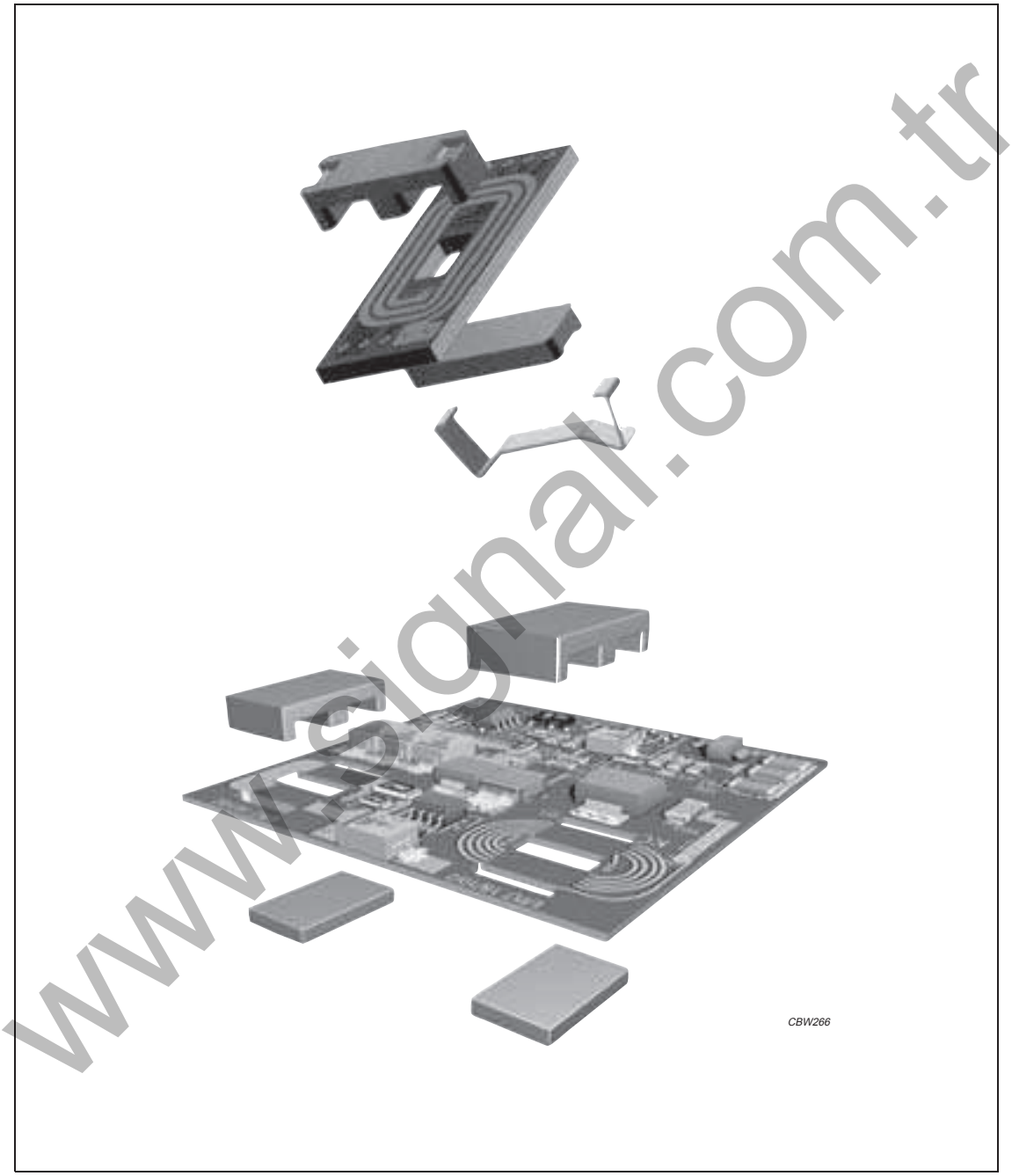


PRODUCT OVERVIEW AND TYPE NUMBER STRUCTURE

Product overview Planar E cores

CORE TYPE	V_e (mm^3)	A_e (mm^2)	MASS (g)
E14/3.5/5	300	14.5	0.6
PLT14/5/1.5	240	14.5	0.5
E14/3.5/5/R	–	–	0.6
PLT14/5/1.5/S	230	14.2	0.5
E18/4/10	960	39.5	2.4
PLT18/10/2	800	39.5	1.7
E18/4/10/R	–	–	2.4
PLT18/10/2/S	830	40.8	1.7
E22/6/16	2550	78.5	6.5
PLT22/16/2.5	2040	78.5	4.0
E22/6/16/R	–	–	6.5
PLT22/16/2.5/S	2100	80.4	4.0
E32/6/20	5380	129	13
PLT32/20/3	4560	129	10
E32/6/20/R	–	–	13
PLT32/20/3/R	4560	130	10
E38/8/25	10200	194	25
PLT38/25/3.8	8460	194	18
E43/10/28	13900	225	35
PLT43/28/4	11500	225	24
E58/11/38	24600	305	62
PLT58/38/4	20800	305	44
E64/10/50	40700	511	100
PLT64/50/5	35500	511	78

• In accordance with IEC 62317, part 9.

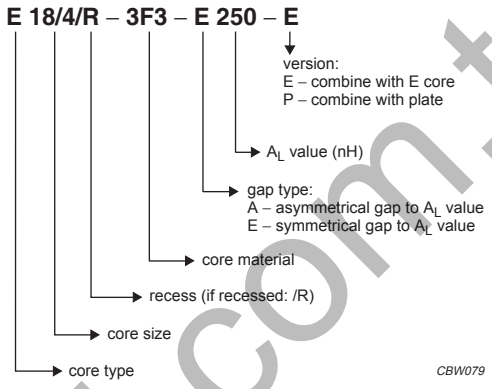


Fig.1 Type number structure for E cores.

