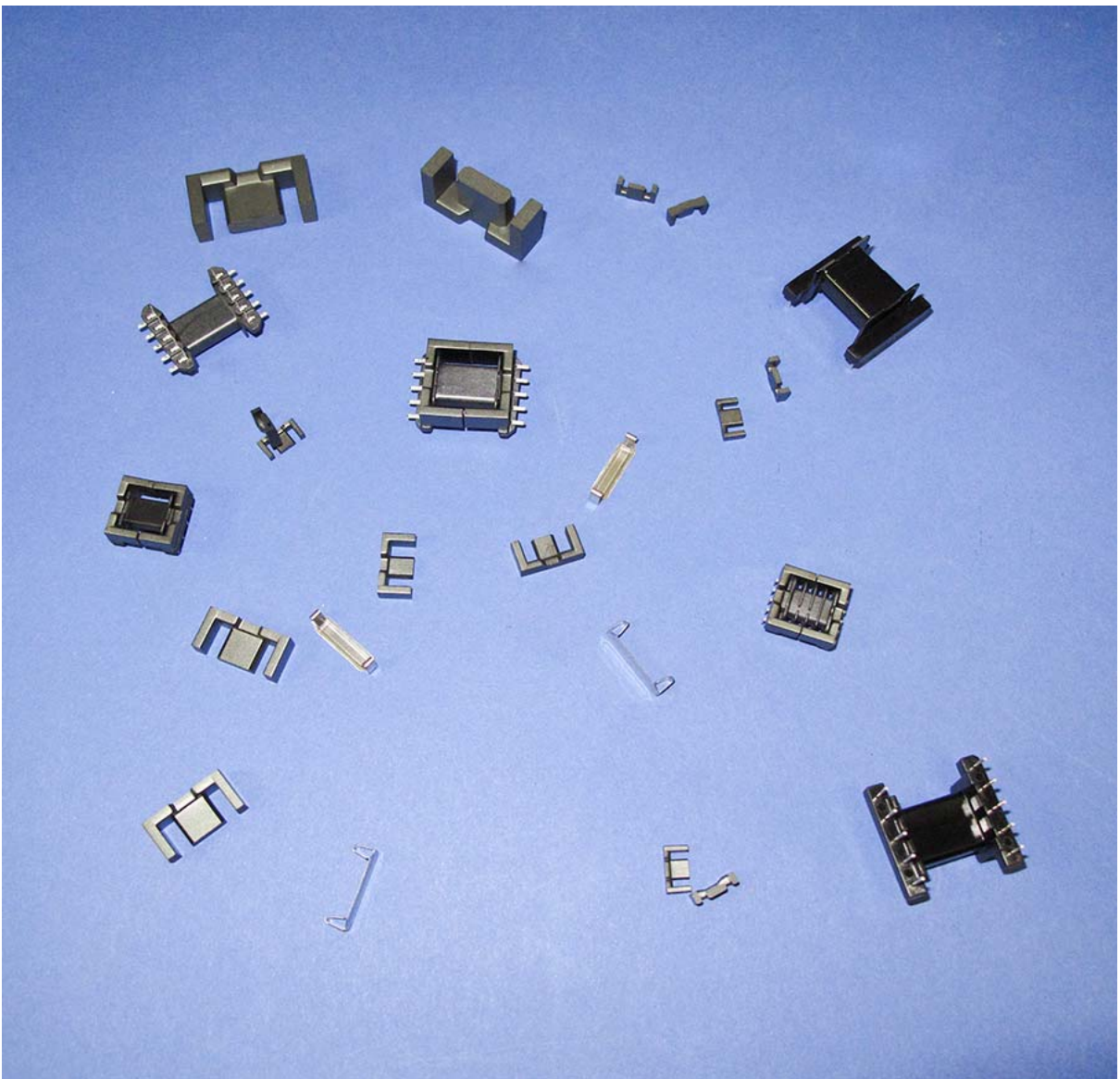




MH&W International Corp

TDK EFD Cores With Associated hardware



September 20, 2011

Core	A	B	C	D1	D2	E	F
PC47EFD15	15.0 ± 0.40	7.50 ± 0.15	4.65 ± 0.15	5.30 ± 0.15	2.30 ± 0.10	11.0 ± 0.35	5.50 ± 0.25
PC95EFD15	15.0 ± 0.40	7.50 ± 0.15	4.65 ± 0.15	5.30 ± 0.15	2.30 ± 0.10	11.0 ± 0.35	5.50 ± 0.25
PC95EFD20	20.0 ± 0.55	10.0 ± 0.25	6.65 ± 0.20	8.90 ± 0.20	3.60 ± 0.18	15.4 ± 0.50	7.70 ± 0.25
PC95EFD25	25.0 ± 0.65	12.5 ± 0.15	9.10 ± 0.20	11.4 ± 0.20	5.20 ± 0.20	18.7 ± 0.60	9.30 ± 0.25

