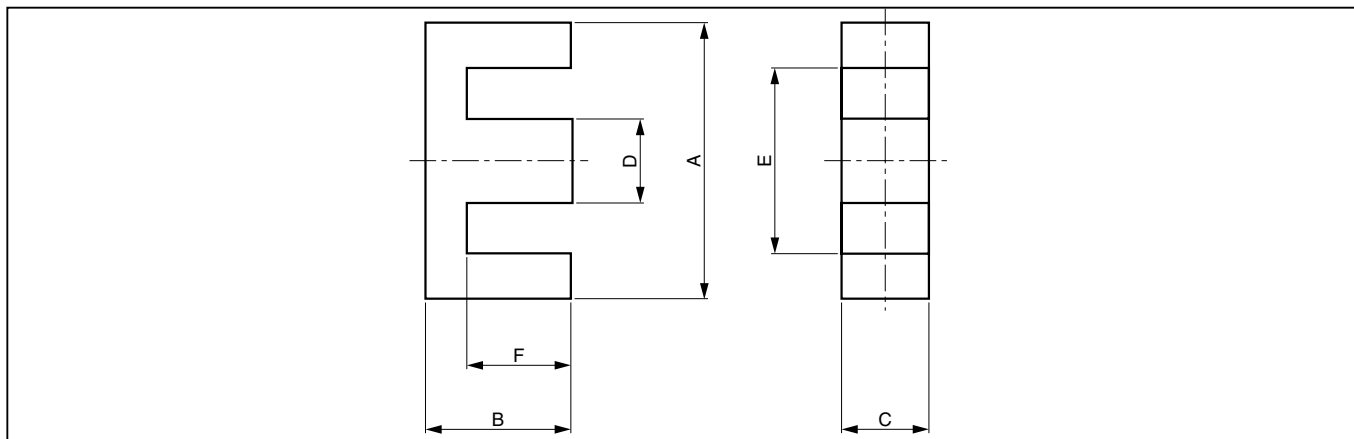
Switching regulators, choke coils, transformers for strobo use, pulse transformers, etc.

Designation



Conventional type EE CORES

Summary

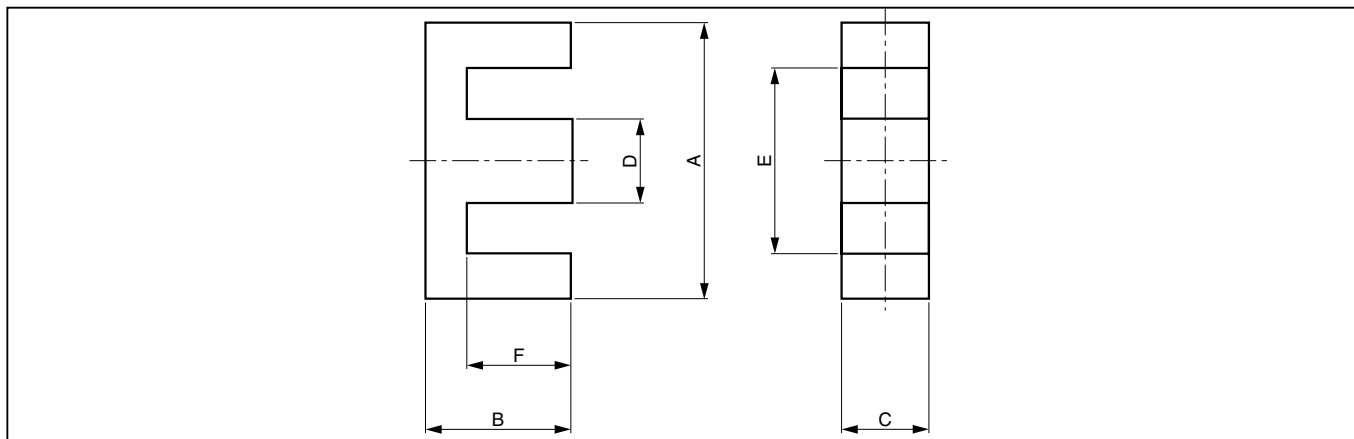


Product code	General standard		Dimensions (mm)					
	IEC	JIS	A	B	C	D	E	F
EE10/11		FEE10.2	10.2±0.2	5.5±0.1	4.75±0.15	2.45±0.15	7.8—0	4.3 ^{+0.15} _{-0.075}
EE12.5/15		FEE12.5	12.5±0.3	7.6 ⁺⁰ _{-0.4}	5.0±0.2	2.6 ⁺⁰ _{-0.4}	9.0—0	4.9 ^{+0.4} ₋₀
EE12.6/13	E13/4	FEE12.7A	12.6 ^{+0.5} _{-0.4}	6.5 ⁺⁰ _{-0.2}	3.7 ⁺⁰ _{-0.3}	3.7 ⁺⁰ _{-0.3}	8.9 ^{+0.6} ₋₀	4.5 ^{+0.3} ₋₀
EE13/11			13.0±0.3	5.6 ^{+0.3} ₋₀	6.5±0.2	3.8±0.15	9.8±0.3	4.1 ^{+0.3} ₋₀
EE13/12C			13.0±0.2	6.0±0.15	6.15±0.15	2.75±0.15	10.2±0.2	4.6±0.1
EE16/11			16.0 ^{+0.7} _{-0.5}	5.65±0.2	7.4 ⁺⁰ _{-0.5}	4.7 ⁺⁰ _{-0.3}	11.3 ^{+0.8} ₋₀	3.6±0.15
EE16/14K			16.0±0.3	7.1 ^{+0.2} ₋₀	5.0 ⁺⁰ _{-0.4}	4.0 ⁺⁰ _{-0.4}	12.0±0.3	5.1 ^{+0.25} ₋₀
EE16/14C		FEE16A	16.0±0.3	7.2±0.3	5.0 ⁺⁰ _{-0.4}	4.0±0.2	11.7—0	5.2±0.2
EE16/16			16.0 ^{+0.7} _{-0.5}	8.2 ⁺⁰ _{-0.3}	4.7 ⁺⁰ _{-0.4}	4.7 ⁺⁰ _{-0.3}	11.3 ^{+0.6} ₋₀	5.7 ^{+0.4} ₋₀
EE16/24		FEE16B	16.0±0.3	12.0 ^{+0.4} ₋₀	5.0 ⁺⁰ _{-0.4}	4.0±0.2	11.8—0	10.0 ^{+0.4} ₋₀
EE16/21			16.1±0.25	10.5 ^{+0.4} ₋₀	4.2±0.2	4.4 ⁺⁰ _{-0.3}	11.6—0	8.0 ^{+0.4} ₋₀
EE19/27		FEE19B	19.0 ^{+0.4} _{-0.3}	13.4±0.3	5.0±0.2	4.5±0.2	14.2—0	11.0±0.3
EE19/15			19.05±0.38	7.59±0.13	4.75±0.13	4.75±0.13	14.33±0.31	5.23±0.13
EE19/16K		FEE19A	19.1±0.3	7.8 ^{+0.3} ₋₀	5.2 ⁺⁰ _{-0.4}	4.7 ⁺⁰ _{-0.3}	14.2—0	5.5 ^{+0.4} ₋₀
EE20/20A	E20/6	FEE20.1	20.0±0.4	9.9±0.2	5.65±0.25	5.7±0.2	14.1—0	7.2±0.2
EE22/19		FEE22A	22.0 ⁺⁰ _{-0.6}	9.55±0.25	6.0 ⁺⁰ _{-0.5}	6.0 ⁺⁰ _{-0.5}	15.5—0	5.3 ^{+0.4} ₋₀
EE22/24C			22.0 ⁺⁰ _{-0.6}	11.9±0.25	6.0 ⁺⁰ _{-0.5}	6.0 ⁺⁰ _{-0.5}	15.5—0	7.9 ^{+0.4} ₋₀
EE22/29		FEE22B	22.0±0.5	14.5 ^{+0.5} ₋₀	6.0 ⁺⁰ _{-0.5}	6.0 ⁺⁰ _{-0.5}	16.0±0.5	10.5 ^{+0.5} ₋₀
EE24/31A			24.5 ^{+0.4} _{-0.3}	15.3±0.3	9.4±0.15	7.8±0.15	16.7—0	11.4±0.25
EE25/20			25.0±0.3	10.0 ^{+0.3} ₋₀	6.4±0.3	6.4±0.3	18.2—0	6.5 ^{+0.3} ₋₀
EE25/33			25.0±0.3	16.3 ^{+0.5} ₋₀	6.5±0.25	6.5±0.25	18.15—0	13.0 ^{+0.4} ₋₀
EE25/25B	E25/7	FEE25.1	25.05±0.75	12.55±0.25	7.2±0.3	7.25±0.25	17.5—0	8.95±0.25
EE25/19D			25.3±0.4	9.6±0.2	7.0±0.2	6.5±0.25	18.5—0	6.6±0.2
EE25/20B			25.3±0.4	9.95±0.2	6.6±0.25	6.4±0.2	19.0—0	6.75±0.15
EE25/23B			25.3±0.4	11.5±0.2	6.6±0.25	6.4±0.2	19.0—0	8.3±0.15
EE25/19Z		FEE25.4A	25.4±0.38	9.53±0.25	6.35±0.25	6.35±0.25	18.7—0	6.38±0.17
EE25/32Z		FEE25.4B	25.4±0.4	16.0±0.3	6.35±0.3	6.35±0.3	18.67—0	12.83±0.3
EE26/29A			26.0±0.3	14.35 ^{+0.4} ₋₀	8.0±0.15	7.3±0.2	18.6—0	10.7±0.15
EE26/33A			26.0±0.3	16.35 ^{+0.4} ₋₀	8.0±0.15	7.3±0.2	18.6—0	12.7±0.15
EE28/18			27.3±0.5	8.9±0.2	9.7±0.2	8.5±0.3	18.5—0	4.9±0.15
EE28/20			28.0±0.4	10.0 ^{+0.25} ₋₀	11.0 ⁺⁰ _{-0.6}	7.5 ⁺⁰ _{-0.5}	18.6—0	6.0 ^{+0.25} ₋₀
EE28/20B			28.0±0.5	10.7 ^{+0.15} _{-0.1}	12.0±0.3	7.2±0.3	18.6—0	6.2 ^{+0.15} _{-0.1}
EE28/25A			28.0±0.3	12.5 ^{+0.35} _{-0.15}	8.0±0.3	8.0 ^{+0.1} _{-0.3}	19.6—0	8.5 ^{+0.25} _{-0.05}

Conventional type EE CORES

Product code	Magnetic parameter								AL (nH)	
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	6H20	2H10
EE10/11	2.16	26.1	12.1	315	11.6	10.5L	24.0	1.4	850(±25%)	—
EE12.5/15	2.10	31.4	14.9	469	12.0	12.0C	35.2	2.3	900(±25%)	—
EE12.6/13	2.41	29.7	12.4	369	12.6	12.2L	26.3	1.9	800(±25%)	3500(±25%)
EE13/11	1.33	27.9	21.0	586	24.7	19.5B	25.5	3.1	1400(±25%)	—
EE13/12C	1.77	30.2	17.1	517	16.9	16.9C	34.3	2.5	1100(±25%)	—
EE16/11	0.848	28.0	33.0	924	32.5	29.3B	25.7	4.5	2200(±25%)	—
EE16/14K	1.87	35.2	18.9	663	18.2	18.2C	42.6	3.2	1100(±25%)	—
EE16/14C	1.83	35.1	19.2	674	19.2	19.2LBC	41.6	3.4	1100(±25%)	—
EE16/16	1.87	37.6	20.1	756	20.5	19.4B	41.6	3.6	1100(±25%)	—
EE16/24	2.87	55.1	19.2	1060	19.2	19.2LBC	81.6	5.3	800(±25%)	—
EE16/21	2.66	47.1	17.7	834	17.6	17.6LC	63.1	4.5	1500(±25%)	—
EE19/27	2.69	61.3	22.8	1400	22.5	22.5LC	110	7.0	850(±25%)	—
EE19/15	1.66	37.3	22.5	837	22.5	22.5LBC	50.1	4.2	1200(±25%)	—
EE19/16K	1.72	39.6	23.1	915	22.8	22.8C	55.7	4.6	1200(±25%)	—
EE20/20A	1.45	46.0	32.0	1490	32.2	31.6B	62.6	7.5	1550(±25%)	—
EE22/19	1.15	42.5	37.0	1570	33.1	33.1C	54.7	8.3	1850(±25%)	—
EE22/24C	1.46	52.4	35.9	1880	33.1	33.1C	80.6	9.7	1500(±25%)	—
EE22/29	1.73	63.4	36.0	2280	33.0	33.0C	108	11.6	1200(±25%)	—
EE24/31A	0.909	66.6	73.3	4880	73.3	70.5L	105	24.5	2550(±25%)	—
EE25/20	1.16	49.3	42.0	2070	40.8	40.8C	80.5	10.5	1600(±25%)	—
EE25/33	1.79	75.2	42.0	3160	42.2	41.6L	160	15.8	1300(±25%)	—
EE25/25B	1.11	57.7	51.7	2990	52.2	51.0L	95.8	15.0	2000(±25%)	—
EE25/19D	1.20	51.6	43.0	2232	45.5	42.0LB	84.5	10.6	1800(±25%)	—
EE25/20B	1.21	49.8	41.3	2060	42.2	39.6L	87.1	10.3	1800(±25%)	—
EE25/23B	1.37	56.0	41.0	2300	42.2	39.6L	107	11.5	1650(±25%)	—
EE25/19Z	1.20	48.1	40.2	1940	40.3	40.0B	81.0	10.3	1800(±25%)	9000(+35% -25%)
EE25/32Z	1.84	74.0	40.3	2970	40.3	40.3LBC	163	14.8	1350(±25%)	—
EE26/29A	1.33	76.0	57.0	4330	58.4	56.0L	203	19.1	1800(±25%)	—
EE26/33A	1.48	84.0	56.9	4780	58.4	56.0L	241	21.3	1650(±25%)	—
EE28/18	0.535	42.9	80.2	3440	82.5	77.6B	51.0	17.2	4000(±25%)	—
EE28/20	0.559	48.2	86.2	4160	77.6	77.6C	72.0	23.0	4000(±25%)	—
EE28/20B	0.508	49.9	98.2	4910	86.4	86.4C	73.2	25.6	4500(±25%)	—
EE28/25A	0.931	59.0	63.4	3740	63.2	63.2C	104	19.1	2400(±25%)	—