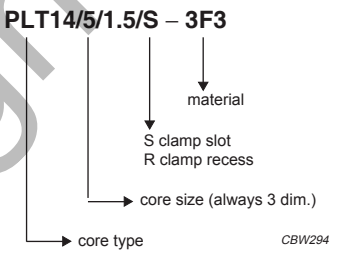


Fig.2 Type number structure for plates.

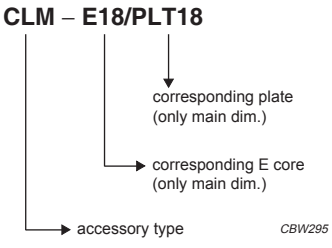
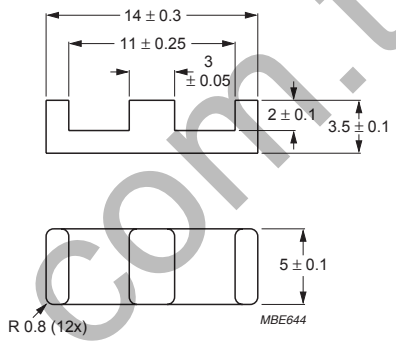


Fig.3 Type number structure for clamps.

CORES

Effective core parameters of a set of E cores

SYMBOL	PARAMETER	VALUE	UNIT
Σ(l/A)	core factor (C1)	1.43	mm^{-1}
V_e	effective volume	300	mm^3
l_e	effective length	20.7	mm
A_e	effective area	14.3	mm^2
A_{min}	minimum area	14.3	mm^2
m	mass of core half	≈ 0.6	g



Dimensions in mm.

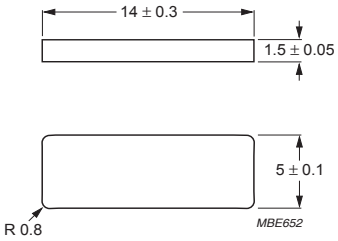
Fig.1 E14/3.5/5 core.

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
Σ(l/A)	core factor (C1)	1.16	mm^{-1}
V_e	effective volume	240	mm^3
l_e	effective length	16.7	mm
A_e	effective area	14.5	mm^2
A_{min}	minimum area	14.5	mm^2
m	mass of plate	≈ 0.5	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT14/5/1.5-3C90
3C92 des	PLT14/5/1.5-3C92
3C93 des	PLT14/5/1.5-3C93
3C94	PLT14/5/1.5-3C94
3C95 des	PLT14/5/1.5-3C95
3C96 des	PLT14/5/1.5-3C96
3F3	PLT14/5/1.5-3F3
3F35 des	PLT14/5/1.5-3F35
3F4 des	PLT14/5/1.5-3F4
3F45 prot	PLT14/5/1.5-3F45
3E6	PLT14/5/1.5-3E6



Dimensions in mm.

Fig.2 PLT14/5/1.5.

Core halves for use in combination with an ungapped E core

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 10 ±5 N, using a PCB coil containing 4 layers of 8 tracks each, total height 1.6 mm.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	63 ±3%	≈ 72	≈ 530	E14/3.5/5-3C90-A63-E
	100 ±5%	≈ 114	≈ 270	E14/3.5/5-3C90-A100-E
	160 ±8%	≈ 182	≈ 130	E14/3.5/5-3C90-A160-E
	1280 ±25%	≈ 1450	≈ 0	E14/3.5/5-3C90
3C92 des	960 ±25%	≈ 1090	≈ 0	E14/3.5/5-3C92
3C93 des	1100 ±25%	≈ 1250	≈ 0	E14/3.5/5-3C93
3C94	63 ±3%	≈ 72	≈ 530	E14/3.5/5-3C94-A63-E
	100 ±5%	≈ 114	≈ 270	E14/3.5/5-3C94-A100-E
	160 ±8%	≈ 182	≈ 130	E14/3.5/5-3C94-A160-E
	1280 ±25%	≈ 1450	≈ 0	E14/3.5/5-3C94
3C95 des	1500 ±25%	≈ 1730	≈ 0	E14/3.5/5-3C95
3C96 des	1200 ±25%	≈ 1360	≈ 0	E14/3.5/5-3C96
3F3	63 ±3%	≈ 72	≈ 530	E14/3.5/5-3F3-A63-E
	100 ±5%	≈ 114	≈ 270	E14/3.5/5-3F3-A100-E
	160 ±8%	≈ 182	≈ 130	E14/3.5/5-3F3-A160-E
	1100 ±25%	≈ 1250	≈ 0	E14/3.5/5-3F3
3F35 des	900 ±25%	≈ 1020	≈ 0	E14/3.5/5-3F35
3F4 des	63 ±3%	≈ 72	≈ 530	E14/3.5/5-3F4-A63-E
	100 ±5%	≈ 114	≈ 270	E14/3.5/5-3F4-A100-E
	160 ±8%	≈ 182	≈ 130	E14/3.5/5-3F4-A160-E
	650 ±25%	≈ 740	≈ 0	E14/3.5/5-3F4
3F45 prot	650 ±25%	≈ 740	≈ 0	E14/3.5/5-3F45
3E6	5600 +40/–30%	≈ 6360	≈ 0	E14/3.5/5-3E6