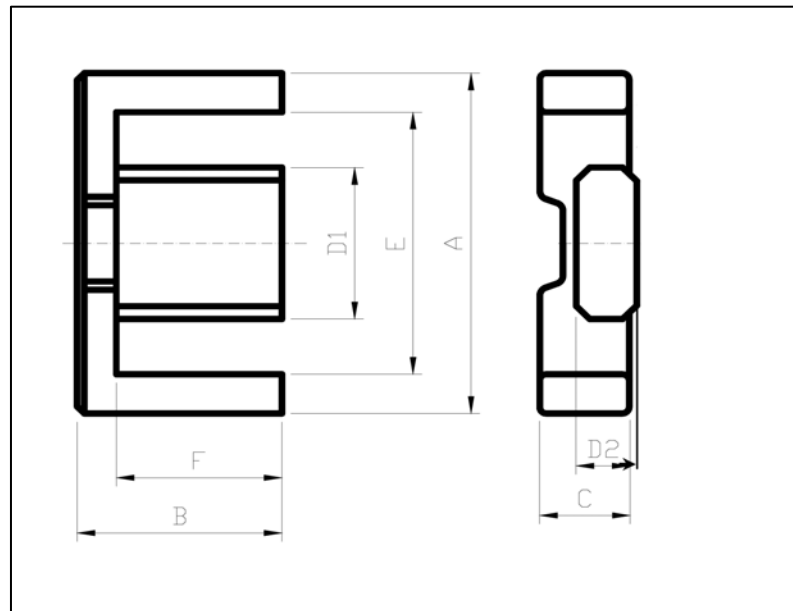
Core	Al Value	Core Loss			Core Constants		
	25°C	25°C	80°C	100°	ℓ_e	A_e	V_e
PC47EFD15	9000 ± 25%	-	-	<0.15W	34mm	11.3mm ²	384mm ³
PC95EFD15	10500 ± 25%	<0.27W	<0.22W	<0.27W	34mm	11.3mm ²	384mm ³
PC95EFD20	18500 ± 25%	<1.0W	<0.8W	<1.0W	46.2mm	26.4mm ²	1222mm ³
PC95EFD25	23700 ± 25%	<1.9W	<1.5W	<1.9W	53.1mm	52.5mm ²	2790mm ³

Al Value measured at 1KHz, 0.5mA, 100Tn coil, HP 4284A

Core Loss measured at 100KHz, 200mT, N1=N2=5Tn, B-H Analyzer

MH&W Int'l has multiple sources for bobbins and clips

	Bobbin (Phenolic)	Clip (Stainless Steel)
EFD15	BEFD15-118CP-P	FEFD15-SS-P
EFD20	BEFD20-118CP-P	FEFD20-SS-P
EFD25	BEFD25-1110CP-P	FEFD25-SS-P



MATERIAL CHARACTERISTICS

MATERIAL CHARACTERISTICS

For Transformer and Choke

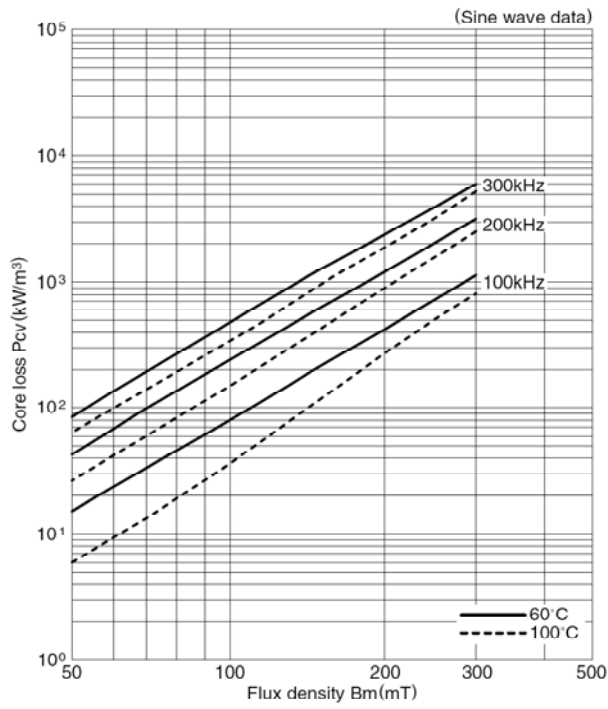
Material				PC40	PC44	PC47	
Initial permeability	μ_i			2300±25%	2400±25%	2500±25%	
Amplitude permeability	μ_a			3000 min.	3000 min.		
Core loss volume density (Core loss)* [B=200mT]	P _{cv}	kW/m ³	25kHz sine wave	25°C	120		
				60°C	80		
				100°C	70		
				120°C	85		
			100kHz sine wave	25°C	600	600	600
				60°C	450	400	400
				100°C	410	300	250
				120°C	500	380	360
Saturation magnetic flux density* [H=1194A/m]	B _s	mT	25°C	510	510	530	
			60°C	450	450	480	
			100°C	390	390	420	
			120°C	350	350	390	
Remanent flux density*	B _r	mT	25°C	95	110	180	
			60°C	65	70	100	
			100°C	55	60	60	
			120°C	50	55	60	
Coercive force*	H _c	A/m	25°C	14.3	13	13	
			60°C	10.3	9	9	
			100°C	8.8	6.5	6	
			120°C	8	6	7	
Curie temperature	T _c	°C		>215	>215	>230	
Density*	d _b	kg/m ³		4.8×10 ³	4.8×10 ³	4.9×10 ³	
Electrical resistivity*	ρ_v	$\Omega \cdot m$		6.5	6.5	4.0	