Conventional type EE CORES

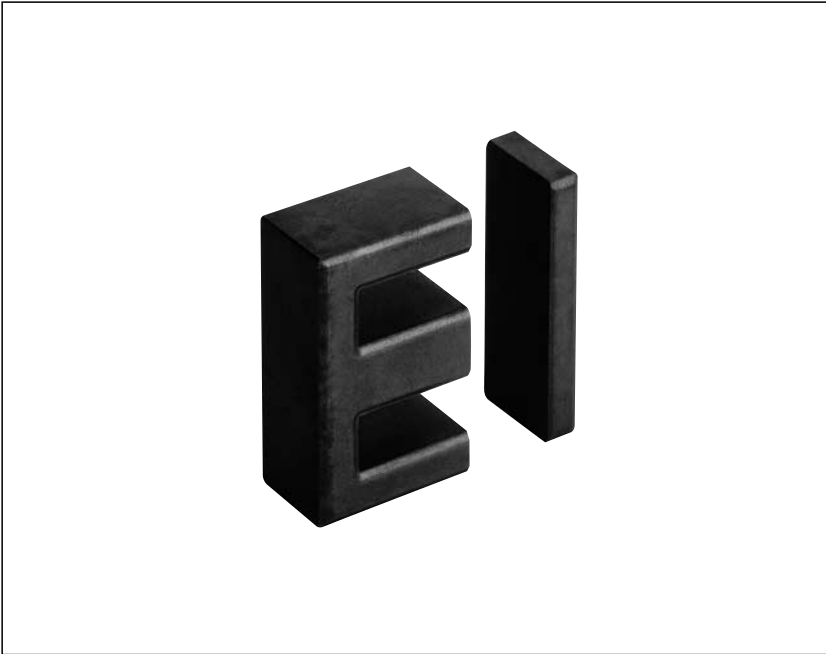


Product code	General standard		Dimensions (mm)					
	IEC	JIS	A	B	C	D	E	F
EE28/33		FEE28	28.0±0.4	16.5 ^{+0.5} ₋₀	11.0 ⁺⁰ _{-0.6}	7.5 ⁺⁰ _{-0.5}	18.6—0	12.0 ^{+0.5} ₋₀
EE28/28A			28.2±0.3	14.0 ^{+0.4} ₋₀	8.0±0.15	7.3±0.2	20.8—0	10.35±0.15
EE29/28			29.8±0.3	13.9±0.2	10.7±0.15	8.1±0.15	20.9—0	9.9±0.2
EE29/30MA			29.8±0.3	15.0	7.1±0.2	8.1±0.2	20.5—0	11.0±0.2
EE29/30M			29.8±0.5	15.0±0.2	10.7 ^{+0.15} _{-0.3}	8.1±0.2	20.5—0	11.0±0.2
EE30/26K		FEE30A	30.0±0.5	13.0 ^{+0.3} ₋₀	11.0 ⁺⁰ _{-0.6}	11.0 ⁺⁰ _{-0.6}	19.5—0	8.0 ^{+0.3} ₋₀
EE30/30A			30.0±0.5	14.9±0.25	6.9±0.3	6.9±0.2	19.5—0	10.15±0.2
EE30/31			30.0 ^{+0.5} _{-0.2}	15.6±0.2	7.5±0.2	10.5±0.2	20.0—0	10.6±0.15
EE30/42K		FEE30B	30.0±0.4	21.0 ^{+0.5} ₋₀	11.0 ⁺⁰ _{-0.6}	11.0 ⁺⁰ _{-0.6}	19.5—0	16.0 ^{+0.5} ₋₀
EE30/26B			30.1±0.3	13.13±0.12	10.69±0.3	10.69±0.27	20.0—0	8.13±0.12
EE31/26			30.5±0.5	13.1±0.15	9.4±0.3	9.4±0.3	21.6—0	8.6 ^{+0.3} _{-0.1}
EE32/32A	E32/9	FEE32.1	32.0 ^{+0.9} _{-0.7}	16.1±0.3	9.15±0.35	9.2±0.3	22.7—0	11.6 ^{+0.3} _{-0.1}
EE33/28A		FEE33A	33.0±0.7	14.1±0.25	12.7±0.3	9.7±0.3	23.6 ^{+1.0} _{-0.25}	9.6±0.25
EE33/33A			33.1±0.4	16.5±0.2	9.0 ⁺⁰ _{-0.4}	9.0 ⁺⁰ _{-0.4}	24.2—0	12.2±0.2
EE33/28B			33.2±0.5	14.15±0.15	12.7±0.3	9.8±0.3	23.7—0	9.65±0.15
EE34/28A			34.6±0.45	14.2±0.2	9.27±0.25	9.27±0.25	25.4—0	9.9±0.25
EE35/29A			34.93±0.5	14.43±0.25	9.53±0.25	9.53±0.25	25.04—0	9.68±0.25
EE35/35A			35.0±0.5	17.5±0.25	10.0±0.3	10.0±0.3	24.5—0	12.5±0.25
EE35/37			35.0 ^{+0.7} _{-0.5}	18.3±0.2	10.0±0.3	10.0±0.3	24.5—0	13.3±0.2
EE35/48		FEE35B	35.0±0.5	24.2±0.4	10.3 ⁺⁰ _{-0.5}	10.3 ⁺⁰ _{-0.5}	25.0±0.5	18.2±0.3
EE35/48C		FEE35C	35.0 ^{+0.7} _{-0.5}	24.2±0.4	11.7±0.3	10.0±0.3	24.5—0	18.2±0.3
EE40/34B			40.0±0.6	16.75±0.35	12.0 ⁺⁰ _{-0.7}	12.0 ⁺⁰ _{-0.7}	26.8—0	10.55 ^{+0.2} ₋₀
EE40/34A			40.0±0.5	16.7 ^{+0.6} ₋₀	12.0 ⁺⁰ _{-0.7}	11.0 ⁺⁰ _{-0.6}	27.4—0	10.0 ^{+0.5} ₋₀
EE40/34K		FEE40A	40.0±0.5	16.7 ^{+0.6} ₋₀	11.0 ⁺⁰ _{-0.6}	11.0 ⁺⁰ _{-0.6}	27.4—0	10.0 ^{+0.5} ₋₀
EE40/54K		FEE40B	40.0±0.5	27.0 ^{+0.5} ₋₀	12.0 ⁺⁰ _{-0.7}	12.0 ⁺⁰ _{-0.7}	26.8—0	20.0 ^{+0.5} ₋₀
EE40/35A			40.8±0.55	16.6±0.25	12.4±0.3	12.5±0.3	28.6—0	10.7±0.28
EE41/33			41.28±0.8	16.76±0.13	12.7±0.25	12.7±0.25	28.01—0	10.54±0.13
EE42/42-15W	E42/15	FEE42.2A	42.0 ^{+1.0} _{-0.7}	21.2 ⁺⁰ _{-0.4}	15.2 ⁺⁰ _{-0.5}	12.2 ⁺⁰ _{-0.5}	29.5 ^{+1.2} ₋₀	14.8 ^{+0.7} ₋₀
EE42/42-20W	E42/20	FEE42.2B	42.0 ^{+1.0} _{-0.7}	21.2 ⁺⁰ _{-0.4}	20.0 ⁺⁰ _{-0.8}	12.2 ⁺⁰ _{-0.5}	29.5 ^{+1.2} ₋₀	14.8 ^{+0.7} ₋₀
EE47/39A			47.1±0.5	19.6±0.25	15.6±0.3	15.6±0.3	31.7—0	12.4±0.3
EE49/48			49.07±0.64	23.77±0.25	15.62±0.43	15.62±0.25	31.37—0	15.24 ^{+0.3} _{-0.15}
EE50/66		FEE50B	50.0±0.7	33.0 ^{+0.7} ₋₀	15.0 ⁺⁰ _{-0.8}	15.0 ⁺⁰ _{-0.8}	33.5—0	24.5 ^{+0.7} ₋₀
EE55/55A	E55/21	FEE55.2A	55.0 ^{+1.2} _{-0.9}	27.8 ⁺⁰ _{-0.6}	21.0 ⁺⁰ _{-0.6}	17.2 ⁺⁰ _{-0.5}	37.5 ^{+1.2} ₋₀	18.5 ^{+0.8} ₋₀
EE55/55B	E55/25	FEE55.2B	55.0 ^{+1.2} _{-0.9}	27.8 ⁺⁰ _{-0.6}	25.0 ⁺⁰ _{-0.8}	17.2 ⁺⁰ _{-0.5}	37.5 ^{+1.2} ₋₀	18.5 ^{+0.8} ₋₀
EE56/47A			56.6±0.55	23.6±0.25	18.7±0.3	18.7±0.3	38.1—0	14.8±0.3
EE80/76			80.0±1.0	38.1±0.4	19.8±0.4	19.8±0.4	62.2	28.2±0.3

Conventional type EE CORES

Product code	Magnetic parameter								AL (nH)	
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	6H20	2H10
EE28/33	0.844	73.6	87.2	6420	77.0	77.0C	145	32.1	2800(±25%)	—
EE28/28A	1.48	84.2	56.9	4790	58.4	56.0L	144	19.0	1650(±25%)	—
EE29/28	0.766	65.9	86.0	5670	86.7	85.6LB	136	28.6	2900(±25%)	—
EE29/30MA	1.07	92.1	86.0	7960	86.7	85.6LB	150	30.0	2300(±25%)	—
EE29/30M	1.61	92.1	57.3	5280	57.5	56.8LB	151	26.4	1500(±25%)	—
EE30/26K	0.528	57.9	110	6360	114	107L	75.8	32.2	4200(±25%)	—
EE30/30A	1.15	66.1	57.3	3790	47.6	47.6C	134	20.7	1900(±25%)	—
EE30/31	0.907	68.1	75.1	5110	78.8	72.0L	107	23.7	2600(±25%)	—
EE30/42K	0.823	90.2	110	9920	114	107LB	152	49.8	3000(±25%)	—
EE30/26B	0.621	61.3	97.6	5980	114	107LB	76.4	32.0	4200(±25%)	—
EE31/26	0.723	61.0	84.4	5150	88.4	79.9L	110	25.8	3150(±25%)	—
EE32/32A	0.886	74.8	84.4	6310	84.2	78.7L	167	31.0	2700(±25%)	—
EE33/28A	0.615	67.7	110	7520	123	114B	129	40.0	3800(±25%)	—
EE33/33A	1.02	78.1	76.3	5960	77.4	75.7LB	299	29.5	2600(±25%)	—
EE33/28B	0.561	65.6	117	7680	123	114LB	138	39.0	4150(±25%)	—
EE34/28A	0.852	69.9	82.1	5750	85.9	79.7B	164	29.5	2500(±25%)	—
EE35/29A	0.768	69.6	90.6	6300	90.8	90.5LB	154	32.2	3400(±25%)	—
EE35/35A	0.807	80.7	100	8070	100	100LBC	188	40.6	3000(±25%)	—
EE35/37	0.839	83.9	100	8390	100	100LBC	200	42.5	2600(±25%)	—
EE35/48	1.01	105	104	10800	100	100LC	273	54.0	2500(±25%)	—
EE35/48C	0.863	105	121	12700	117	117LC	273	63.5	2900(±25%)	—
EE40/34B	0.544	77.5	142	11000	137	137C	167	52.0	4200(±25%)	—
EE40/34A	0.557	77.4	139	10800	125	125C	177	56.4	4500(±25%)	—
EE40/34K	0.608	77.4	127	9860	114	114C	178	52.0	3800(±25%)	—
EE40/54K	0.808	117	145	17000	137	137C	323	85.0	3150(±25%)	—
EE40/35A	0.526	78.1	149	11600	155	145L	178	58.8	4250(±25%)	—
EE41/33	0.483	77.3	160	12400	161	158LB	169	63.0	4950(±25%)	—
EE42/42-15W	0.542	97.8	180	17600	180	180BC	276	87.0	4400(±25%)	—
EE42/42-20W	0.415	97.8	236	23000	235	235BC	276	118	5600(±25%)	—
EE47/39A	0.385	89.5	232	20800	243	223B	206	106	6000(±25%)	—
EE49/48	0.428	110	257	28200	245	245C	250	134	5900(±25%)	—
EE50/66	0.649	144	222	32000	213	213C	506	160	4000(±25%)	—
EE55/55A	0.350	124	353	43700	352	352C	400	218	6700(±25%)	—
EE55/55B	0.295	124	420	52000	417	417C	400	260	8650(±25%)	—
EE56/47A	0.316	107	345	36700	352	329B	292	189	6500(±25%)	—
EE80/76	0.491	185	377	69800	392	352L	1480	350	4800(±25%)	—

Conventional type EI CORES



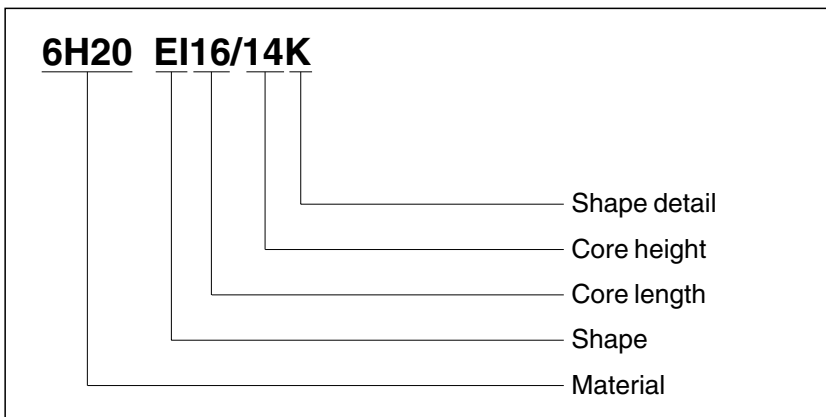
Features

- ① Wide selection of the shapes for customer's choice.