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT) clamping force for A_L measurements, 10 ±5 N, using a PCB coil containing 4 layers of 8 tracks each, total height 1.6 mm.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	63 ±3%	≈ 58	≈ 600	E14/3.5/5-3C90-A63-P
	100 ±5%	≈ 92	≈ 300	E14/3.5/5-3C90-A100-P
	160 ±8%	≈ 148	≈ 150	E14/3.5/5-3C90-A160-P
	1500 ±25%	≈ 1400	≈ 0	E14/3.5/5-3C90
3C92 des	1130 ±25%	≈ 1040	≈ 0	E14/3.5/5-3C92
3C93 des	1300 ±25%	≈ 1200	≈ 0	E14/3.5/5-3C93
3C94	63 ±3%	≈ 58	≈ 600	E14/3.5/5-3C94-A63-P
	100 ±5%	≈ 92	≈ 300	E14/3.5/5-3C94-A100-P
	160 ±8%	≈ 148	≈ 150	E14/3.5/5-3C94-A160-P
	1500 ±25%	≈1400	≈ 0	E14/3.5/5-3C94
3C95 des	1740 ±25%	≈ 1600	≈ 0	E14/3.5/5-3C95
3C96 des	1350 ±25%	≈ 1260	≈ 0	E14/3.5/5-3C96
3F3	63 ±3%	≈ 58	≈ 600	E14/3.5/5-3F3-A63-P
	100 ±5%	≈ 92	≈ 300	E14/3.5/5-3F3-A100-P
	160 ±8%	≈ 148	≈ 150	E14/3.5/5-3F3-A160-P
	1300 ±25%	≈ 1200	≈ 0	E14/3.5/5-3F3
3F35 des	1050 ±25%	≈ 980	≈ 0	E14/3.5/5-3F35
3F4 des	63 ±3%	≈ 58	≈ 600	E14/3.5/5-3F4-A63-P
	100 ±5%	≈ 92	≈ 300	E14/3.5/5-3F4-A100-P
	160 ±8%	≈ 148	≈ 150	E14/3.5/5-3F4-A160-P
	780 ±25%	≈ 720	≈ 0	E14/3.5/5-3F4
3F45 prot	780 ±25%	≈ 720	≈ 0	E14/3.5/5-3F45
3E6	6400 +40/−30%	≈ 5900	≈ 0	E14/3.5/5-3E6

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at				
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E+E14-3C90	≥320	≤ 0.030	–	–	–	–
E+PLT14-3C90	≥320	≤ 0.026	–	–	–	–
E+E14-3C92	≥370	≤ 0.024	–	≤ 0.16	–	–
E+PLT14-3C92	≥370	≤ 0.021	–	≤ 0.15	–	–
E+E14-3C93	≥320	≤ 0.024[1]	–	≤ 0.16[1]	–	–
E+PLT14-3C93	≥320	≤ 0.021[1]	–	≤ 0.15[1]	–	–
E+E14-3C94	≥320	≤ 0.024	–	≤ 0.16	–	–
E+PLT14-3C94	≥320	≤ 0.021	–	≤ 0.15	–	–
E+E14-3C95	≥320	–	≤ 0.17	≤ 0.16	–	–
E+PLT14-3C95	≥320	–	≤ 0.13	≤ 0.12	–	–
E+E14-3C96	≥340	≤ 0.019	–	≤ 0.13	≤ 0.05	≤ 0.11
E+PLT14-3C96	≥340	≤ 0.016	–	≤ 0.12	≤ 0.045	≤ 0.09
E+E14-3F3	≥300	≤ 0.033	–	–	≤ 0.06	–
E+PLT14-3F3	≥300	≤ 0.027	–	–	≤ 0.047	–
E+E14-3F35	≥300	–	–	–	≤ 0.03	≤ 0.05
E+PLT14-3F35	≥300	–	–	–	≤ 0.024	≤ 0.035

1. Measured at 140 °C.

Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E+E14-3F35	≥300	≤ 0.35	–	–	–
E+PLT14-3F35	≥300	≤ 0.27	–	–	–
E+E14-3F4	≥250	–	≤ 0.09	–	≤ 0.15
E+PLT14-3F4	≥250	–	≤ 0.07	–	≤ 0.12
E+E14-3F45	≥250	–	≤ 0.07	≤ 0.26	≤ 0.12
E+PLT14-3F45	≥250	–	≤ 0.055	≤ 0.2	≤ 0.095

MOUNTING INFORMATION

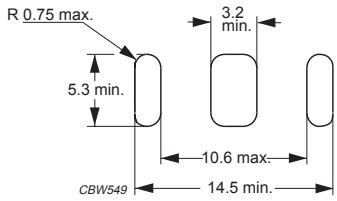
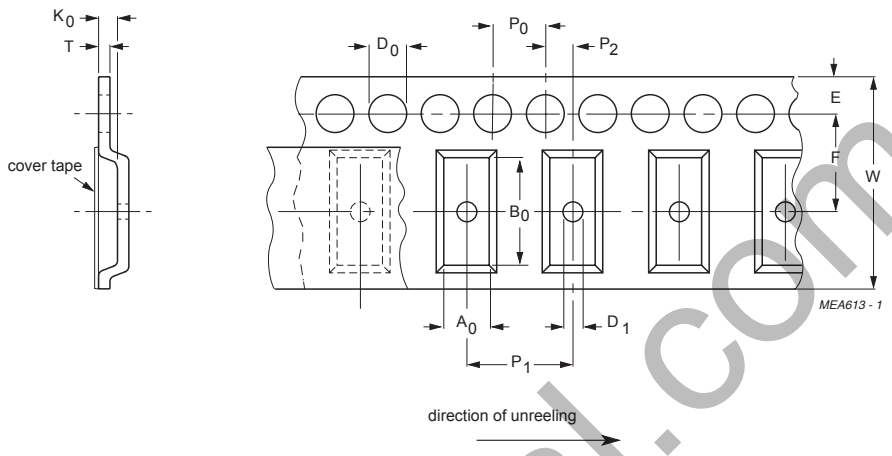


Fig.3 Recommended PCB cut-out for glued planar E14/3.5/5 cores.

BLISTER TAPE AND REEL DIMENSIONS prot



For dimensions see Table 1.

Fig.4 Blister tape.