Material				PC90	PC95	
Initial permeability	μ_i			2200±25%	3300±25%	
Amplitude permeability	μ_a					
Core loss volume density (Core loss)* [B=200mT]	P _{cv}	kW/m ³	100kHz sine wave	25°C	680	350
				60°C	470	
				100°C	320	290
				120°C	460	350
Saturation magnetic flux density* [H=1194A/m]	B _s	mT	25°C	540	530	
			60°C	500	480	
			100°C	450	410	
			120°C	420	380	
Remanent flux density*	B _r	mT	25°C	170	85	
			60°C	95	70	
			100°C	60	60	
			120°C	65	55	
Coercive force*	H _c	A/m	25°C	13	9.5	
			60°C	9	7.5	
			100°C	6.5	6.5	
			120°C	7	6.0	
Curie temperature	T _c	°C		>250	>215	
Density*	d _b	kg/m ³		4.9×10 ³	4.9×10 ³	
Electrical resistivity*	ρ_v	$\Omega \cdot m$		4.0	6.0	

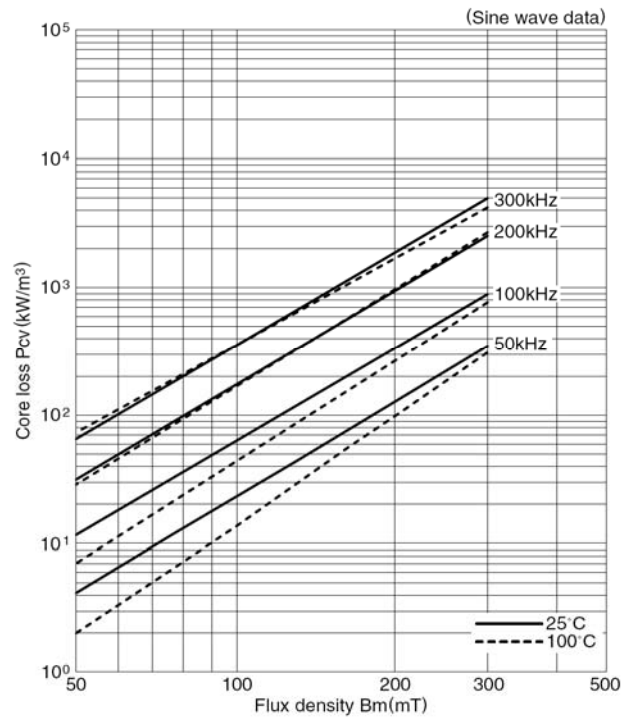
* Average value

** 500kHz, 50mT

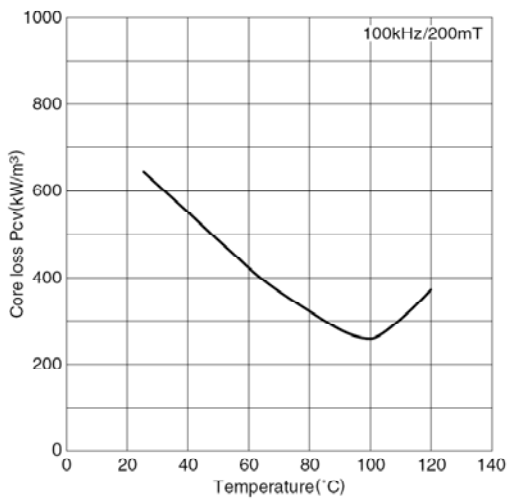
Material: PC47



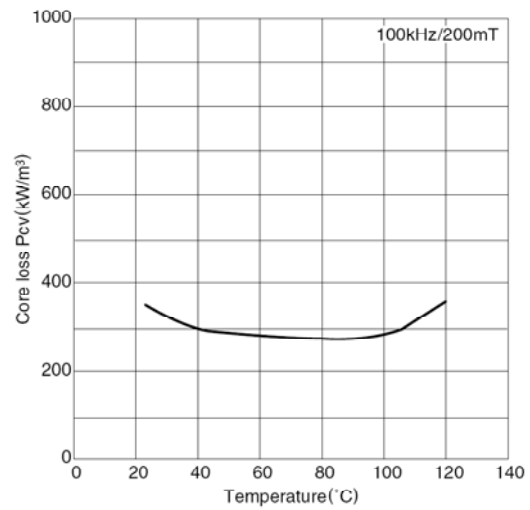
Material: PC95



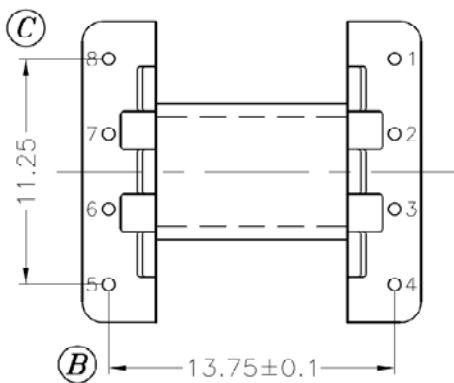
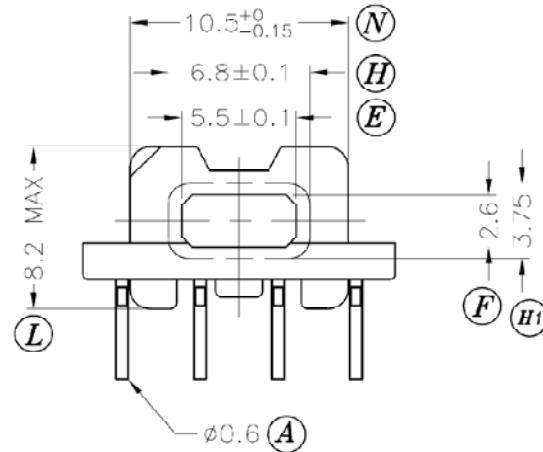
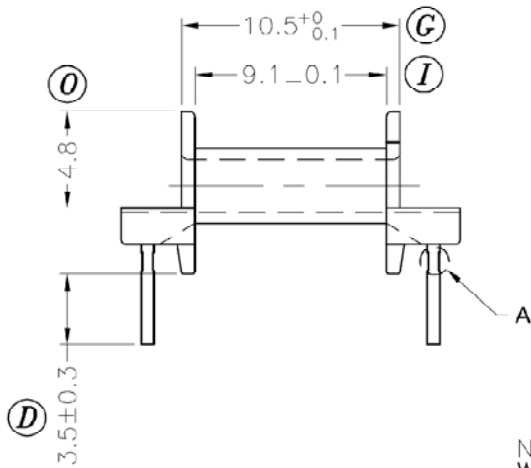
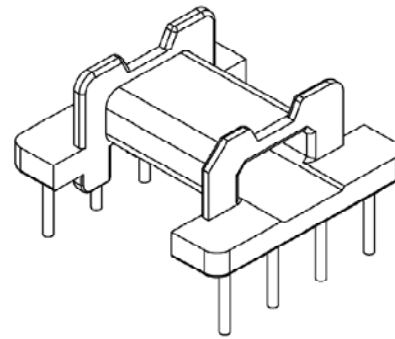
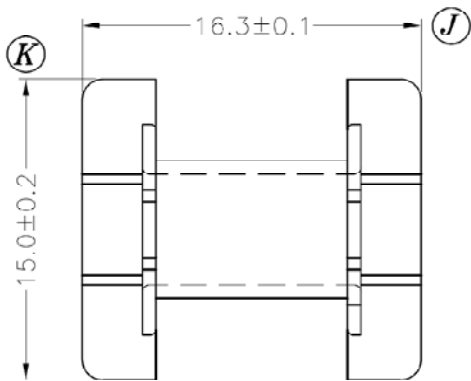
Material: PC47