Applications

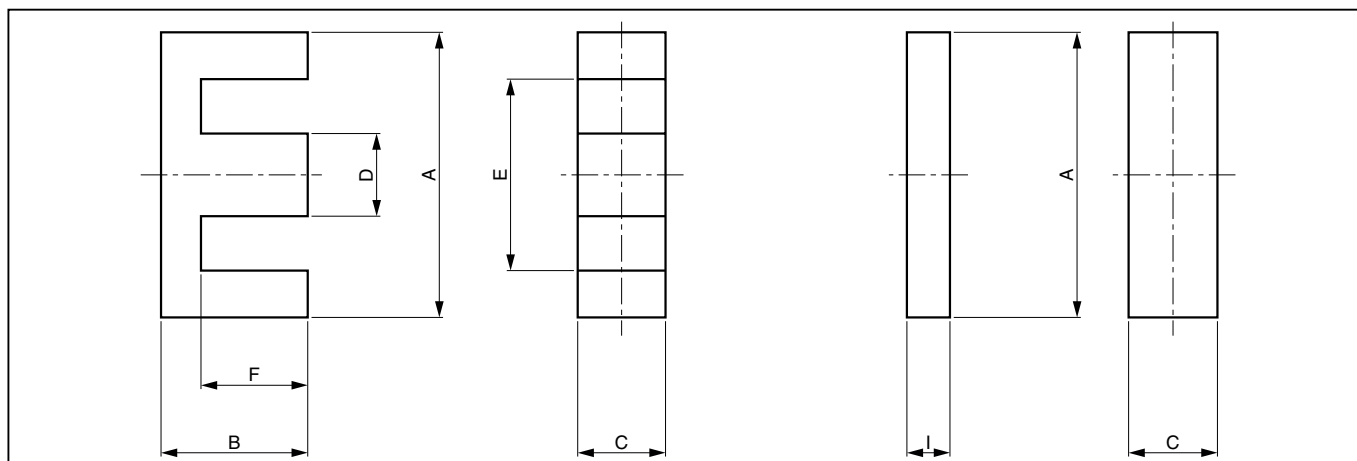
Transformers for switching power supply, Choke coil, Inverter, Converter, etc.

Designation



Conventional type EI CORES

Summary



Product code	General standard		Dimensions (mm)						
	IEC	JIS	A	B	C	D	E	F	I
EI12.5/09		FEI12.5	12.5±0.3	7.6 ⁺⁰ _{-0.4}	5.0±0.2	2.6 ⁺⁰ _{-0.4}	9.0—0	4.9 ^{+0.4} ₋₀	1.5±0.15
EI16/14K		FEI16	16.0±0.3	12.0 ^{+0.4} ₋₀	5.0 ⁺⁰ _{-0.4}	4.0±0.2	11.8—0	10.0 ^{+0.4} ₋₀	2.0±0.2
EI19/16		FEI19	19.0 ^{+0.4} _{-0.3}	13.4±0.3	5.0±0.2	4.5±0.2	14.2—0	11.0±0.3	2.4±0.2
EI22/18		FEI22	22.0±0.5	14.5 ^{+0.5} ₋₀	6.0 ⁺⁰ _{-0.5}	6.0 ⁺⁰ _{-0.5}	16.0±0.5	10.5 ^{+0.5} ₋₀	4.0±0.2
EI25/19			25.0±0.3	16.3 ^{+0.5} ₋₀	6.5±0.25	6.5±0.25	18.15—0	13.0 ^{+0.4} ₋₀	3.0±0.2
EI25/19Z		FEI25.4	25.4 ^{+0.5} _{-0.4}	16.0±0.3	6.35±0.3	6.35±0.3	18.6—0	12.9±0.3	3.2±0.2
EI28/20		FEI28	28.0±0.4	16.5 ^{+0.5} ₋₀	11.0 ⁺⁰ _{-0.6}	7.5 ⁺⁰ _{-0.5}	18.6—0	12.0 ^{+0.5} ₋₀	3.5±0.2
EI30/26K		FEI30	30.0±0.4	21.0 ^{+0.5} ₋₀	11.0 ⁺⁰ _{-0.6}	11.0 ⁺⁰ _{-0.6}	19.5—0	16.0 ^{+0.5} ₋₀	5.5±0.2
EI35/29		FEI35A	35.0±0.5	24.2±0.4	10.3 ⁺⁰ _{-0.5}	10.3 ⁺⁰ _{-0.5}	25.0±0.5	18.2±0.3	5.0±0.2
EI40/35K		FEI40	40.2±0.5	27.0 ^{+0.5} ₋₀	12.0 ⁺⁰ _{-0.7}	12.0 ⁺⁰ _{-0.7}	27.3—0	20.0 ^{+0.5} ₋₀	7.5±0.3
EI50/42K		FEI50	50.0±0.7	33.0 ^{+0.7} ₋₀	15.0 ⁺⁰ _{-0.8}	15.0 ⁺⁰ _{-0.8}	33.5—0	24.5 ^{+0.7} ₋₀	9.0±0.3

Product code	Magnetic parameter								AL (nH)
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (510 ⁻³ kg)	6H20
EI12.5/09	1.42	21.6	15.0	324	12.0	12.0C	35.2	1.9	1000(±25%)
EI16/14K	1.81	34.6	19.0	657	19.2	18.7L	82.6	3.3	1000(±25%)
EI19/16	1.71	39.3	23.0	903	22.5	22.5LC	55.0	4.5	1100(±25%)
EI22/18	1.11	41.9	37.0	1550	33.1	33.1C	110	8.3	1700(±25%)
EI25/19	1.17	48.5	42.0	2040	42.3	41.6L	160	10.1	1750(±25%)
EI25/19Z	1.20	48.3	40.2	1940	40.3	39.4B	81.7	9.7	1700(±25%)
EI28/20	0.569	48.4	84.0	4070	77.6	77.6C	144	22.0	3400(±25%)
EI30/26K	0.524	58.1	111	6450	114	107LB	151	32.3	4000(±25%)
EI35/29	0.660	67.3	102	6870	101	101LC	272	36.3	3000(±25%)
EI40/35K	0.522	76.8	148	11400	136	136C	323	59.2	4200(±25%)
EI50/42K	0.412	94.7	230	21800	213	213C	497	114	5000(±25%)

Conventional type RM CORES



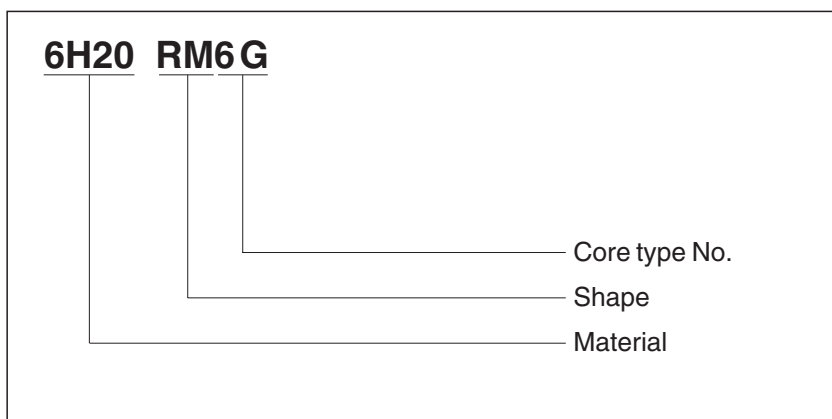
Features

- ① Products complying with IEC standard.
- ② A high-density mounting of elements on the substrate is possible.

Applications

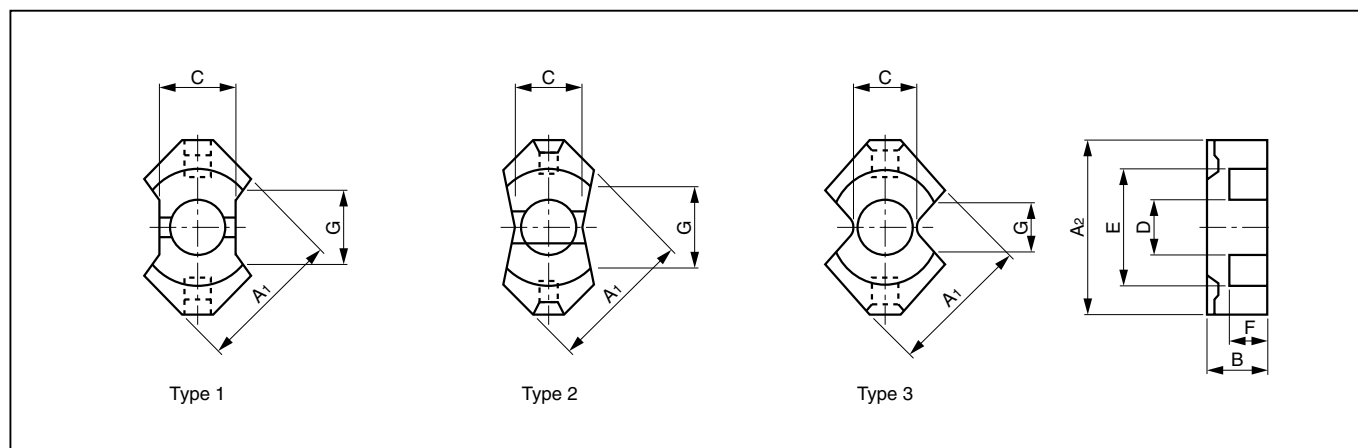
Transformers for switching power supply, Choke coil, Filters, Inductors, etc.

Designation



Conventional type RM CORES

Summary



Product code	Type	General standard		Dimensions (mm)							
		IEC	JIS	A ₁	A ₂	B	C	D	E	F	G
RM5G	1	RM5-φ	RM5-J	12.3 ⁺⁰ _{-0.4}	14.9 ⁺⁰ _{-0.8}	5.25 ⁺⁰ _{-0.1}	6.8 ⁺⁰ _{-0.4}	4.9 ⁺⁰ _{-0.2}	10.2 ^{+0.4} ₋₀	3.15 ^{+0.2} ₋₀	6.0-0
RM6G	2	RM6-S-φ	RM6-S-J	14.7 ⁺⁰ _{-0.6}	17.9 ⁺⁰ _{-0.6}	6.25 ⁺⁰ _{-0.1}	8.2 ⁺⁰ _{-0.4}	6.4 ⁺⁰ _{-0.2}	12.4 ^{+0.5} ₋₀	4.0 ^{+0.2} ₋₀	8.4-0
R6G	3	RM6-R-0	RM6-R	14.7 ⁺⁰ _{-0.5}	17.7 ⁺⁰ _{-0.7}	6.25 ⁺⁰ _{-0.1}	—	6.2 ^{+0.2} ₋₀	12.4 ^{+0.5} ₋₀	4.0 ^{+0.2} ₋₀	—
RM8G	1	RM8-φ	RM8-J	19.7 ⁺⁰ _{-0.7}	23.2 ⁺⁰ _{-0.9}	8.25 ⁺⁰ _{-0.1}	11.0 ⁺⁰ _{-0.4}	8.55 ⁺⁰ _{-0.3}	17.0 ^{+0.6} ₋₀	5.4 ^{+0.2} ₋₀	10.5-0
RM10G	1	RM10-φ	RM10-J	24.7 ⁺⁰ _{-1.1}	28.5 ⁺⁰ _{-1.3}	9.35 ⁺⁰ _{-0.1}	13.5 ⁺⁰ _{-0.5}	10.9 ⁺⁰ _{-0.4}	21.2 ^{+0.9} ₋₀	6.2 ^{+0.3} ₋₀	11.3-0
RM12GA	1			29.8 ⁺⁰ _{-1.2}	37.6 ⁺⁰ _{-1.5}	11.8 ⁺⁰ _{-0.1}	—	12.8 ⁺⁰ _{-0.4}	24.9 ^{+1.1} ₋₀	8.4 ^{+0.3} ₋₀	12.9-0
RM12G	1	RM12-φ	RM12-J	29.8 ⁺⁰ _{-1.2}	37.6 ⁺⁰ _{-1.5}	12.3 ⁺⁰ _{-0.1}	—	12.8 ⁺⁰ _{-0.4}	24.9 ^{+1.1} ₋₀	8.4 ^{+0.3} ₋₀	12.9-0

