PQ Cores

PQ CORES

PQ cores are designed specifically for switched mode power supplies. This design provides an optimized ratio of volume to winding area and surface area. As a result, both maximum inductance and winding area are possible with a minimum core size. The cores provide maximum power output with minimum assembled transformer weight and volume, in addition to taking up a minimum amount of area on the printed circuit board.

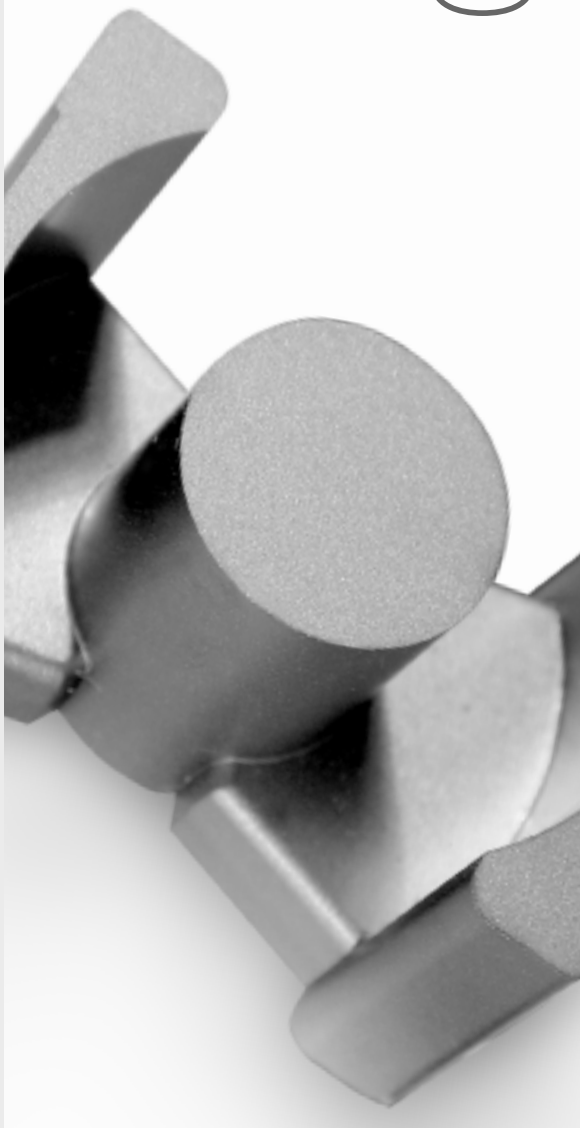
Assembly with printed circuit bobbins and one piece clamps is simplified. This efficient design provides a more uniform cross-sectional area; thus cores tend to operate with fewer hot spots than with other designs.

Typical applications include power transformers and power inductors.

HOW TO ORDER

O	P	4	20	16	UG	XX

- STANDARD CORE
- FERRITE CORE MATERIAL
- USED FOR ALL FERRITE TYPES
- APPROXIMATE DIAMETER IN MM
- APPROXIMATE HEIGHT IN MM
- GEOMETRY CODE/GAP CODE (SEE PAGE 1.5)
- SPECIAL SPECIFICATION CODE



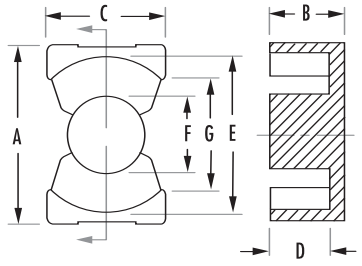
PQ
Core Data (ungapped)