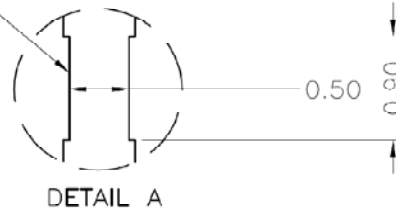
Material: PC95



BEFD15-118CP-P



NCK FOR WRAPPING



Dimensions in mm

Country of Origin: China | RoHS Certified: YES

Bobbin Material: Sumitomo PM9630

UL File: E41429 | UL Rec: 94-V0 | P-1505

MH&W International Corp

Phone 201-891-8800 | Email: sales@mhw-intl.com

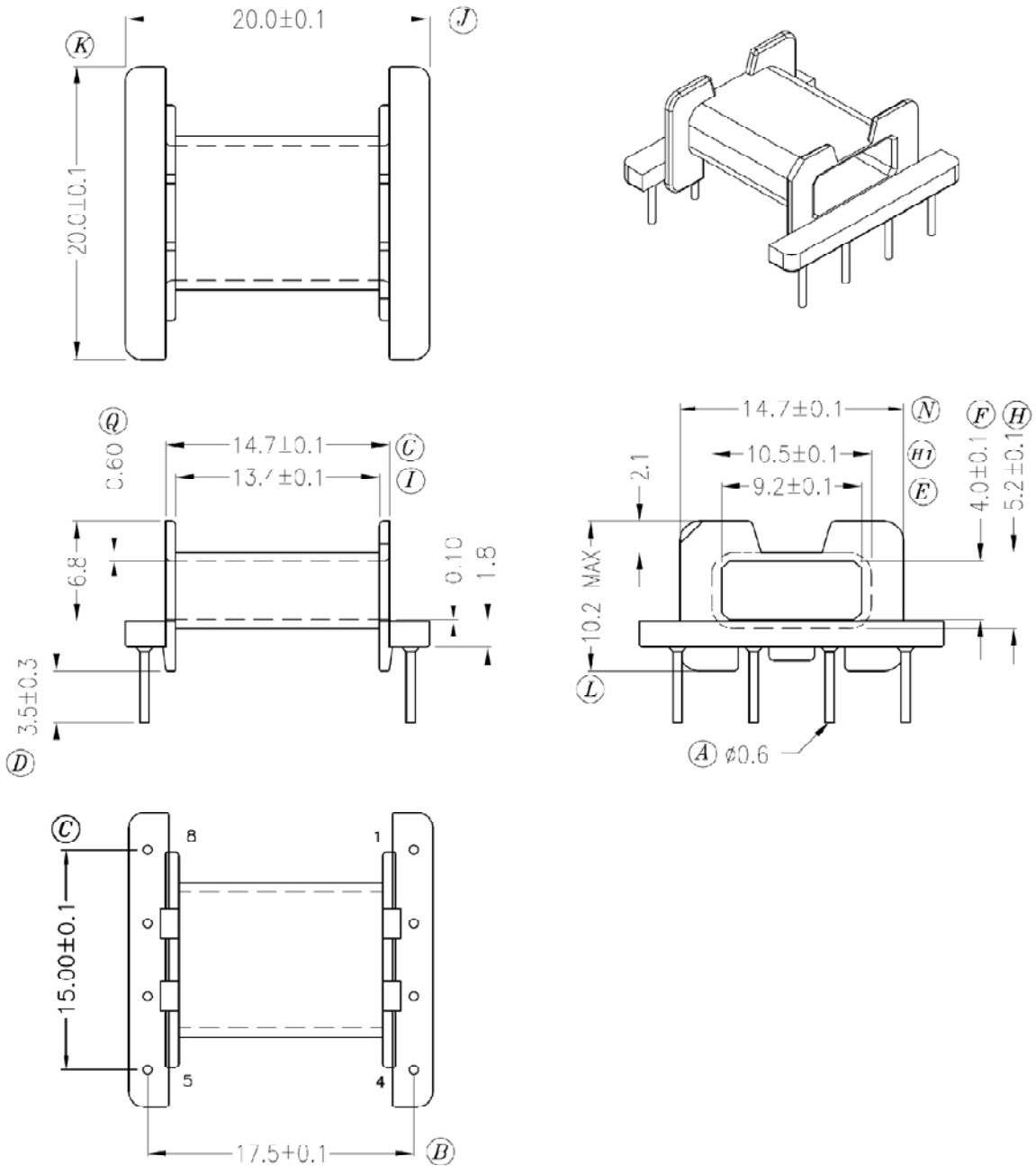
Drawing Number: BEFD15-118CP-P

Pin Material: Steel Wire (CP)

Pin Tension: 0.9Kgm min | Finish: e2 (JEDEC)