Product code	Magnetic parameter								AL (nH)		
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	6H20	2H07	2H10
RM5G	0.938	22.3	23.8	530	18.1	18.1C	18.2	3.2	2000(^{+30%} _{-20%})	3500(±30%)	6700(^{+40%} _{-30%})
RM6G	0.799	28.5	35.7	1020	31.2	30.7B	26.0	5.3	2400(^{+30%} _{-20%})	4300(±30%)	8600(^{+40%} _{-30%})
R6G	0.800	25.6	32.0	820	23.4	23.4C	26.0	5.2	—	—	8600(^{+40%} _{-30%})
RM8G	0.590	38.0	64.0	2400	55.4	55.0B	52.2	12.2	3300(^{+30%} _{-20%})	6000(±30%)	12500(^{+40%} _{-30%})
RM10G	0.453	45.0	99.0	4500	90.0	90.0C	69.5	22.0	4200(^{+30%} _{-20%})	—	—
RM12GA	0.374	56.0	150	8400	125	125C	113	44.1	5300(^{+30%} _{-20%})	—	—
RM12G	0.374	56.0	150	8400	125	125C	113	44.1	5300(^{+30%} _{-20%})	—	—

Conventional type EP CORES



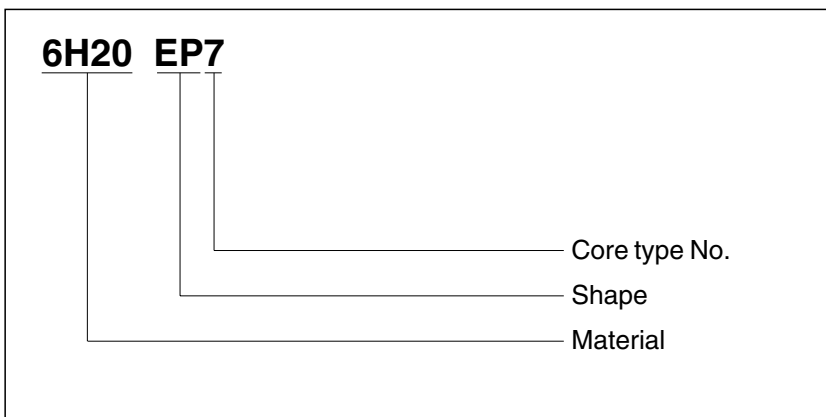
Features

- ① Suitable for the designing of small-sized transformers.
- ② A high magnetic shield performance.

Applications

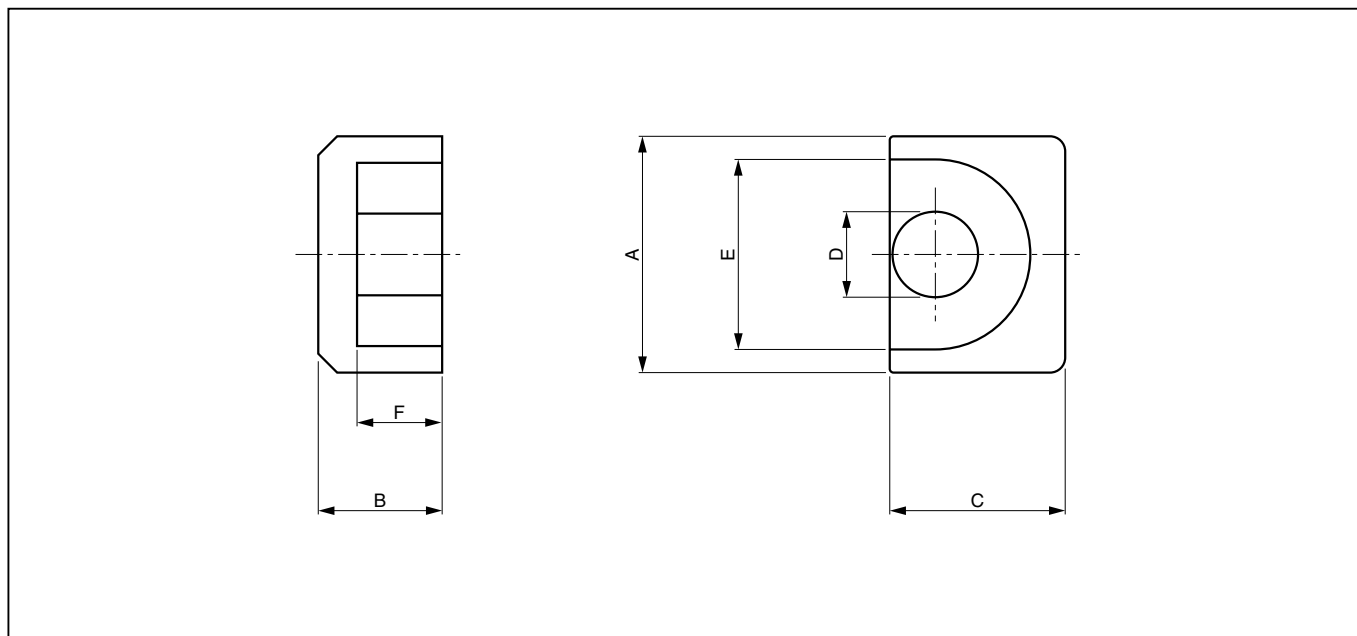
Wide band transformers, switching regulators, coils, etc.

Designation



Conventional type EP CORES

Summary



Product code	General standard		Dimensions (mm)					
	IEC	JIS	A	B	C	D	E	F
EP7	EP7	EP7	9.2±0.2	3.75 ⁺⁰ _{-0.1}	6.5 ⁺⁰ _{-0.3}	3.4 ⁺⁰ _{-0.2}	7.4±0.2	2.5 ^{+0.2} ₀
EP10	EP10	EP10	11.5±0.3	5.2 ⁺⁰ _{-0.2}	7.85 ⁺⁰ _{-0.4}	3.45 ⁺⁰ _{-0.3}	9.4±0.2	3.6 ^{+0.2} ₀
EP13	EP13	EP13	12.5±0.3	6.5 ⁺⁰ _{-0.15}	9.0 ⁺⁰ _{-0.4}	4.5 ⁺⁰ _{-0.3}	10.0±0.3	4.5 ^{+0.2} ₀
EP13B			12.5±0.4	6.5±0.15	9.0 ⁺⁰ _{-0.4}	4.5 ⁺⁰ _{-0.4}	9.9—0	4.7 ^{+0.2} _{-0.1}
EP17	EP17	EP17	18.0±0.4	8.5 ⁺⁰ _{-0.3}	11.25 ⁺⁰ _{-0.5}	5.85 ⁺⁰ _{-0.35}	12.0±0.4	5.5 ^{+0.3} ₀
EP20	EP20	EP20	24.0±0.5	10.8 ⁺⁰ _{-0.2}	15.3 ⁺⁰ _{-0.7}	9.0 ⁺⁰ _{-0.5}	16.5±0.4	7.0 ^{+0.3} ₀

Product code	Magnetic parameter								AL (nH)			
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	6H20	2H07	2H10	2H15
EP7	1.52	15.7	10.3	163	8.55	8.55C	10.7	1.3	1100(^{+30%} _{-20%})	2000(±30%)	5200(^{+40%} _{-30%})	—
EP10	1.70	19.2	11.3	218	8.55	8.55C	22.6	2.8	1100(^{+30%} _{-20%})	2000(±30%)	4800(^{+40%} _{-30%})	—
EP13	1.24	24.2	19.6	476	14.9	14.9C	26.0	4.8	1600(^{+30%} _{-20%})	3000(±30%)	7000(^{+40%} _{-30%})	8500(^{+40%} _{-30%})
EP13B	1.24	24.2	19.6	476	14.9	14.9C	26.0	4.8	—	—	—	7800(—0%)
EP17	0.840	28.5	33.9	964	25.3	25.3C	35.7	11.8	2400(^{+30%} _{-20%})	—	—	—
EP20	0.508	39.8	78.3	3110	60.1	60.1C	55.4	29.2	4000(^{+30%} _{-20%})	—	—	—

Conventional type PM CORES



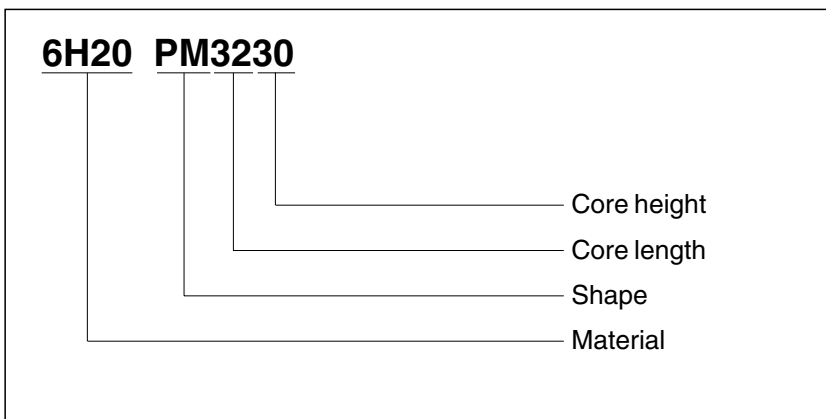
Features

- ① 8 basic shapes available.
- ② Suitable for high-density mounting.

Applications

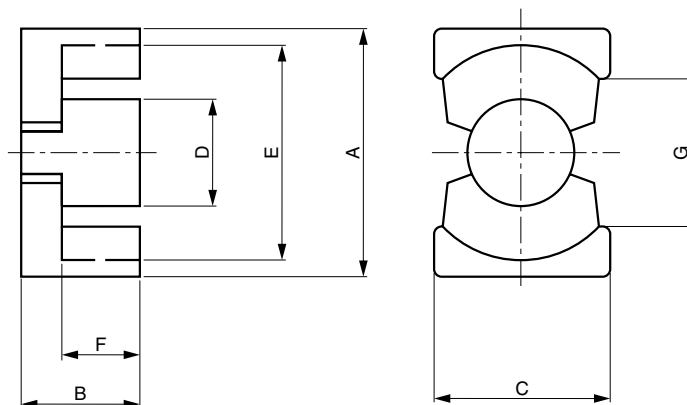
Switching regulators, choke coils, etc.

Designation



Conventional type PM CORES

Summary



Product code	Dimensions (mm)						
	A	B	C	D	E	F	G
PM2010	20.5±0.4	4.95±0.05	14.0±0.4	9.0 ⁺⁰ _{-0.4}	18.0±0.4	2.03±0.13	12.0—0
PM2016	20.5±0.4	8.2 ⁺⁰ _{-0.2}	14.0±0.4	9.0 ⁺⁰ _{-0.4}	18.0±0.4	5.0 ^{+0.5} ₋₀	12.0—0
PM2020	20.5±0.4	10.2 ⁺⁰ _{-0.2}	14.0±0.4	9.0 ⁺⁰ _{-0.4}	18.0±0.4	7.0 ^{+0.5} ₋₀	12.0—0
PM2619	26.5±0.45	9.7 ⁺⁰ _{-0.25}	19.0±0.45	12.2 ⁺⁰ _{-0.4}	22.5±0.45	5.1 ^{+0.5} ₋₀	15.5—0
PM2620	26.5±0.45	10.2 ⁺⁰ _{-0.25}	19.0±0.45	12.2 ⁺⁰ _{-0.4}	22.5±0.45	5.6 ^{+0.5} ₋₀	15.5—0
PM2625	26.5±0.5	12.5 ⁺⁰ _{-0.25}	19.0±0.5	12.2 ⁺⁰ _{-0.4}	22.5±0.5	7.9 ^{+0.5} ₋₀	15.5—0
PM3220	32.0±0.5	10.4 ⁺⁰ _{-0.25}	22.0±0.5	13.7 ⁺⁰ _{-0.5}	27.5±0.5	5.6 ^{+0.5} ₋₀	19.0—0
PM3230	32.0±0.5	15.3 ⁺⁰ _{-0.25}	22.0±0.5	13.7 ⁺⁰ _{-0.5}	27.5±0.5	10.5 ^{+0.5} ₋₀	19.0—0
PM3530	35.0 ^{+0.7} _{-0.5}	15.0 ⁺⁰ _{-0.25}	26.0±0.5	14.6 ⁺⁰ _{-0.5}	32.0±0.5	9.85 ^{+0.5} ₋₀	23.5—0
PM3535	35.0 ^{+0.7} _{-0.5}	17.5 ⁺⁰ _{-0.25}	26.0±0.5	14.6 ⁺⁰ _{-0.5}	32.0±0.5	12.35 ^{+0.5} ₋₀	23.5—0

Product code	Magnetic parameter								AL (nH)	
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	6H20	7H10
PM2010	0.405	25.0	61.7	1540	60.8	60.8C	18.7	9.0	4200(±25%)	—
PM2016	0.605	37.4	62.0	2310	60.8	60.8C	47.4	13.0	3450(±25%)	—
PM2020	0.738	45.4	62.0	2790	60.8	60.8C	65.8	15.0	2900(±25%)	2100(±25%)
PM2619	0.366	43.5	119	5180	113	113C	56.2	29.8	5300(±25%)	—
PM2620	0.391	46.3	119	5490	113	113C	60.4	31.0	5500(±25%)	4050(±25%)
PM2625	0.472	55.5	118	6530	113	113C	84.5	34.7	4650(±25%)	—
PM3220	0.326	55.5	170	9420	142	142C	80.8	41.2	6750(±25%)	—
PM3230	0.464	74.6	161	12000	142	142C	150	56.6	4900(±25%)	—
PM3530	0.397	77.9	196	15300	162	162C	178	62.6	5000(±25%)	4000(±25%)
PM3535	0.448	87.9	196	17300	162	162C	221	71.4	5000(±25%)	3700(±25%)

Conventional type FR CORES



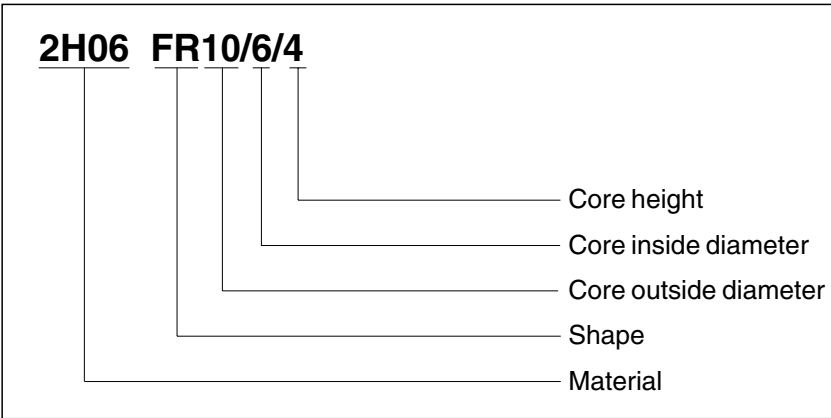
Features

① Customers are invited to select the most suitable products from a wide selection of shapes.