Any practical gap is available. See page 1.8-1.11

			MECHANICAL DIMENSIONS (mm)								
PART	CORE TYPE	FIG.	A	B	2B	C	D	2D	E	F	G
0_42016UG	**PQ 20/16**	**1**	21.3 ± .4	8.1 ± .1	16.2 ± .2	14 ± .4	5.15 ± .15	10.3 ± .3	18 ± .4	8.8 ± .2	12 min
0_42020UG	**PQ 20/20**	**1**	21.3 ± .4	10.1 ± .1	20.2 ± .2	14. ± .4	7.15 ± .15	14.3 ± .3	18 ± .4	8.8 ± .2	12 min
0_42610UG		**1**	27.2 ± .45	5.1 ± .1	10.2 ± .2	19 ± .45	1.2 min	2.39 min	22.05 min	12.2 max	15.5 min
0_42614UG		**1**	27.2 ± .45	5.94 ± .1	11.9 ± .2	19. ± .45	3.4 min	6.7 min	22.05 min	12.2 max	15.5 min
0_42620UG	**PQ 26/20**	**1**	27.3 ± .46	10.1 ± .13	20.2 ± .25	19 ± .45	5.75 ± .15	11.5 ± .3	22.5 ± .45	12 ± .2	15.5 min
0_42625UG	**PQ 26/25**	**1**	27.3 ± .46	12.35 ± .13	24.7 ± .25	19 ± .45	8.05 ± .15	16.1 ± .3	22.5 ± .46	12 ± .2	15.5 min
0_43214UG		**1**	33 ± .5	5.94 ± .1	11.9 ± .2	22 ± .5	3.4 min	6.7 min	27 min	13.75 max	19 min
0_43220UG	**PQ 32/20**	**1**	33 ± .5	10.3 ± .13	20.6 ± .25	22 ± .5	5.75 ± .15	11.5 ± .3	27.5 ± .5	13.5 ± .25	19 min
0_43230UG	**PQ 32/30**	**1**	33 ± .5	15.15 ± .13	30.3 ± .25	22 ± .5	10.65 ± .15	21.3 ± .3	27.5 ± .5	13.5 ± .25	19 min
0_43535UG	**PQ 35/35**	**1**	36.1 ± .6	17.35 ± .13	34.7 ± .25	26 ± .5	12.5 ± .15	25 ± .3	32 ± .5	14.4 ± .25	23.5 min
0_44040UG	**PQ 40/40**	**1**	41.5 ± .9	19.9 ± .15	39.8 ± .3	28 ± .6	14.75 ± .2	29.5 ± .4	37 ± .6	14.9 ± .3	29 ± 1
0_45050UG	**PQ 50/50**	**1**	51 ± .7	25 ± .25	50 ± .5	32 ± .6	18.05 ± .3	36.1 ± .6	44 ± .7	20 ± .35	32 min

To order, add material code to part number.

FIGURE 1



PQ
Core Data (ungapped)

A_L (mH/1000T) min

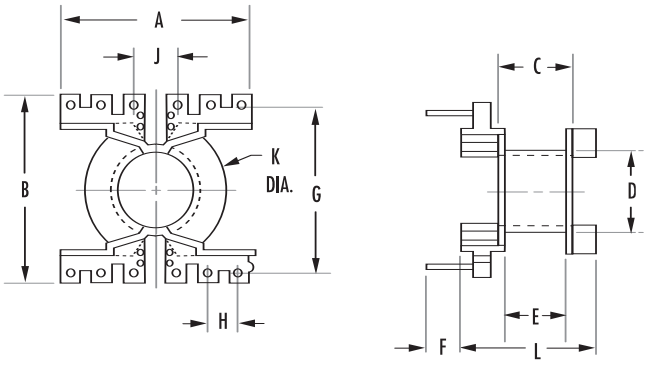
	POWER MATERIALS			MAGNETIC DATA						AVAILABLE HARDWARE	
PART	R	P	F	l_e (mm)	A_e (mm^2)	A min (mm^2)	V_e (mm^3)	CORE WEIGHT (grams per set)	WaAc (cm^4)	PRINTED CIRCUIT BOBBIN	MOUNTING CLAMP
0_42016UG	2,690	2,930	4,690	37.6	61.9	59.1	2,330	13	0.15	✓	✓
0_42020UG	2,210	2,410	3,860	45.7	62.6	59.1	2,850	15	0.23		✓
0_42610UG	5,800	6,310	8,080	29.4	105	93.8	3,090	15	0.09		
0_42614UG	4,210	4,585	7,335	33.3	86.4	70.9	2,880	14	0.17		
0_42620UG	4,170	4,540	7,270	45	121	109	5,470	31	0.39	✓	✓
0_42625UG	3,450	3,750	6,010	54.3	120	108	6,530	36	0.59	✓	✓
0_43214UG	5,150	5,600	8,960	34.4	109	92	3,750	21	0.3		
0_43220UG	4,980	5,410	9,737	55.9	169	142	9,440	42	0.8	✓	✓
0_43230UG	3,500	3,810	6,100	74.7	167	142	12,500	55	1.6	✓	✓
0_43535UG	3,610	3,930	7,347	86.1	190	162	16,300	73	3.12	✓	✓
0_44040UG	3,200	3,480	5,580	102	201	175	20,500	95	5	✓	✓
0_45050UG	5,550	6,146	9,639	113	328	314	37,100	195	—		

*F material nominal ±25%

Printed Circuit Bobbins

MECHANICAL DIMENSIONS (mm)													
PART	CORE SIZE	FIG.	A NOM	B NOM	C MAX	D NOM	E NOM	F NOM	G NOM	H NOM	J NOM	K NOM	L NOM
PCB2620LA	**42620**	**1**	26.49	29.31	10.99	14.19	8.99	7.36	25.4	3.81	7.62	21.59	21.64
PCB2625LA	**42625**	**1**	26.49	29.31	15.74	14.19	13.58	7.36	25.4	3.81	7.62	21.59	26.23
PCB3220LA	**43220**	**1**	32	33.98	10.99	15.9	8.78	6.35	30.48	5.08	7.62	26.59	22.83
PCB3230LA	**43230**	**1**	32	33.98	20.7	15.9	18.59	6.35	30.48	5.08	7.62	26.59	32.63
PCB3535LA	**43535**	**1**	35	38.98	24.46	16.78	22.3	6.35	35.56	5.08	10.16	31.09	37.16