Part Number: BEFD15-118CP-P

BEFD20-118CP-P

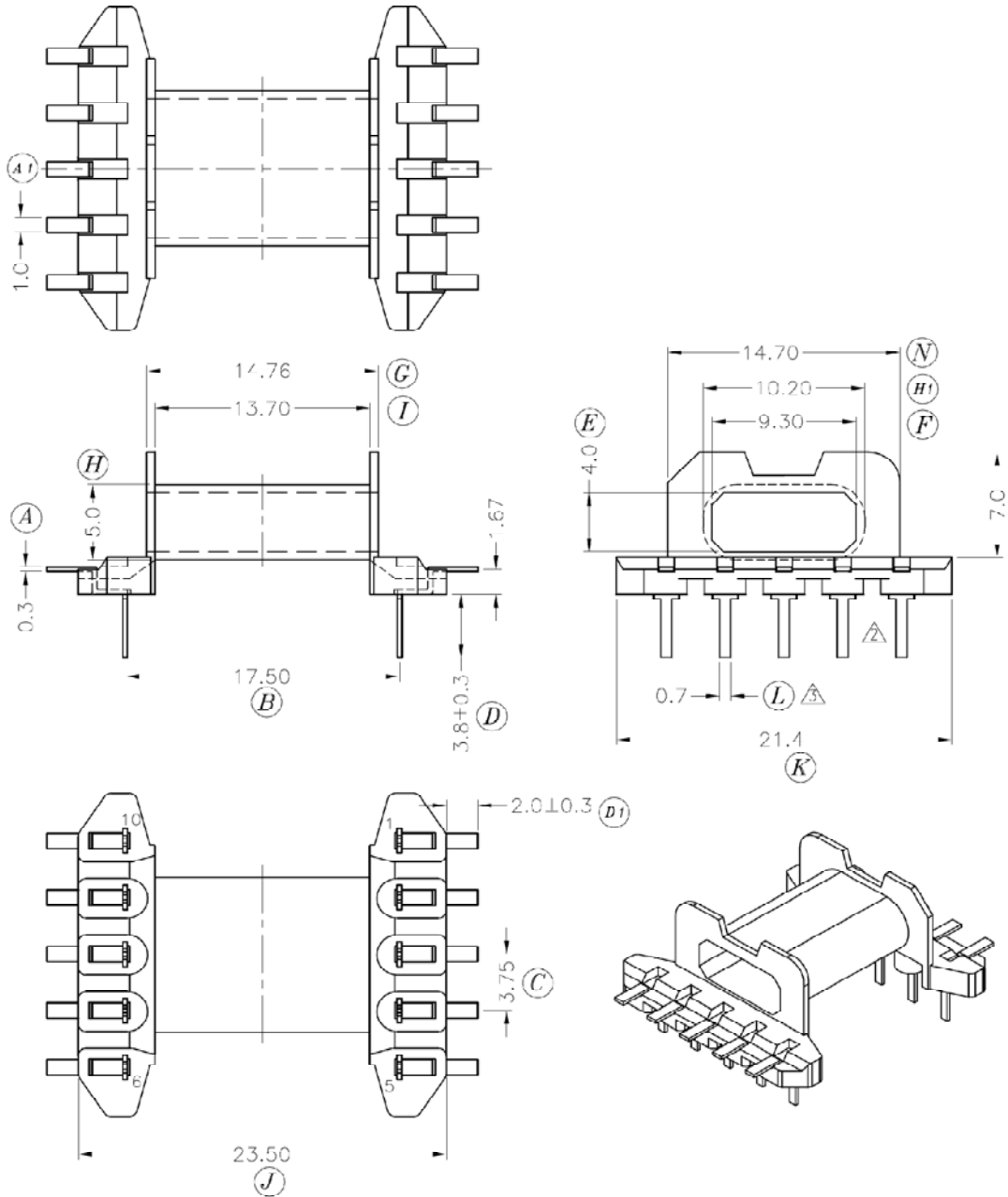


Dimensions in mm

Country of Origin: China	RoHS Certified: YES		
Bobbin Material: Sumitomo PM9630		Drawing Number: BEFD20-118CP-P	
UL File: E41429	UL Rec: 94-V0	P-2022	Pin Material: Steel Wire (CP)
MH&W International Corp Phone 201-891-8800 Email: sales@mhw-intl.com		Pin Tension: 1.0Kg min	Finish: e2 (JEDEC)