Table 1 Physical dimensions of blister tape; see Fig.4

SIZE	DIMENSIONS (mm)
A_0	5.4 ±0.2
B_0	14.6 ±0.2
K_0	4.0 ±0.2
T	0.3 ±0.05
W	24.0 ±0.3
E	1.75 ±0.1
F	11.5 ±0.1
D_0	1.5 +0.1
D_1	≥1.5
P_0	4.0 ±0.1
P_1	8.0 ±0.1
P_2	2.0 ±0.1

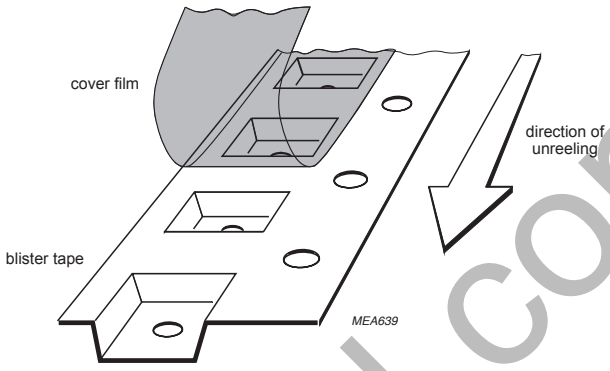
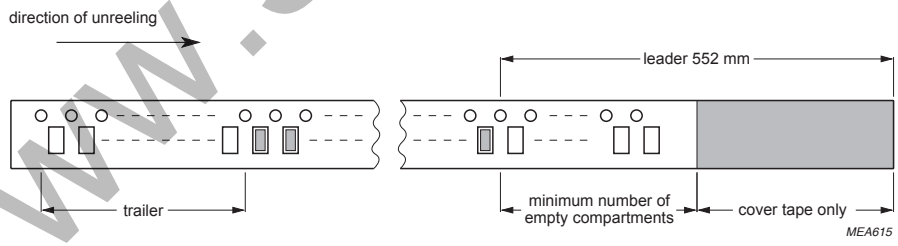
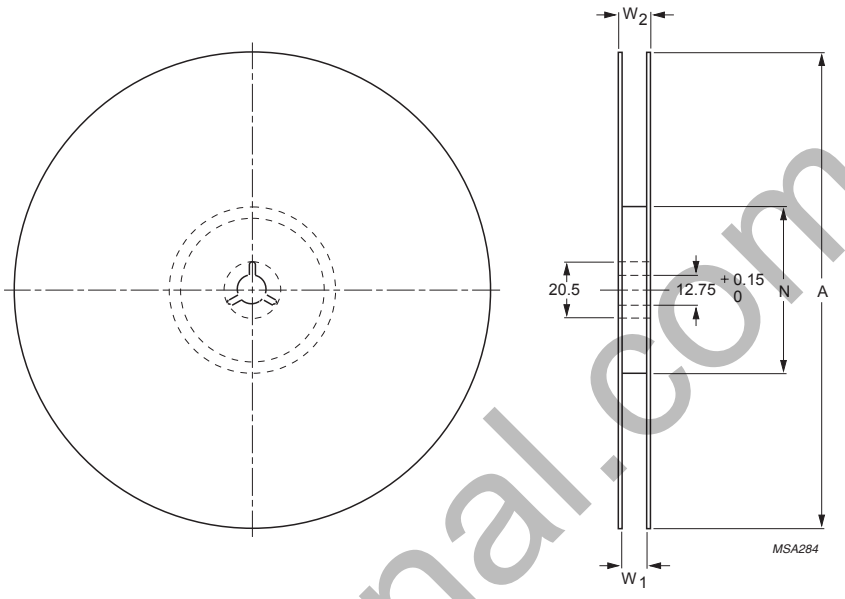


Fig.5 Construction of blister tape.



Leader: length of leader tape is 552 mm minimum covered with cover tape.
Trailer: 160 mm minimum (secured with tape).
Storage temperature range for tape: −25 to +45 °C.

Fig.6 Leader/trailer tape.



Dimensions in mm.
For dimensions see Table 2.

Fig.7 Reel.

Table 2 Reel dimensions; see Fig.7

SIZE	DIMENSIONS (mm)			
	A	N	W_1	W_2
24	330	100 ±5	24.4	≤28.4

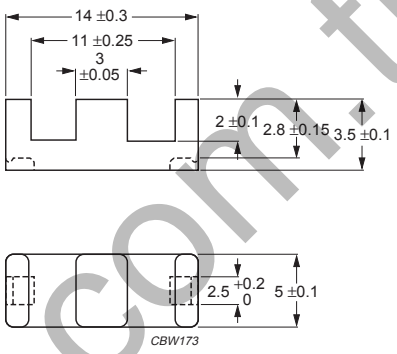
CORES

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	1.15	mm^{-1}
V_e	effective volume	230	mm^3
l_e	effective length	16.4	mm
A_e	effective area	14.2	mm^2
A_{min}	minimum area	10.9	mm^2
m	mass of E core half	≈ 0.6	g
m	mass of plate	≈ 0.5	g

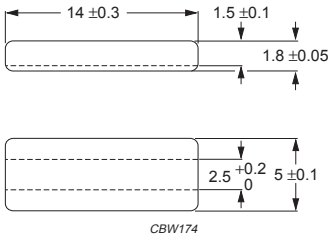
Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT14/5/1.5/S-3C90
3C92 des	PLT14/5/1.5/S-3C92
3C93 des	PLT14/5/1.5/S-3C93
3C94	PLT14/5/1.5/S-3C94
3C95 des	PLT14/5/1.5/S-3C95
3C96 des	PLT14/5/1.5/S-3C96
3F3	PLT14/5/1.5/S-3F3
3F35 des	PLT14/5/1.5/S-3F35
3F4 des	PLT14/5/1.5/S-3F4
3F45 prot	PLT14/5/1.5/S-3F45
3E6	PLT14/5/1.5/S-3E6



Dimensions in mm.

Fig.1 E14/3.5/5/R core.



Dimensions in mm.

Fig.2 PLT14/5/1.5/S.