Applications

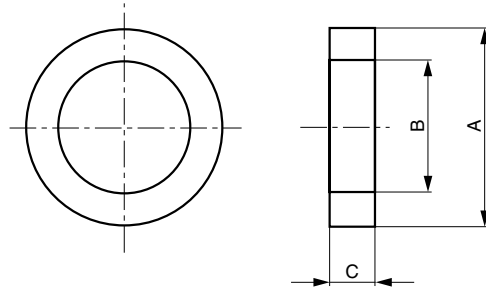
Line filters, pulse transformers, choke coils, various coils, etc.

Designation



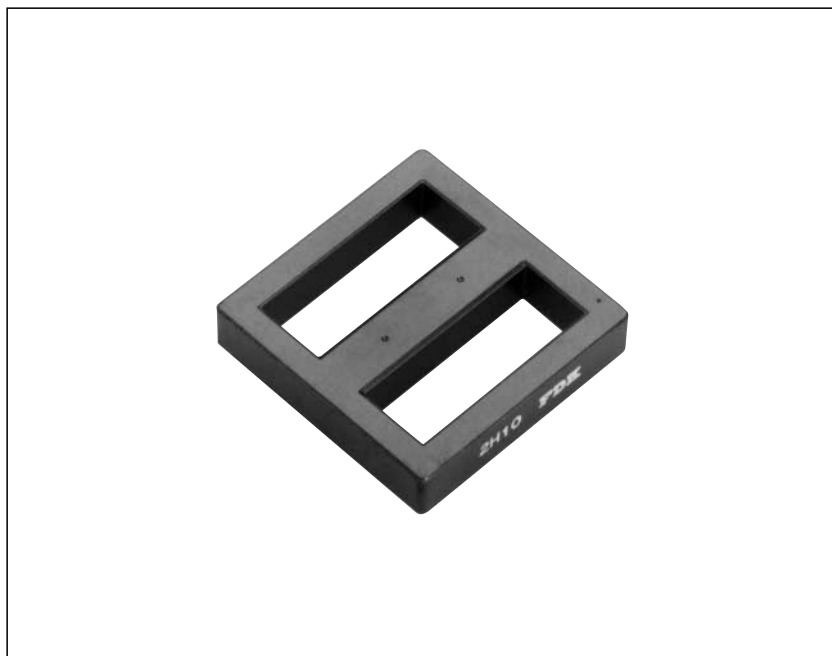
Conventional type FR CORES

Summary



Product code	General standard		Dimensions (mm)			Magnetic parameter					AL (nH)			
	IEC	JIS	A	B	C	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	W (×10 ⁻³ kg)	2H06	2H07	2H10	2H15
FR4/2.2/2.7			4.0±0.2	2.2±0.2	2.7±0.2	4.20	9.18	2.18	20.1	0.11	—	—	3000(±30%)	4500(±30%)
FR5.9/3.1/3.2			5.9±0.2	3.1±0.2	3.2±0.2	3.07	13.2	4.15	54.9	0.30	—	2800(±25%)	—	—
FR9.5/4.8/4.8			9.53±0.25	4.75±0.25	4.78±0.25	1.92	20.7	10.8	224	1.1	—	—	6600(±30%)	9900(±30%)
FR10/6/4	R10		10.0±0.3	6.0±0.3	4.0±0.2	3.07	24.0	7.80	187	1.0	2500(+25% -40%)	2800(±25%)	4000(±30%)	—
FR11/5/3			11.0±0.3	5.0±0.2	3.0±0.2	2.67	22.7	8.54	194	1.1	2400(±25%)	3300(±25%)	4500(±30%)	—
FR12/6/4	FOR12	FOR12	12.0±0.4	6.0±0.3	4.0±0.3	2.26	26.1	11.5	301	1.5	3500(+25% -40%)	3750(±25%)	5300(±30%)	—
FR12.5/8/8			12.5±0.3	8.0±0.3	8.0±0.3	1.76	31.2	17.7	552	2.8	2800(+100% -0%)	4700(±25%)	—	—
FR12.7/8/6	T12.7		12.7±0.3	7.9±0.3	6.35±0.3	2.10	31.2	14.9	465	2.3	3000(±25%)	4200(±30%)	5500(±30%)	—
FR13/7/5			13.0±0.4	7.0±0.3	5.0±0.3	2.05	29.5	14.4	423	2.1	3200(±25%)	4400(±25%)	5900(±30%)	—
FR14/7.5/7			13.9±0.25	7.57 ^{+0.3} _{-0.12}	6.95±0.15	1.52	31.9	21.1	673	3.8	4250(+30% -15%)	—	—	—
FR14/7/4	FOR14	FOR14	14.0±0.3	7.0±0.2	4.0±0.2	2.27	30.5	13.5	410	2.0	3000(±25%)	4100(±25%)	5000(±30%)	—
FR14/7/7			14.0±0.3	7.0±0.2	7.0±0.2	1.29	30.5	23.5	717	3.9	4625(-0%)	—	—	—
FR16/10/7			16.0±0.3	10.0±0.3	7.0±0.3	1.90	38.9	20.5	857	4.0	2800(+40% -20%)	4800(±25%)	6400(±25%)	—
FR16/10/8	FOR16	FOR16	16.0±0.3	10.0±0.3	8.0±0.3	1.67	39.4	23.6	928	4.6	3500(+25% -40%)	5600(±25%)	7500(±30%)	—
FR19/10/10	FOR19	FOR19	18.45±0.3	9.75±0.3	10.25±0.3	1.02	41.4	42.1	1740	9.2	6900(±25%)	9400(±30%)	12600(±30%)	—
FR20/12/4			19.95±0.3	12.05±0.3	4.15±0.3	3.00	48.1	16.0	770	3.9	2100(+40% -20%)	3000(+40% -20%)	—	—
FR20/12/8			19.95±0.3	12.05±0.3	8.0±0.3	1.55	48.2	30.9	1490	7.6	4500(±25%)	5600(±25%)	8100(±25%)	—
FR22/14/8			22.0±0.5	14.0±0.4	8.0±0.3	1.74	83.4	48.0	4000	8.7	2650(-0%)	5300(±25%)	7100(±30%)	—
FR22/14/10	FOR22	FOR22	22.0±0.3	14.0±0.3	10.0±0.3	1.41	54.7	38.8	2120	11.1	4900(±25%)	6700(+40% -25%)	8900(±30%)	—
FR22/14/12.7			22.0 ^{+0.25} _{-0.4}	14.0±0.25	12.7±0.25	1.10	54.7	49.9	2730	14.3	6250(+30% -15%)	—	—	—
FR25/15/10	R25		25.0±0.5	15.0±0.5	10.0±0.5	1.23	60.2	48.9	2940	15.0	5500(±25%)	7500(±25%)	10000(±30%)	—
FR25/15/12	FOR25	FOR25	25.0±0.5	15.0±0.5	12.0±0.3	1.03	60.2	58.7	3530	18.0	6500(±30%)	9000(±25%)	12000(±25%)	—
FR29/16/12			29.0±0.5	16.0±0.5	12.0±0.5	0.880	66.7	75.7	5050	26.5	7800(±25%)	—	—	—
FR31/20/10			31.0 ⁺⁰ _{-0.8}	20.0 ^{+0.5} ₋₀	10.0 ⁺⁰ _{-0.6}	1.63	77.7	47.5	3690	18.5	4400(±30%)	5900(±30%)	—	—
FR31/20/16			31.0 ⁺⁰ _{-0.8}	20.0 ^{+0.5} ₋₀	16.0±0.3	0.953	77.7	81.5	6330	31.7	7000(+40% -20%)	9900(+40% -25%)	—	—
FR38/19/13	FOR38	FOR38	38.0±0.7	19.0±0.5	13.0±0.4	0.697	82.7	119	9820	53.1	9300(±25%)	8600(-0%)	—	—
FR38/19/6	T38.1		38.0±0.7	19.0±0.5	6.35±0.35	1.43	82.7	57.8	4780	25.9	4400(±25%)	6000(±25%)	—	—
FR40/20/12			40.0 ⁺⁰ _{-1.0}	20.0 ^{+0.5} ₋₀	12.0 ^{+0.6} ₋₀	0.809	93.9	116	9780	53.3	8000(+40% -20%)	11500(±25%)	—	—
FR50/25/10			50.0 ⁺⁰ _{-1.2}	25.0 ^{+0.6} ₋₀	10.0 ^{+0.6} ₋₀	0.959	117	122	14300	69.9	6600(+40% -20%)	9900(±25%)	—	—
FR102/65/20			102±1.5	65.0±1.0	10.0±0.5	1.40	254	181	46000	233	—	3540(+50% -10%)	—	—

Conventional type FUR CORES



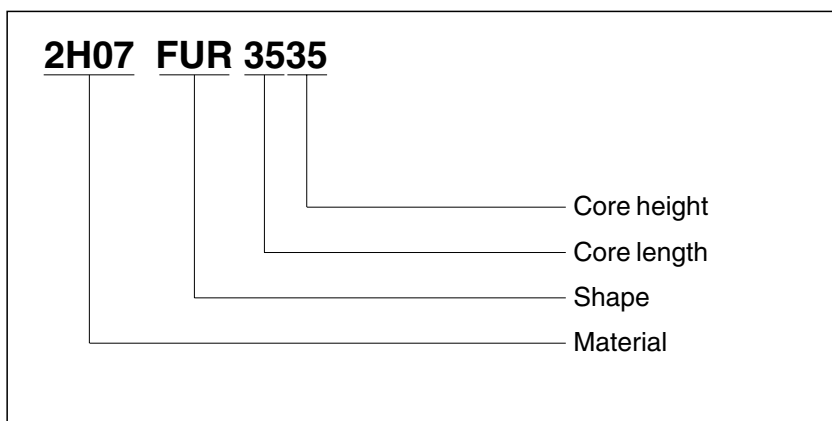
Features

- ① Most suitable for the designing of high inductance transformer in small size.
- ② Customers are invited to select the most suitable product from three shapes.