		Part Number: BEFD20-118CP-P	

BEFD20-L110-P

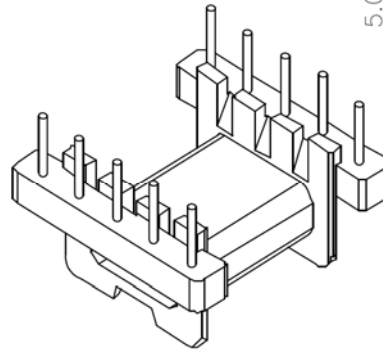
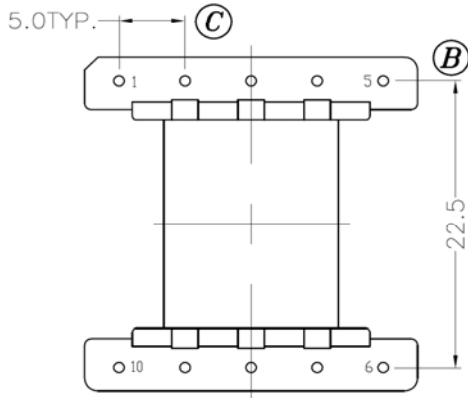
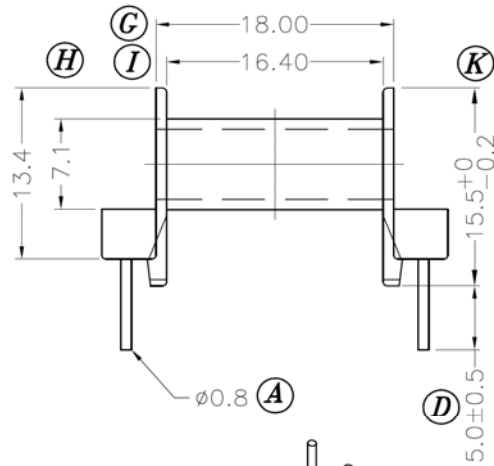
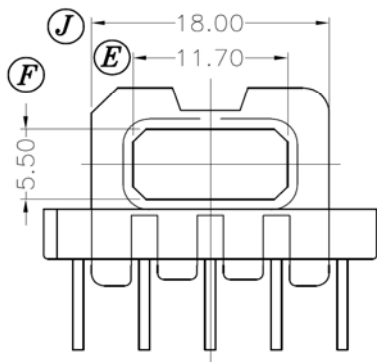
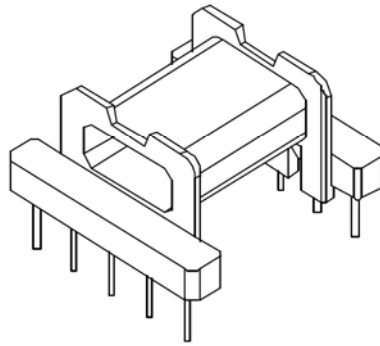
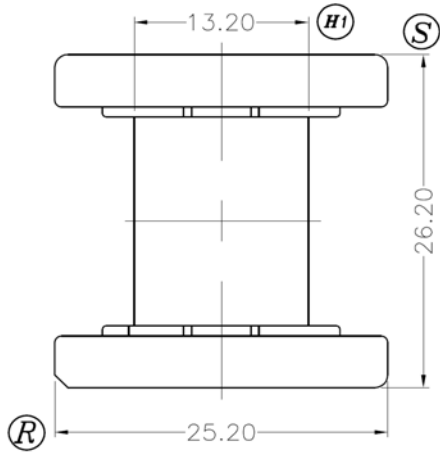
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Dimensions in mm