Core halves for use in combination with a slotted plate (PLT/S)

A_L measured in combination with a slotted plate (PLT/S) clamping force for A_L measurements 10 ±5 N; measurement coil as for E14/3.5/5.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	63 ±3%	≈ 58	≈ 600	E14/3.5/5/R-3C90-A63-P
	100 ±5%	≈ 92	≈ 300	E14/3.5/5/R-3C90-A100-P
	160 ±8%	≈ 148	≈ 150	E14/3.5/5/R-3C90-A160-P
	1500 ±25%	≈ 1380	≈ 0	E14/3.5/5/R-3C90
3C92 des	1130 ±25%	≈ 1040	≈ 0	E14/3.5/5/R-3C92
3C93 des	1300 ±25%	≈ 1200	≈ 0	E14/3.5/5/R-3C93
3C94	63 ±3%	≈ 58	≈ 600	E14/3.5/5/R-3C94-A63-P
	100 ±5%	≈ 92	≈ 300	E14/3.5/5/R-3C94-A100-P
	160 ±8%	≈ 148	≈ 150	E14/3.5/5/R-3C94-A160-P
	1500 ±25%	≈ 1380	≈ 0	E14/3.5/5/R-3C94
3C95 des	1740 ±25%	≈ 1600	≈ 0	E14/3.5/5/R-3C95
3C96 des	1350 ±25%	≈ 1240	≈ 0	E14/3.5/5/R-3C96
3F3	63 ±3%	≈ 58	≈ 600	E14/3.5/5/R-3F3-A63-P
	100 ±5%	≈ 92	≈ 300	E14/3.5/5/R-3F3-A100-P
	160 ±8%	≈ 148	≈ 150	E14/3.5/5/R-3F3-A160-P
	1300 ±25%	≈ 1200	≈ 0	E14/3.5/5/R-3F3
3F35 des	1050 ±25%	≈ 970	≈ 0	E14/3.5/5/R-3F35
3F4 des	63 ±3%	≈ 58	≈ 600	E14/3.5/5/R-3F4-A63-P
	100 ±5%	≈ 92	≈ 300	E14/3.5/5/R-3F4-A100-P
	160 ±8%	≈ 148	≈ 150	E14/3.5/5/R-3F4-A160-P
	780 ±25%	≈ 710	≈ 0	E14/3.5/5/R-3F4
3F45 prot	780 ±25%	≈ 710	≈ 0	E14/3.5/5/R-3F45
3E6	6400 +40/–30%	≈ 5900	≈ 0	E14/3.5/5/R-3E6

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at				
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E14/R+PLT14/S-3C90	≥320	≤ 0.026	–	–	–	–
E14/R+PLT14/S-3C92	≥370	≤ 0.021	–	≤ 0.15	–	–
E14/R+PLT14/S-3C93	≥320	≤ 0.021[1]	–	≤ 0.15[1]	–	–
E14/R+PLT14/S-3C94	≥320	≤ 0.021	–	≤ 0.15	–	–
E14/R+PLT14/S-3C95	≥320	–	≤ 0.13	≤ 0.12	–	–
E14/R+PLT14/S-3C96	≥340	≤ 0.016	–	≤ 0.12	≤ 0.045	≤ 0.09
E14/R+PLT14/S-3F3	≥300	≤ 0.027	–	–	≤ 0.047	–
E14/R+PLT14/S-3F35	≥300	–	–	–	≤ 0.024	≤ 0.035
E14/R+PLT14/S-3F4	≥250	–	–	–	–	–
E14/R+PLT14/S-3F45	≥250	–	–	–	–	–

1. Measured at 140 °C.

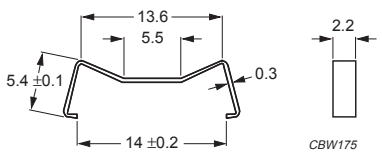
Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E14/R+PLT14/S-3C90	≥320	–	–	–	–
E14/R+PLT14/S-3C92	≥370	–	–	–	–
E14/R+PLT14/S-3C93	≥320	–	–	–	–
E14/R+PLT14/S-3C94	≥320	–	–	–	–
E14/R+PLT14/S-3C95	≥320	–	–	–	–
E14/R+PLT14/S-3C96	≥340	–	–	–	–
E14/R+PLT14/S-3F3	≥300	–	–	–	–
E14/R+PLT14/S-3F35	≥300	≤ 0.027	–	–	–
E14/R+PLT14/S-3F4	≥250	–	≤ 0.07	–	≤ 0.11
E14/R+PLT14/S-3F45	≥250	–	≤ 0.055	≤ 0.2	≤ 0.09

MOUNTING PARTS

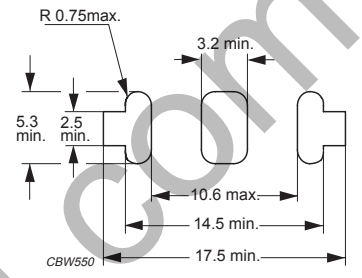
General data and ordering information

ITEM	MATERIAL	FIGURE	TYPE NUMBER
Clamp	stainless steel (CrNi)	3	CLM-E14/PLT14



Dimensions in mm.

Fig.3 Clamp for E14/R+PLT14/S.



Dimensions in mm.

Fig.4 Recommended PCB cut-out for clamped cores.

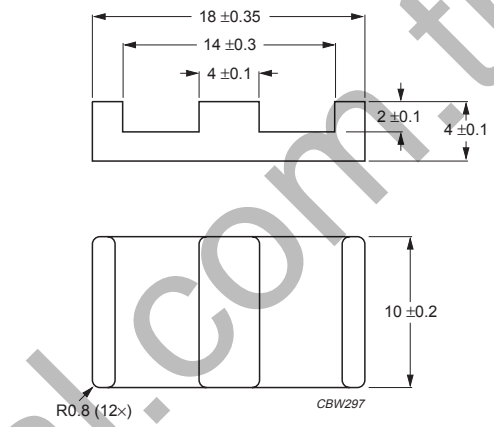
BLISTER TAPE AND REEL

For blister tape dimensions and construction and reel dimensions, see data sheet “E14/3.5/5”.

CORES

Effective core parameters of a set of E cores

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.616	mm^{-1}
V_e	effective volume	960	mm^3
l_e	effective length	24.3	mm
A_e	effective area	39.3	mm^2
A_{min}	minimum area	39.3	mm^2
m	mass of core half	≈ 2.4	g



Dimensions in mm.