FIGURE 1

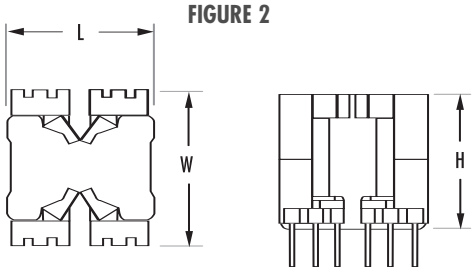


Printed Circuit Bobbins

PART	NOMINAL WINDING AREA PER SECTION cm^2	AVERAGE LENGTH OF TURN (mm)	BOBBIN MATERIAL	PIN MATERIAL	PIN DIAMETER (mm)	BOARD CLEARANCE (mm)*			
							Length	Width	Height
PCB2620LA	0.332	4.7	Rynite	Tin plated Brass	.91	no clamp	27.9	29.7	23.1
						with clamp	28.3	92.7	25.4
PCB2625LA	0.502	4.7	Rynite	Tin plated Brass	.91	no clamp	27.9	29.7	25.8
						with clamp	28.3	29.7	30
PCB3220LA	0.47	5.6	Rynite	Tin plated Brass	.91	no clamp	34	34.3	24.1
						with clamp	34.4	34.3	26.2
PCB3230LA	0.994	5.6	Rynite	Tin plated Brass	.91	no clamp	34	34.3	34
						with clamp	34.4	34.3	36
PCB3535LA	1.59	6.3	Rynite	Tin plated Brass	.91	no clamp	37.3	39.4	38.5
						with clamp	37.3	39.4	40.3

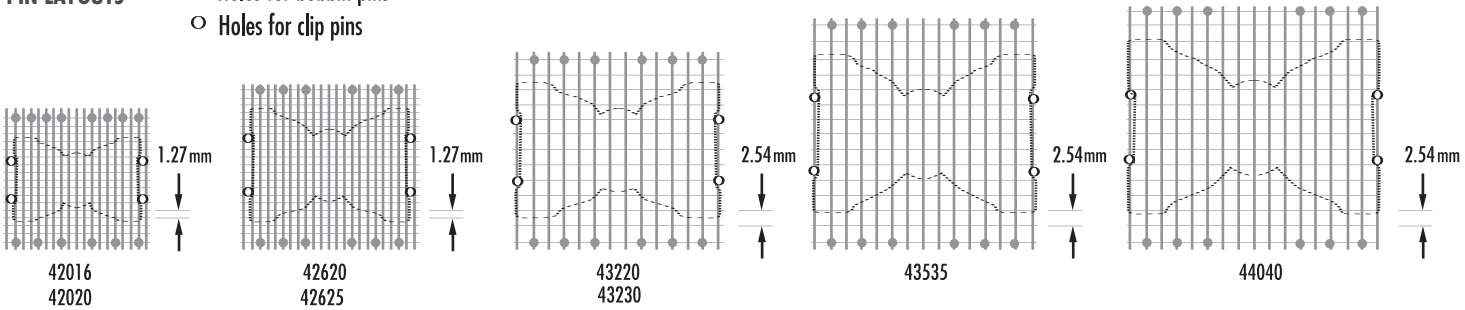
*reference figure 2 for board clearance

FIGURE 2



PIN LAYOUTS

● Holes for bobbin pins
○ Holes for clip pins



Mounting Clamps

			MECHANICAL DIMENSIONS (mm)							
PART	CORE SIZE	FIG.	A±.51	B±.08	C±.25	D REF	E NOM	F NOM	MATERIAL	MATERIAL THICKNESS (mm)
00C201612	**42016**	**1**	29	7.89	17.5	14.98	6.4	1.49	Nickel Silver	0.304
00C202012	**42020**	**1**	32.99	7.89	21.48	14.98	6.4	1.49	Nickel Silver	0.304
00C262012	**42620**	**1**	32.99	10.49	21.48	21	8.99	1.49	Nickel Silver	0.304
00C262512	**42625**	**1**	37.49	10.49	26.11	21	8.99	1.49	Nickel Silver	0.304
00C322017	**43220**	**1**	36.5	12.293	21.99	27.0	10.59	1.7	Nickel Silver	0.432
00C323017	**43230**	**1**	46.5	12.29	31.8	27.0	10.59	1.7	Nickel Silver	0.432
00C353517	**43535**	**1**	50.49	12.7	36.19	29.99	11.3	1.7	Nickel Silver	0.432
00C404017	**44040**	**1**	55.49	13.48	41.19	35	11.78	1.7	Nickel Silver	0.432

FIGURE 1