Applications

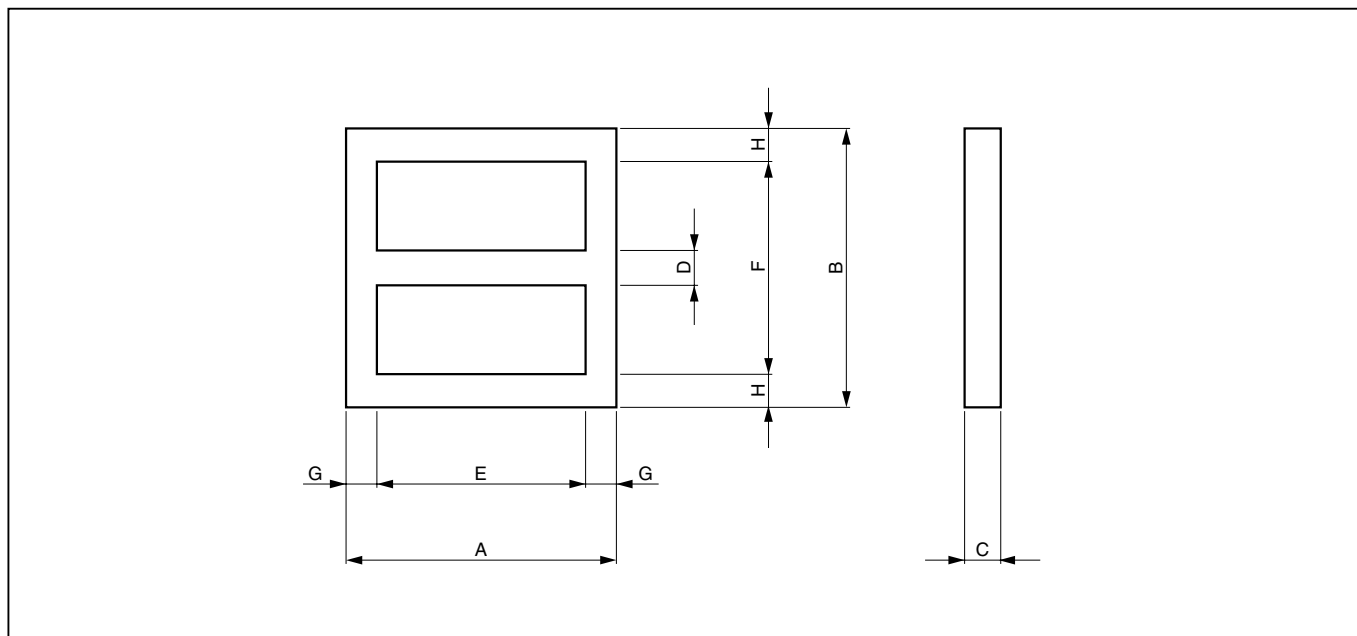
Line filters

Designation



Conventional type FUR CORES

Summary



Product code	Dimensions (mm)							
	A	B	C	D	E	F	G	H
FUR2424	24.0 ^{+0.7} _{-0.3}	24.0 ^{+0.7} _{-0.3}	4.0±0.3	4.0±0.2	19.0—0	19.0—0	2.4±0.15	2.4±0.15
FUR2828	28.2 ^{+0.8} _{-0.3}	28.2 ^{+0.8} _{-0.3}	5.0±0.3	5.0±0.2	22.2—0	22.2—0	2.9±0.15	2.9±0.15
FUR3535	35.0 ^{+0.9} _{-0.3}	35.0 ^{+0.9} _{-0.3}	7.5±0.3	7.5±0.25	26.8—0	26.8—0	4.0±0.2	4.0±0.2

Product code	Magnetic parameter								AL (nH)	
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	2H07	2H10
FUR2424	3.44	60.3	17.5	1050	16.0	16.0C	149	5.6	2600 ^{(+40%} _(-25%)	3600 ^{(+40%} _(-25%)
FUR2828	2.70	70.0	27.0	1890	25.0	25.0C	200	10.2	3550 ^{(+40%} _(-25%)	4690 ^{(+40%} _(-25%)
FUR3535	1.46	85.2	58.3	4960	56.3	56.3C	271	25.8	6000 ^{(+40%} _(-25%)	—

Conventional type FU CORES



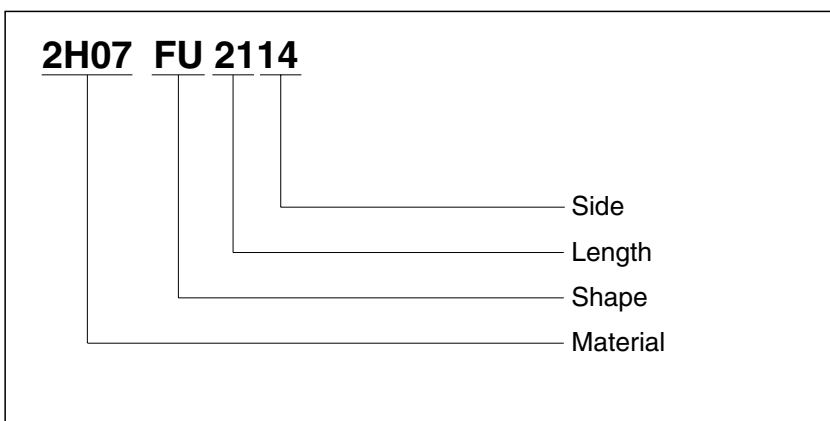
Features

- ① Wide selection of the shapes for customer's choice.

Applications

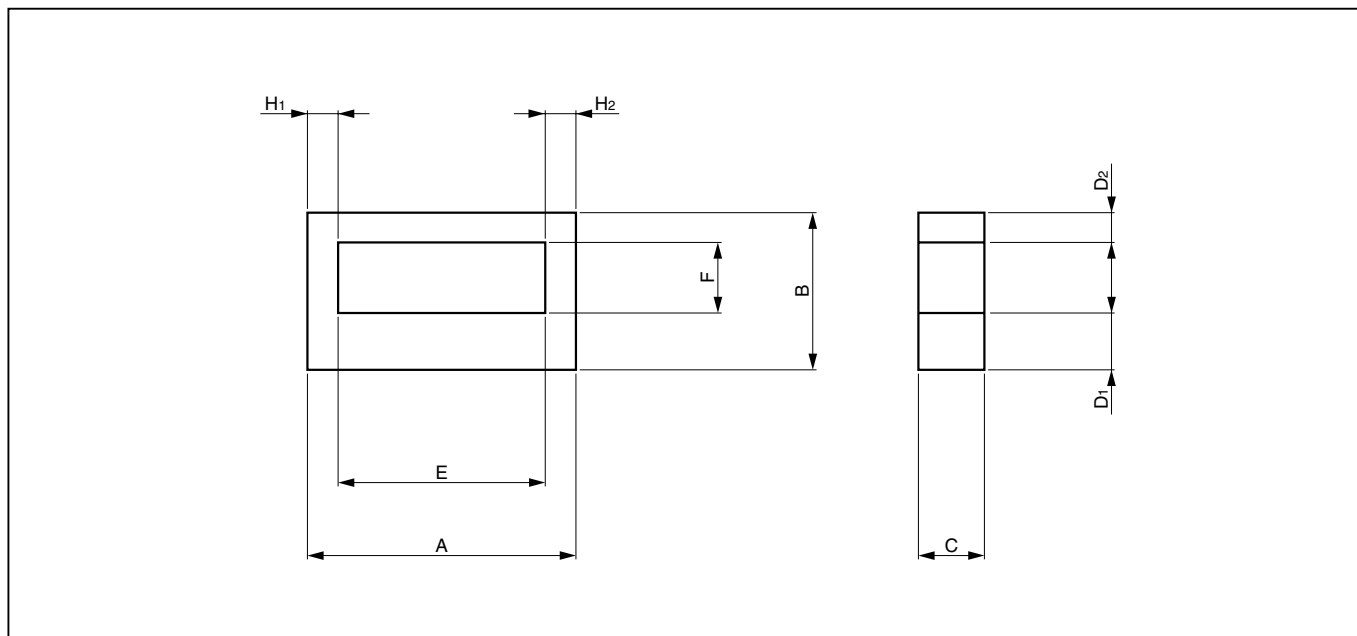
Line filters, etc.

Designation



Conventional type FU CORES

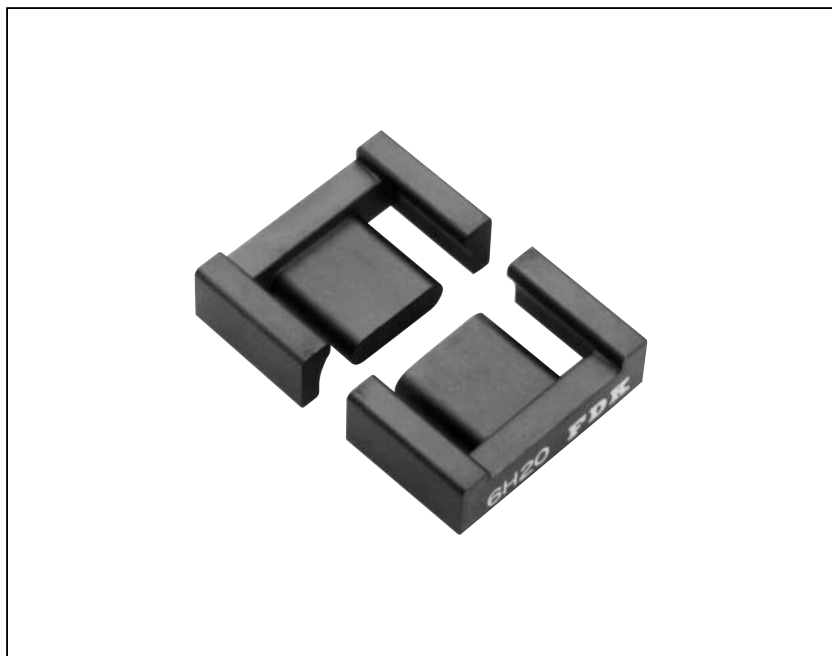
Summary



Product code	Dimensions (mm)								
	A	B	C	D ₁	D ₂	E	F	H ₁	H ₂
FU2014	20.5+0	14.0+0	4.1±0.2	3.2 ^{+0.25} ₋₀	3.2 ^{+0.25} ₋₀	13.0 ^{+0.6} ₋₀	6.7 ^{+0.4} ₋₀	3.2 ^{+0.25} ₋₀	3.2 ^{+0.25} ₋₀
FU2114	20.6±0.3	14.1±0.25	4.6±0.2	4.2±0.2	2.4±0.15	15.7-0	7.35-0	2.3±0.15	2.3±0.15
FU2216	21.5±0.3	15.6±0.2	3.75±0.2	3.7	5.0	15.5±0.2	6.9±0.2	—	—
FU2316	24.0+0	16.2+0	4.6 ^{+0.3} _{-0.2}	3.6 ^{+0.25} ₋₀	3.6 ^{+0.25} ₋₀	15.6 ^{+0.7} ₋₀	8.1 ^{+0.4} ₋₀	3.6 ^{+0.25} ₋₀	3.6 ^{+0.25} ₋₀
FU2618	25.6±0.4	17.6±0.3	5.2±0.25	5.2±0.15	3.4±0.15	19.5-0	8.7-0	2.9±0.15	2.9±0.15
FU3223	32.3+0	23.3+0	7.8±0.2	6.3 ^{+0.3} ₋₀	6.3 ^{+0.3} ₋₀	18.5 ^{+0.9} ₋₀	9.6 ^{+0.5} ₋₀	6.3±0.15	6.3±0.15

Product code	Magnetic parameter							AL (nH)		
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	2H07	2H10
FU2014	4.07	51.2	12.6	645	12.6	12.6	91.8	3.2	1950(±30%)	—
FU2114	4.37	52.9	12.1	638	19.3	10.6	120	3.8	2200(^{+40%} _{-30%})	2900(^{+40%} _{-25%})
FU2216	4.30	55.0	12.8	704	13.5	10.8	107	3.7	2500(^{+30%} _{-15%})	—
FU2316	3.88	62.1	15.5	963	15.5	15.5	132	4.7	2350(±30%)	—
FU2618	3.89	68.4	17.6	1200	22.4	15.1	178	6.5	2500(^{+30%} _{-25%})	3090(^{+30%} _{-25%})
FU3223	1.73	77.7	45.0	3500	45.8	44.6	187	16.5	5450(±30%)	—

Conventional type EED CORES



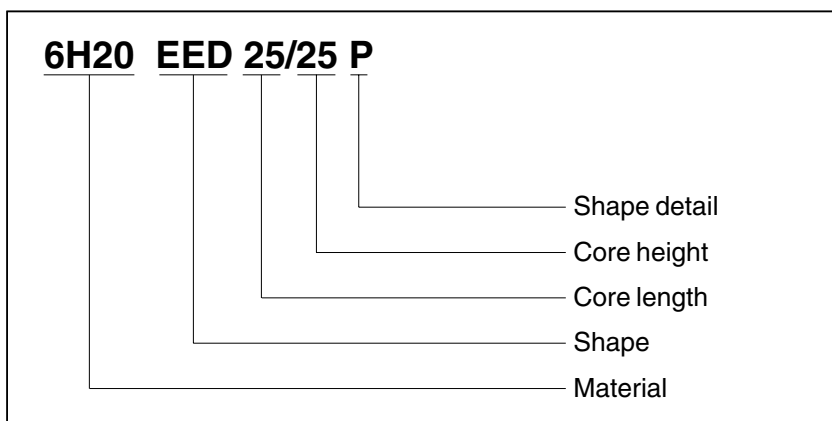
Features

- ① Most suitable for the designing of small sized transformer.
- ② Customers are invited to select the most suitable products from a wide selection of shapes.

Applications

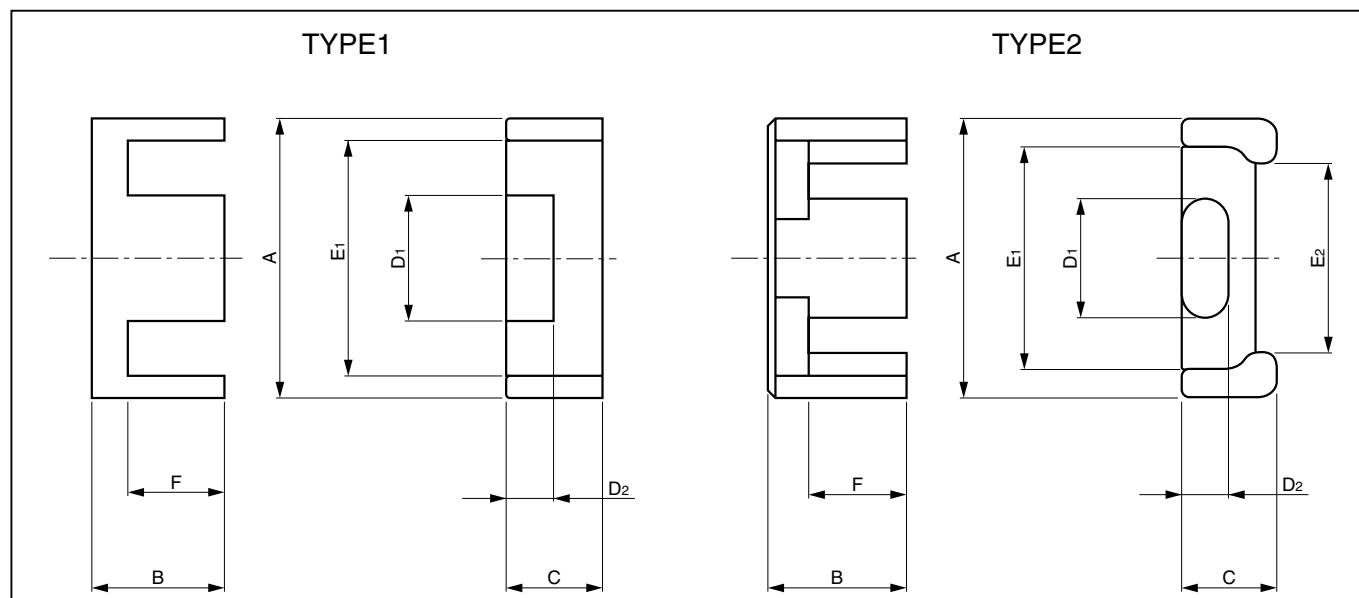
Switching regulators, choke coils, etc.