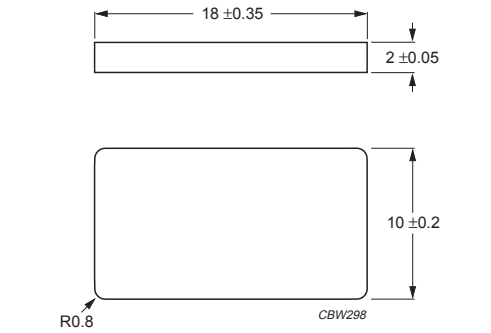
Fig.1 E18/4/10 core half.

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.514	mm^{-1}
V_e	effective volume	800	mm^3
l_e	effective length	20.3	mm
A_e	effective area	39.5	mm^2
A_{min}	minimum area	39.5	mm^2
m	mass of plate	≈ 1.7	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT18/10/2-3C90
3C92 des	PLT18/10/2-3C92
3C93 des	PLT18/10/2-3C93
3C94	PLT18/10/2-3C94
3C95 des	PLT18/10/2-3C95
3C96 des	PLT18/10/2-3C96
3F3	PLT18/10/2-3F3
3F35 des	PLT18/10/2-3F35
3F4 des	PLT18/10/2-3F4
3F45 prot	PLT18/10/2-3F45
3E6	PLT18/10/2-3E6



Dimensions in mm.

Fig.2 PLT18/10/2.

Core halves for use in combination with an non-gapped E core

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 20 ±10 N, using a PCB coil containing 4 layers of 8 tracks each, total height 1.6 mm.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	100 ±3%	≈ 49	≈ 800	E18/4/10-3C90-A100-E
	160 ±3%	≈ 78	≈ 420	E18/4/10-3C90-A160-E
	250 ±5%	≈ 123	≈ 220	E18/4/10-3C90-A250-E
	315 ±8%	≈ 154	≈ 170	E18/4/10-3C90-A315-E
	3200 ±25%	≈ 1560	≈ 0	E18/4/10-3C90
3C92 des	2330 ±25%	≈ 1140	≈ 0	E18/4/10-3C92
3C93 des	2700 ±25%	≈ 1320	≈ 0	E18/4/10-3C93
3C94	100 ±3%	≈ 49	≈ 800	E18/4/10-3C94-A100-E
	160 ±3%	≈ 78	≈ 420	E18/4/10-3C94-A160-E
	250 ±5%	≈ 123	≈ 220	E18/4/10-3C94-A250-E
	315 ±8%	≈ 154	≈ 170	E18/4/10-3C94-A315-E
	3200 ±25%	≈ 1560	≈ 0	E18/4/10-3C94
3C95 des	3800 ±25%	≈ 1870	≈ 0	E18/4/10-3C95
3C96 des	2900 ±25%	≈ 1410	≈ 0	E18/4/10-3C96
3F3	100 ±3%	≈ 49	≈ 800	E18/4/10-3F3-A100-E
	160 ±3%	≈ 78	≈ 420	E18/4/10-3F3-A160-E
	250 ±5%	≈ 123	≈ 220	E18/4/10-3F3-A250-E
	315 ±8%	≈ 154	≈ 170	E18/4/10-3F3-A315-E
	2700 ±25%	≈ 1320	≈ 0	E18/4/10-3F3
3F35 des	2200 ±25%	≈ 1070	≈ 0	E18/4/10-3F35
3F4 des	100 ±3%	≈ 49	≈ 800	E18/4/10-3F4-A100-E
	160 ±3%	≈ 78	≈ 420	E18/4/10-3F4-A160-E
	250 ±5%	≈ 123	≈ 220	E18/4/10-3F4-A250-E
	315 ±8%	≈ 154	≈ 170	E18/4/10-3F4-A315-E
	1550 ±25%	≈ 760	≈ 0	E18/4/10-3F4
3F45 prot	1550 ±25%	≈ 760	≈ 0	E18/4/10-3F45
3E6	13500 +40/-30%	≈ 6600	≈ 0	E18/4/10-3E6

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT), clamping force for A_L measurements, 20 ±10 N, using a PCB coil containing 4 layers of 8 tracks each, total height 1.6 mm.

GRADE	A_L() (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	100 ±3%	≈ 41	≈ 870	E18/4/10-3C90-A100-P
	160 ±3%	≈ 65	≈ 470	E18/4/10-3C90-A160-P
	250 ±5%	≈ 102	≈ 240	E18/4/10-3C90-A250-P
	315 ±8%	≈ 129	≈ 170	E18/4/10-3C90-A315-P
	3680 ±25%	≈ 1500	≈ 0	E18/4/10-3C90
3C92 des	2690 ±25%	≈ 1100	≈ 0	E18/4/10-3C92
3C93 des	3100 ±25%	≈ 1270	≈ 0	E18/4/10-3C93
3C94	100 ±3%	≈41	≈870	E18/4/10-3C94-A100-P
	160 ±3%	≈65	≈470	E18/4/10-3C94-A160-P
	250 ±5%	≈102	≈240	E18/4/10-3C94-A250-P
	315 ±8%	≈129	≈170	E18/4/10-C94-A315-P
	3680 ±25%	≈ 1500	≈ 0	E18/4/10-3C94
3C95 des	4340 ±25%	≈ 1780	≈ 0	E18/4/10-3C95
3C96 des	3250 ±25%	≈ 1320	≈ 0	E18/4/10-3C96
3F3	100 ±3%	≈41	≈870	E18/4/10-3F3-A100-P
	160 ±3%	≈65	≈470	E18/4/10-3F3-A160-P
	250 ±5%	≈102	≈240	E18/4/10-3F3-A250-P
	315 ±8%	≈129	≈170	E18/4/10-3F3-A315-P
	3100 ±25%	≈ 1270	≈ 0	E18/4/10-3F3
3F35 des	2500 ±25%	≈ 1020	≈ 0	E18/4/10-3F35
3F4 des	100 ±3%	≈41	≈870	E18/4/10-3F4-A100-P
	160 ±3%	≈65	≈470	E18/4/10-3F4-A160-P
	250 ±5%	≈102	≈240	E18/4/10-3F4-A250-P
	315 ±8%	≈129	≈170	E18/4/10-3F4-A315-P
	1800 ±25%	≈ 740	≈ 0	E18/4/10-3F4
3F45 prot	1800 ±25%	≈ 740	≈ 0	E18/4/10-3F45
3E6	15500 +40/-30%	≈ 6400	≈ 0	E18/4/10-3E6