Country of Origin: China		RoHS Certified: YES	
Bobbin Material: Sumitomo E4008 (k) (LCP)		Drawing Number: BEFD20-L110-P	
UL File: E54705	UL Rec: 94-V0	P-2023-1	Pin Material: C-2680 Copper Brass
MH&W International Corp		Pin Tension: 1.5Kg min	Finish: e2 (JEDEC)
Phone 201-891-8800 Email: sales@mhw-intl.com		Part Number: BEFD20-L110-P	

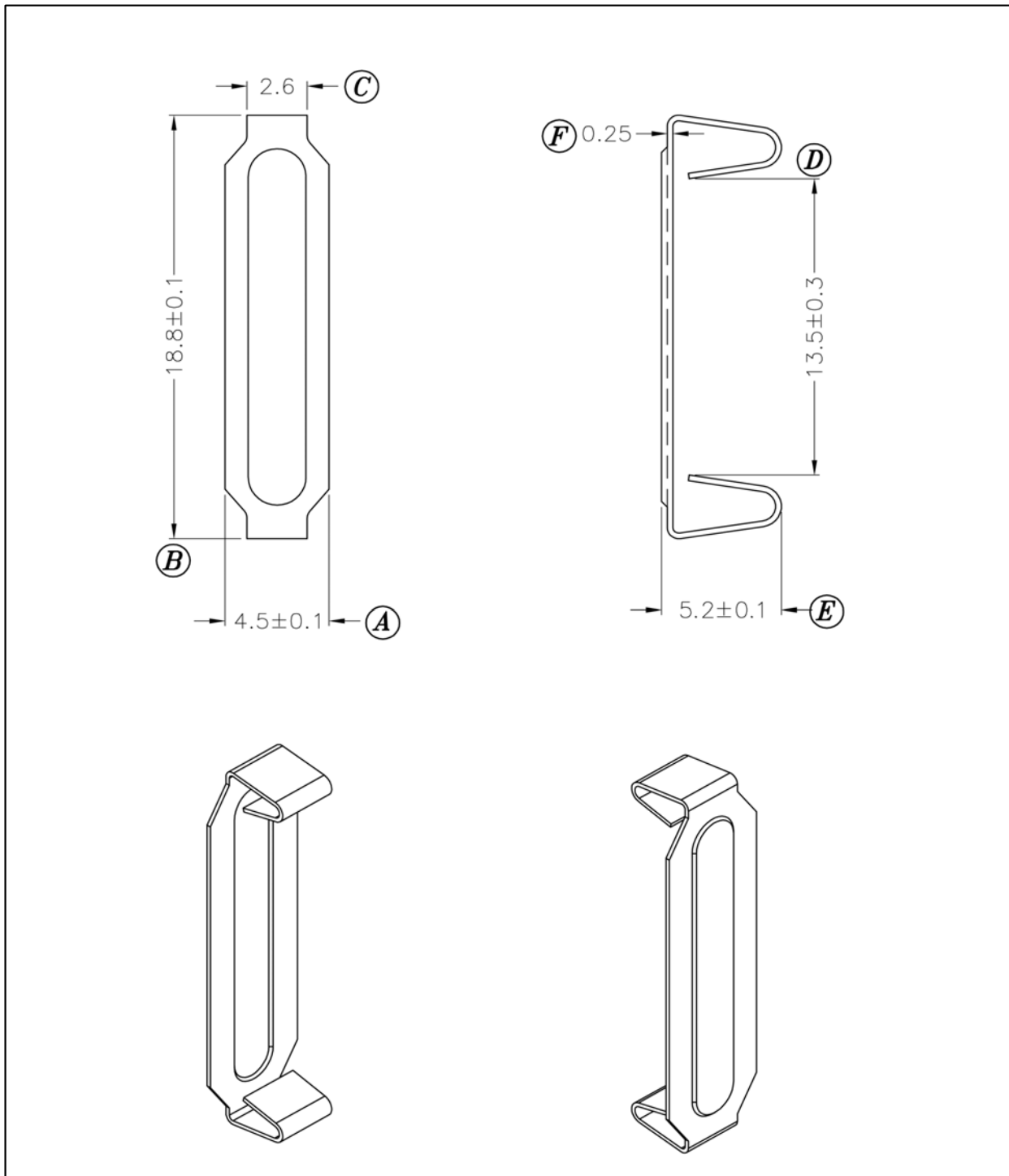
BEFD25-1110CP-P



Dimensions in mm

Country of Origin: China		RoHS Certified: YES	
Bobbin Material: Chang Shun Plastics T375J		Drawing Number: BEFD25-1110CP-P	
UL File: E59481	UL Rec: 94-V0	P-2512	Pin Material: Steel Wire (CP)
MH&W International Corp		Pin Tension: 1.5Kgm min	Finish: e3 (JEDEC)
Phone 201-891-8800 Email: sales@mhw-intl.com		Part Number: BEFD25-1110CP-P	

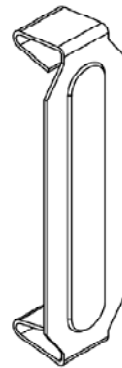
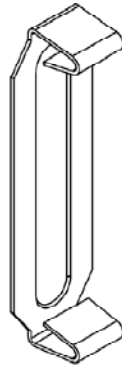
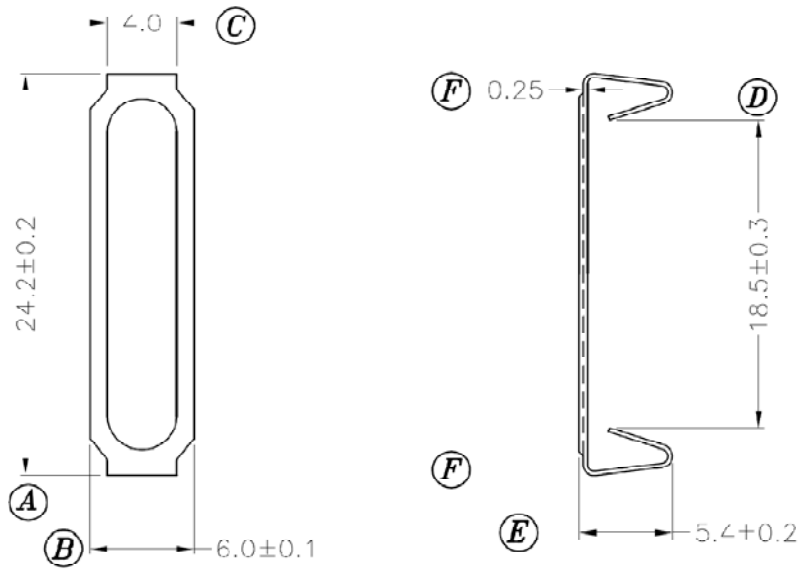
FEFD15-SS-P