Designation



Conventional type EED CORES

Summary



Product code	Type	General standard		Dimensions (mm)							
		IEC	JIS	A	B	C	D ₁	D ₂	E ₁	E ₂	F
EED12/12D	1			12.5±0.3	6.2±0.1	3.5±0.1	5.4±0.15	2.0±0.1	9.0±0.25	—	4.55±0.15
EED13/13P	2		FEPC13	13.2±0.25	6.6±0.2	4.6±0.15	5.6±0.15	2.05±0.1	10.7±0.2	8.3—0	4.5±0.2
EED15/15D	1			15.0±0.4	7.5±0.15	4.65±0.15	5.3±0.15	2.4±0.1	11.0±0.35	—	5.5±0.25
EED16/15	2			16.0 ^{+0.4} _{-0.2}	7.5 ^{+0.3} ₋₀	7.5 ^{+0.3} _{-0.1}	6.5 ⁺⁰ _{-0.2}	5.0 ⁺⁰ _{-0.2}	12.7 ^{+0.6} ₋₀	10.5 ^{+0.4} _{-0.2}	5.6 ^{+0.25} ₋₀
EED16/15A	1			16.0±0.3	7.25±0.2	4.8±0.2	6.1 ^{+0.05} _{-0.25}	2.4±0.1	11.8—0	—	5.05±0.2
EED17/17P	2		FEPC17	17.5±0.3	8.55±0.2	6.0±0.15	7.7±0.15	2.8±0.1	14.5±0.3	12.0±0.5	6.05±0.2
EED19/19P	2		FEPC19	19.0±0.3	9.75±0.2	6.0±0.15	8.5±0.15	2.5±0.1	16.0±0.3	13.6±0.5	7.25±0.2
EED20/20D	1			20.0±0.55	10.0±0.15	6.65±0.15	8.9±0.2	3.6±0.15	15.4±0.5	—	7.7±0.25
EED25/25D	1			25.0±0.65	12.5±0.15	9.1±0.2	11.4±0.2	5.2±0.15	18.7±0.6	—	9.3±0.25
EED25/25P	2		FEPC25	25.0±0.4	12.5±0.2	8.0±0.2	11.5±0.2	4.0±0.1	21.0±0.35	17.5±0.5	9.0±0.3
EED27/32P	2		FEPC27	27.0±0.4	16.0±0.2	8.0±0.2	13.0±0.3	4.0±0.1	22.0±0.4	19.0±0.5	12.0±0.3
EED30/35P	2		FEPC30	30.0±0.4	17.5±0.2	8.0±0.2	15.0±0.3	4.0±0.1	24.0±0.4	20.5±0.5	13.0±0.3

Product code	Magnetic parameter								AL (nH)
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (×10 ⁻³ kg)	6H20
EED12/12D	2.50	28.5	11.4	325	10.7	10.7C	16.4	1.7	800(±25%)
EED13/13P	2.46	30.6	12.5	382	10.6	10.6C	23.0	2.1	870(±25%)
EED15/15D	2.27	34.0	15.0	510	12.2	12.2C	31.4	2.8	900(±25%)
EED16/15	1.28	36.5	28.6	1040	27.9	27.9C	37.8	5.1	1400(±25%)
EED16/15A	1.94	33.1	17.1	566	14.4	14.4C	30.6	3.1	1000(±25%)
EED17/17P	1.76	40.2	22.8	917	19.9	19.9C	41.1	4.5	1150(±25%)
EED19/19P	2.03	46.1	22.7	1050	19.9	19.9C	54.4	5.3	940(±25%)
EED20/20D	1.52	47.0	31.0	1460	31.0	31.0C	50.1	7.1	1500(±25%)
EED25/25D	0.980	57.0	58.0	3310	57.5	57.0L	67.9	16.6	2100(±25%)
EED25/25P	1.28	59.2	46.4	2750	42.6	42.6C	85.5	13.0	1600(±25%)
EED27/32P	1.34	73.1	54.6	4000	48.6	48.6C	108	18.0	1600(±25%)
EED30/35P	1.32	81.6	61.0	5040	56.6	56.6C	117	23.0	1600(±25%)

Low profile type

Features

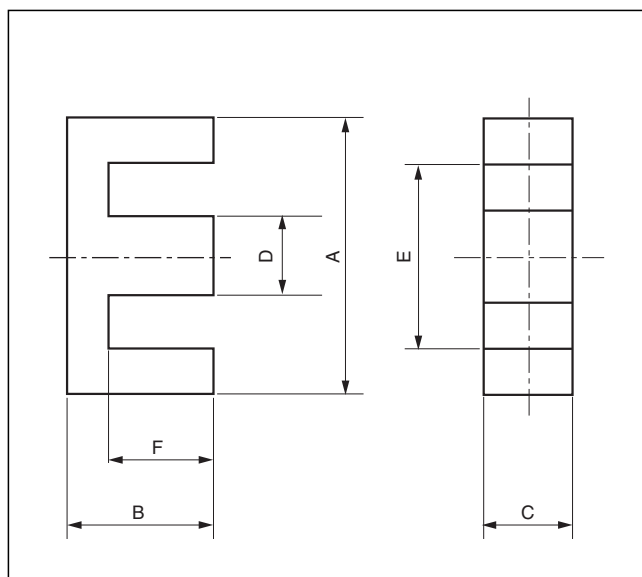
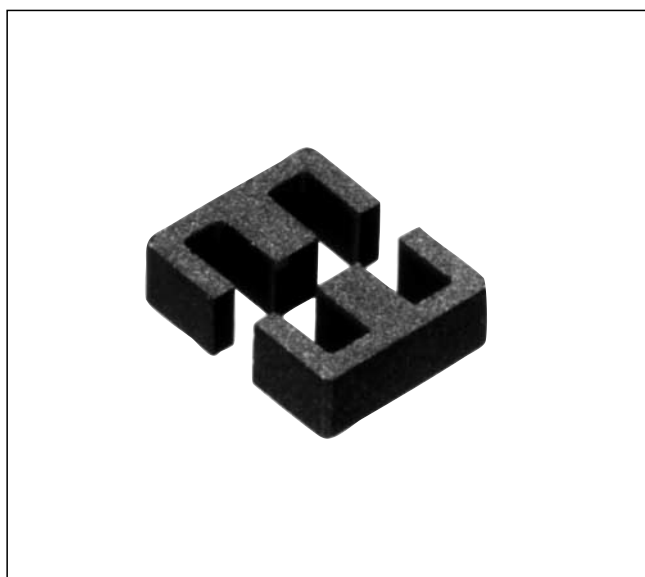
- ① Suitable for the designing of low profiled transformers.
- ② Customers are invited to select the most suitable products from a wide selection of shapes.

Applications

DC-DC converters

Low profile type Small E CORES

Summary

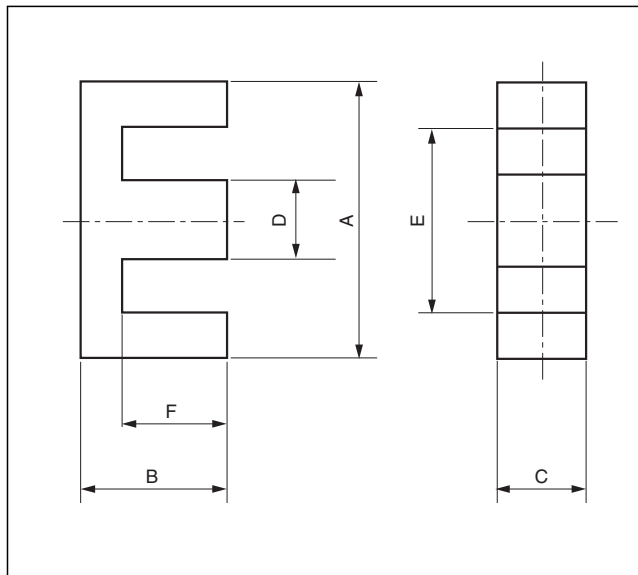
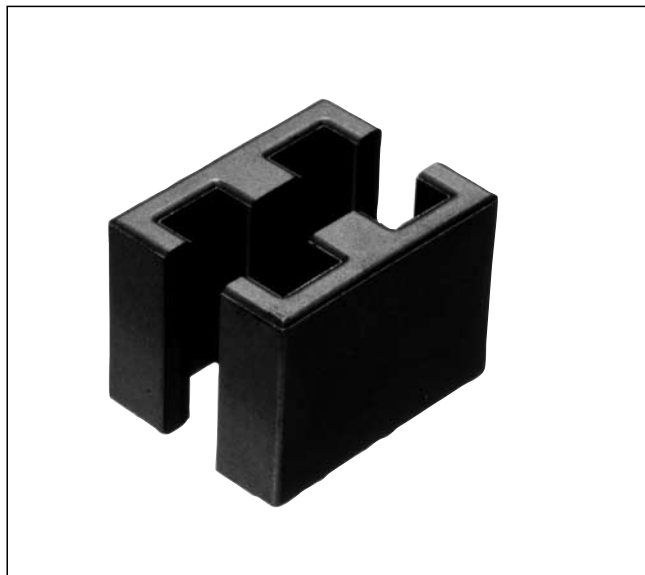


Product code	General standard		Dimensions (mm)					
	IEC	JIS	A	B	C	D	E	F
EE04/03			4.15±0.1	1.55±0.05	1.4±0.1	1.2±0.1	2.9±0.1	0.95±0.05
EE05/05	E5.3/2	FEE/5.25	5.25±0.05	2.65±0.05	1.95±0.05	1.35±0.05	3.85typ.	2typ.
EE07/06			6.5±0.3	3.0±0.15	1.8±0.15	1.5±0.15	4.5min.	2.1±0.15
EE09/08	E8.8/2	FEE/9	9.017typ.	3.937±0.127	1.905±0.102	1.905±0.127	5.207±0.127	2.159±0.127

Product code	Magnetic parameter							
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (g)
EE04/03	4.35	7.4	1.7	12.6	1.68	1.68BC	1.62	0.07
EE05/05	4.77	12.6	2.64	33.2	2.63	2.54B	5	0.17
EE07/06	4.7	14.2	3.02	42.9	2.7	2.70C	7.35	0.22
EE09/08	3.13	22.9	8.4	78	3.61	3.61C	7.23	0.4

Low profile type EE CORES

Summary

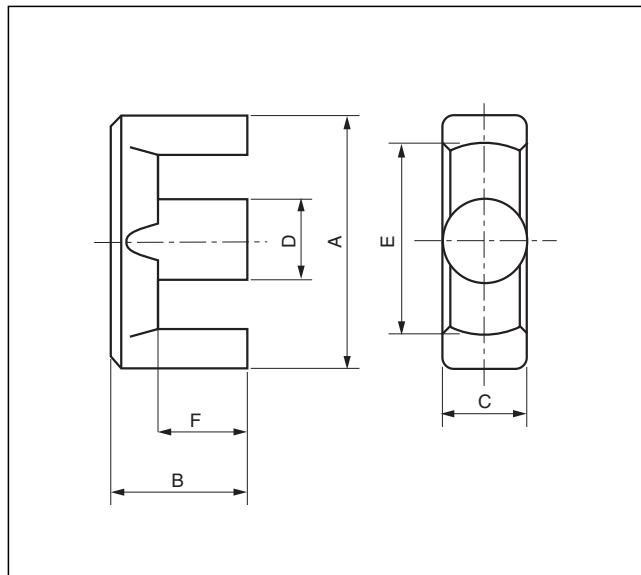
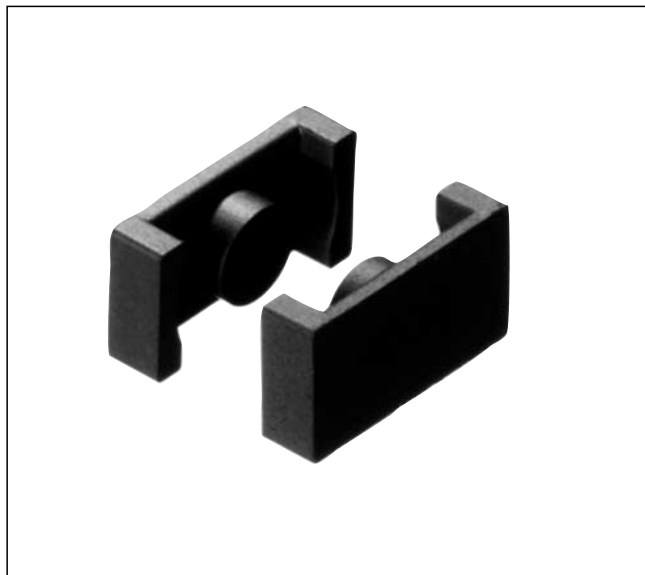