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at				
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E+E18-3C90	≥320	≤ 0.105	–	–	–	–
E+PLT18-3C90	≥320	≤ 0.095	–	–	–	–
E+E18-3C92	≥370	≤ 0.085	–	≤ 0.6	–	–
E+PLT18-3C92	≥370	≤ 0.075	–	≤ 0.5	–	–
E+E18-3C93	≥320	≤ 0.085[1]	–	≤ 0.6[1]	–	–
E+PLT18-3C93	≥320	≤ 0.075[1]	–	≤ 0.5[1]	–	–
E+E18-3C94	≥320	≤ 0.085	–	≤ 0.6	–	–
E+PLT18-3C94	≥320	≤ 0.075	–	≤ 0.5	–	–
E+E18-3C95	≥320	–	≤ 0.53	≤ 0.5	–	–
E+PLT18-3C95	≥320	–	≤ 0.44	≤ 0.42	–	–
E+E18-3C96	≥320	≤ 0.065	–	≤ 0.45	≤ 0.18	≤ 0.35
E+PLT18-3C96	≥320	≤ 0.06	–	≤ 0.4	≤ 0.15	≤ 0.3
E+E18-3F3	≥300	≤ 0.11	–	–	≤ 0.19	–
E+PLT18-3F3	≥300	≤ 0.09	–	–	≤ 0.16	–
E+E18-3F35	≥300	–	–	–	≤ 0.09	≤ 0.13
E+PLT18-3F35	≥300	–	–	–	≤ 0.08	≤ 0.12

1. Measured at 140 °C.

Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E+E18-3F35	≥300	≤ 1.0	–	–	–
E+PLT18-3F35	≥300	≤ 0.9	–	–	–
E+E18-3F4	≥250	–	≤ 0.3	–	≤ 0.45
E+PLT18-3F4	≥250	–	≤ 0.24	–	≤ 0.39
E+E18-3F45	≥250	–	≤ 0.22	≤ 0.82	≤ 0.38
E+PLT18-3F45	≥250	–	≤ 0.18	≤ 0.67	≤ 0.32

MOUNTING INFORMATION

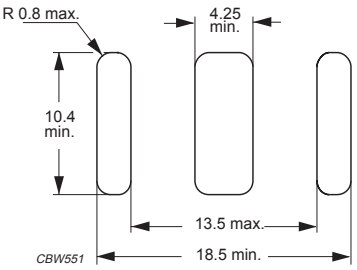
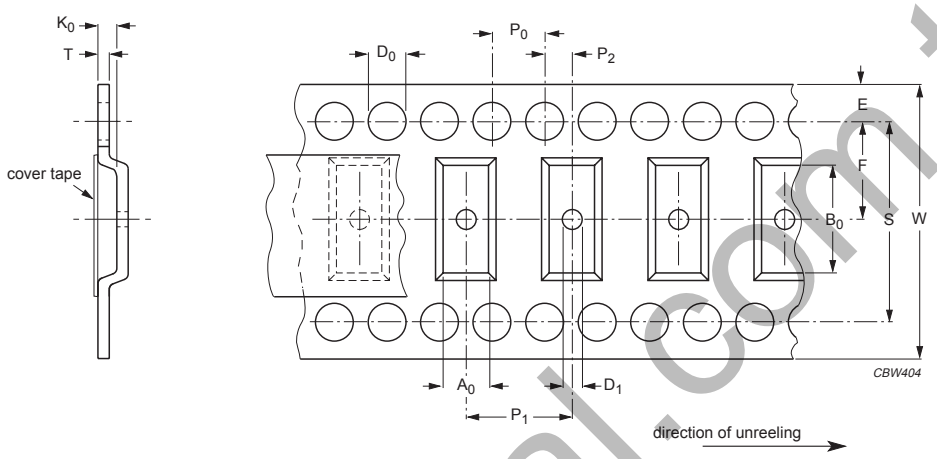


Fig.3 Recommended PCB cut-out for glued planar E18/4/10 cores.

BLISTER TAPE AND REEL DIMENSIONS prot



For dimensions see Table 1.

Fig.4 Blister tape.

Table 1 Physical dimensions of blister tape; see Fig.4

SIZE	DIMENSIONS (mm)
A_0	10.5 ±0.2
B_0	18.7 ±0.2
K_0	4.5 ±0.2
T	0.3 ±0.05
W	32.0 ±0.3
E	1.75 ±0.1
F	14.2 ±0.1
D_0	1.5 +0.1
D_1	≥ 2.0
P_0	4.0 ±0.1
P_1	16.0 ±0.1
P_2	2.0 ±0.1
S	28.4 ±0.1