Dimensions in mm

Country of Origin: China	RoHS Certified: YES	Drawing Number: FEFD15-SS-P	
MH&W International Corp		Material: Stainless Steel	Finish: N/A
Phone 201-891-8800 Email: sales@mhw-intl.com		Part Number: FEFD15-SS-P	Item ID: C-040

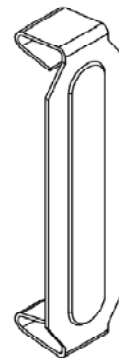
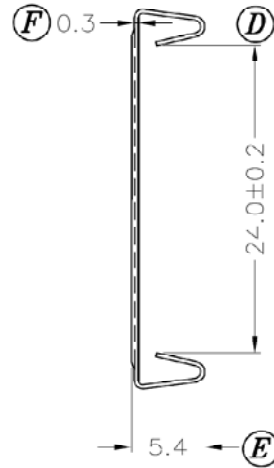
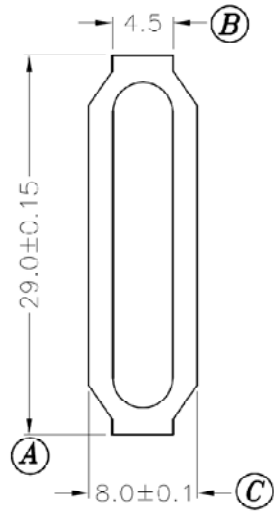
FEFD20-SS-P



Dimensions in mm

Country of Origin: China	RoHS Certified: YES	Drawing Number: FEFD20-SS-P	
MH&W International Corp		Material: Stainless Steel	Finish: N/A
Phone 201-891-8800 Email: sales@mhw-intl.com		Part Number: FEFD20-SS-P	Item ID: C-042

FEFD25-SS-P



Dimensions in mm

Country of Origin: China	RoHS Certified: YES	Drawing Number: FEFD25-SS-P	
MH&W International Corp		Material: Stainless Steel	Finish: N/A
Phone 201-891-8800 Email: sales@mhw-intl.com		Part Number: FEFD25-SS-P	Item ID: C-044