Product code	General standard		Dimensions (mm)					
	IEC	JIS	A	B	C	D	E	F
EE14/07	E/E14		14.0±0.3	3.5±0.1	5.0±0.1	3.0±0.1	11.0±0.25	2.0±0.1
EE18/08	E/E18		18.0±0.35	4.0±0.1	10.0±0.2	4.0±0.1	14.0±0.3	2.0±0.1
EE21/06			21.0±0.3	2.9 ⁺⁰ _{-0.2}	15.0±0.3	5.0±0.2	15.7min.	1.3±0.1
EE22/11A	E/E22		21.8±0.4	5.7±0.1	15.8±0.3	5.0±0.1	16.8±0.4	3.2±0.1

Product code	Magnetic parameter							
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (g)
EE14/07	1.45	20.7	14.3	296	15	13.9L	16	1.5
EE18/08	0.618	24.3	39.3	955	40	38.9L	20	4.8
EE21/06	0.418	21.6	51.7	1120	75	45B	13.9	5.6
EE22/11A	0.414	32.5	78.3	2540	79	77.9L	37.8	12.7

Low profile type EER CORES

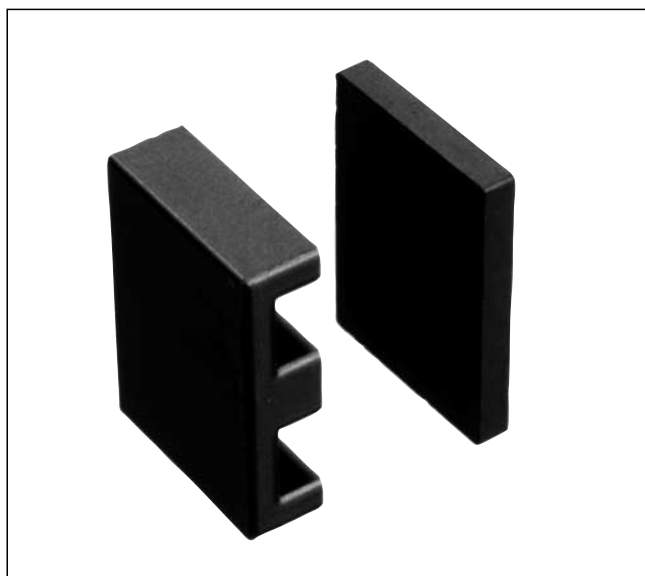
Summary



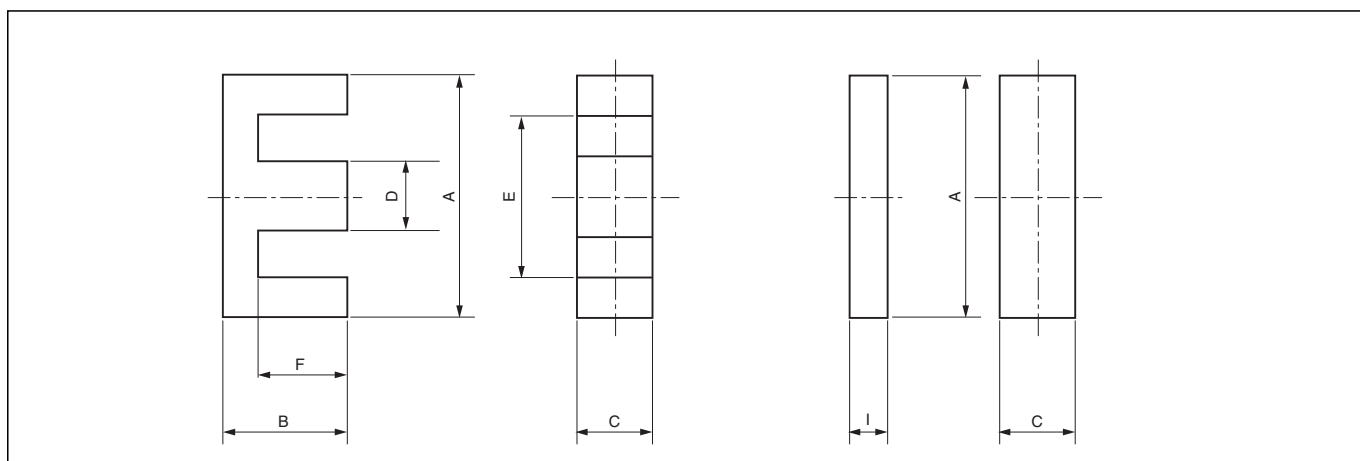
Product code	General standard		Dimensions (mm)					
	IEC	JIS	A	B	C	D	E	F
EER09/05			9.5 ⁺⁰ _{-0.4}	2.4 ⁺⁰ _{-0.2}	5.2 ⁺⁰ _{-0.3}	3.5 ⁺⁰ _{-0.3}	7.7 ^{+0.4} ₋₀	1.5 ^{+0.2} ₋₀
EER11/04			10.8±0.2	2.0 ⁺⁰ _{-0.1}	5.9±0.1	4.1±0.15	8.7min.	1.0 ^{+0.15} ₋₀
EER11/05			10.8±0.2	2.45±0.1	5.9±0.1	4.1±0.15	8.7min.	1.6±0.1
EER16/06			15.5±0.2	3.2 ⁺⁰ _{-0.15}	7.0 ⁺⁰ _{-0.3}	5.2 ⁺⁰ _{-0.2}	11.7 ^{+0.4} ₋₀	1.85 ^{+0.2} ₋₀
EER19/06A			19.08/20.09	2.93/3.12	7.19/7.59	5.47/5.96	14.38/15.39	1.27/1.47
EER24/06B			24.38±0.6	2.97±0.1	8.51±0.4	6.6±0.25	18.59±0.6	0.96±0.07
EER40/18			40.0±0.7	9.0 ⁺⁰ _{-0.2}	13.3±0.3	13.3±0.3	28.8min.	4.0±0.15

Product code	Magnetic parameter							
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (g)
EER09/05	1.73	13.8	7.96	110	8.81	7.07B	7.28	0.63
EER11/04	1.07	12.7	11.9	151	13.2	10.3B	5.27	0.9
EER11/05	1.24	14.7	11.9	175	13.2	10.3B	7.48	1
EER16/06	1.07	19.5	18.2	354	20.4	15.4B	11.1	2
EER19/06A	0.812	21.1	26	540	26	26CB	12.4	2.9
EER24/06B	0.656	23.6	36	840	34.2	34.2C	11.5	4.8
EER40/18	0.346	48.5	140	6780	139	130B	64.8	36.2

Low profile type EI CORES



Summary

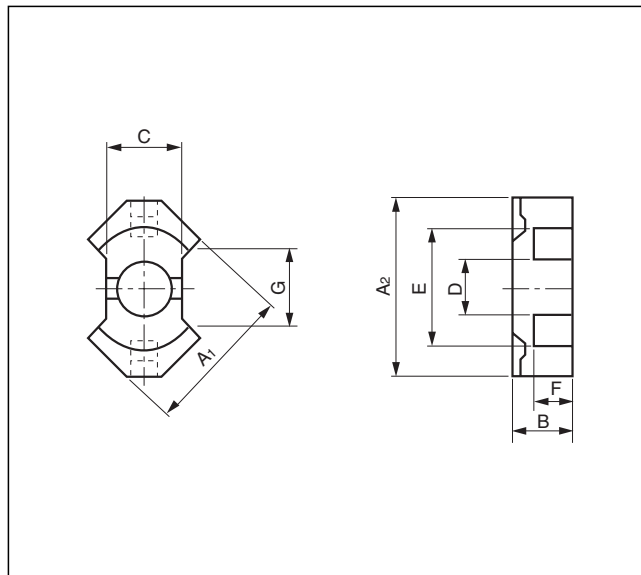


Product code	General standard		Dimensions (mm)						
	IEC	JIS	A	B	C	D	E	F	I
EI14/05	E/PLT14		14.0±0.3	3.5±0.1	5.0±0.1	3.0±0.1	11.0±0.25	2.0±0.1	1.5±0.1
EI18/06	E/PLT18		18.0±0.35	4.0±0.1	10.0±0.2	4.1±0.1	14.0±0.3	2.0±0.1	2.0±0.1
EI22/08			21.6±0.25	5.72±0.07	15.9±0.25	5.08±0.12	16.1min.	3.18±0.1	2.54±0.12
EI22/08A	E/PLT22		21.8±0.4	5.7±0.1	15.8±0.3	5.0±0.1	16.8±0.4	3.2±0.1	2.5±0.1

Product code	Magnetic parameter							
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (g)
EI14/05	1.15	16.7	14.5	242	15	13.9L	8	1.2
EI18/06	0.513	20.3	39.5	802	40	38.9L	10	4
EI22/08	0.32	25.8	80.5	2080	80.5	80.5LBC	15	10.8
EI22/08A	0.332	26.1	78.5	2050	79	77.9L	18.9	10.3

Low profile type RM CORES

Summary



Product code	General standard		Dimensions (mm)							
	IEC	JIS	A1	A2	B	C	D	E	F	G
RM5GA			12.3 ⁺⁰ _{-0.4}	14.9 ⁺⁰ _{-0.8}	3.56±0.05	6.8 ⁺⁰ _{-0.4}	4.9 ⁺⁰ _{-0.2}	10.2 ^{+0.4} ₋₀	1.6±0.1	6.0min.
RM5GP	RM5/8		12.3 ⁺⁰ _{-0.4}	14.9 ⁺⁰ _{-0.8}	3.9 ⁺⁰ _{-0.1}	6.8 ⁺⁰ _{-0.4}	4.9 ⁺⁰ _{-0.2}	10.2 ^{+0.4} ₋₀	1.8 ^{+0.2} ₋₀	6.0min.
RM6GL			14.7 ⁺⁰ _{-0.6}	17.9 ⁺⁰ _{-0.6}	3.55 ⁺⁰ _{-0.1}	8.2 ⁺⁰ _{-0.4}	6.4 ⁺⁰ _{-0.2}	12.4 ^{+0.5} ₋₀	1.35 ^{+0.2} ₋₀	8.4min.
RM6GP	RM6/9		14.7 ⁺⁰ _{-0.6}	17.9 ⁺⁰ _{-0.6}	4.5 ⁺⁰ _{-0.1}	8.2 ⁺⁰ _{-0.4}	6.4 ⁺⁰ _{-0.2}	12.4 ^{+0.5} ₋₀	2.25 ^{+0.2} ₋₀	8.4min.
RM8GP	RM8/11		19.7 ⁺⁰ _{-0.7}	23.2 ⁺⁰ _{-0.9}	5.8 ⁺⁰ _{-0.1}	11.0 ⁺⁰ _{-0.4}	8.55 ⁺⁰ _{-0.3}	17.0 ^{+0.6} ₋₀	2.95 ^{+0.2} ₋₀	10.5min.
RM10GL			24.7 ⁺⁰ _{-1.1}	28.5 ⁺⁰ _{-1.3}	4.75±0.1	13.5 ⁺⁰ _{-0.5}	10.9 ⁺⁰ _{-0.4}	21.2 ^{+0.9} ₋₀	1.98±0.1	11.3 ^{+1.3} ₋₀
RM10GP	RM10/13		24.7 ⁺⁰ _{-1.1}	28.5 ⁺⁰ _{-1.3}	6.5 ⁺⁰ _{-0.1}	13.5 ⁺⁰ _{-0.5}	10.9 ⁺⁰ _{-0.4}	21.2 ^{+0.9} ₋₀	3.35 ^{+0.2} ₋₀	11.3min.
RM12GB			29.8 ⁺⁰ _{-1.2}	37.6 ⁺⁰ _{-1.5}	8.5±0.2	—	12.8 ⁺⁰ _{-0.4}	24.9 ^{+1.1} ₋₀	5.35±0.15	12.9min.
RM12GP	RM12/17		29.8 ⁺⁰ _{-1.2}	37.6 ⁺⁰ _{-1.5}	8.4 ⁺⁰ _{-0.1}	—	12.8 ⁺⁰ _{-0.4}	24.9 ^{+1.1} ₋₀	4.5 ^{+0.25} ₋₀	12.9min.

Product code	Magnetic parameter							
	C ₁ (mm ⁻¹)	Le (mm)	Ae (mm ²)	Ve (mm ³)	Ac (mm ²)	Amin. (mm ²)	Aw (mm ²)	W (g)
RM5GA	0.794	18.9	23.8	450	18.1	18.1C	8.32	2.4
RM5GP	0.704	17.4	24.7	430	18.1	18.1C	9.5	2.6
RM6GL	0.496	17.7	35.7	632	31.2	30.7B	8.1	3.4
RM6GP	0.611	22	36	791	31.2	30.7B	13.5	4
RM8GP	0.409	27.7	67.6	1870	55.4	55B	24.9	9.2
RM10GL	0.271	26.8	99	2650	90	90C	20.3	13.2
RM10GP	0.334	33.4	100	3340	90	90C	34.5	17.2
RM12GB	0.271	26.8	99	2653	125	125C	20.4	13.2
RM12GP	0.279	41.3	148	6120	125	125C	54.5	33.6



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