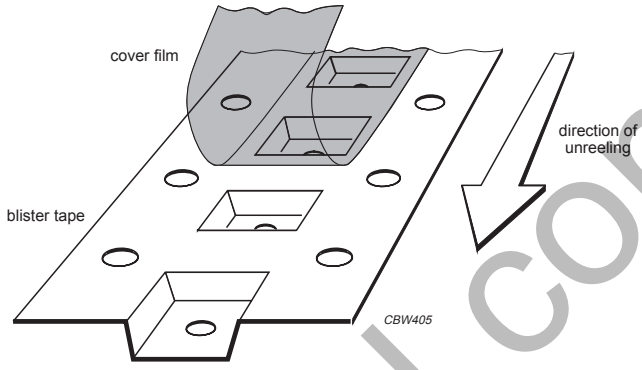
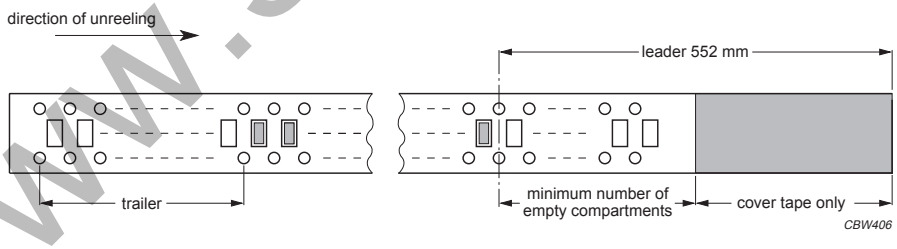
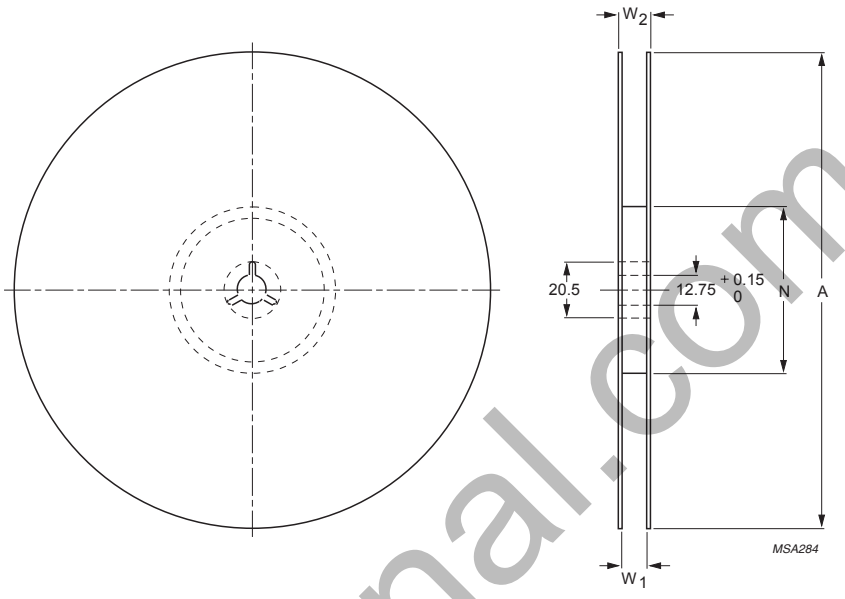


Fig.5 Construction of blister tape.



Leader: length of leader tape is 552 mm minimum covered with cover tape.
Trailer: 160 mm minimum (secured with tape).
Storage temperature range for tape: −25 to +45 °C.

Fig.6 Leader/trailer tape.



Dimensions in mm.
For dimensions see Table 2.

Fig.7 Reel.

Table 2 Reel dimensions; see Fig.7

SIZE	DIMENSIONS (mm)			
	A	N	W_1	W_2
32	330	100 ±5	32.4	≤36.4

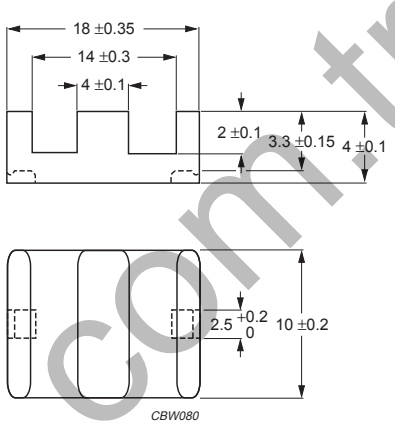
CORES

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.498	mm^{-1}
V_e	effective volume	830	mm^3
l_e	effective length	20.3	mm
A_e	effective area	39.5	mm^2
A_{min}	minimum area	35.9	mm^2
m	mass of E core half	≈ 2.4	g
m	mass of plate	≈ 1.7	g

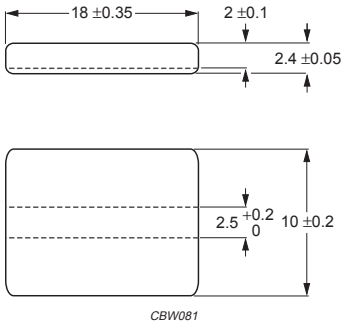
Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT18/10/2/S-3C90
3C92 des	PLT18/10/2/S-3C92
3C93 des	PLT18/10/2/S-3C93
3C94	PLT18/10/2/S-3C94
3C95 des	PLT18/10/2/S-3C95
3C96 des	PLT18/10/2/S-3C96
3F3	PLT18/10/2/S-3F3
3F35 des	PLT18/10/2/S-3F35
3F4 des	PLT18/10/2/S-3F4
3F45 prot	PLT18/10/2/S-3F45
3E6	PLT18/10/2/S-3E6



Dimensions in mm.

Fig.1 E18/4/10/R core half.



Dimensions in mm.

Fig.2 PLT 18/10/2.

Core halves for use in combination with a slotted plate (PLT/S)

A_L measured in combination with a slotted plate (PLT/S) clamping force for A_L measurements, 20 ±10 N; measurement coil as for E18/4/10.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	100 ±3%	≈ 41	≈ 870	E18/4/10/R-3C90-A100-P
	160 ±3%	≈ 65	≈ 470	E18/4/10/R-3C90-A160-P
	250 ±5%	≈ 102	≈ 240	E18/4/10/R-3C90-A250-P
	315 ±8%	≈ 129	≈ 170	E18/4/10/R-3C90-A315-P
	3680 ±25%	≈ 1500	≈ 0	E18/4/10/R-3C90
3C92 des	2690 ±25%	≈ 1070	≈ 0	E18/4/10/R-3C92
3C93 des	3100 ±25%	≈ 1230	≈ 0	E18/4/10/R-3C93
3C94	100 ±3%	≈ 41	≈ 870	E18/4/10/R-3C94-A100-P
	160 ±3%	≈ 65	≈ 470	E18/4/10/R-3C94-A160-P
	250 ±5%	≈ 102	≈ 240	E18/4/10/R-3C94-A250-P
	315 ±8%	≈ 129	≈ 170	E18/4/10/R-3C94-A315-P
	3680 ±25%	≈ 1500	≈ 0	E18/4/10/R-3C94
3C95 des	4340 ±25%	≈ 1780	≈ 0	E18/4/10/R-3C95
3C96 des	3250 ±25%	≈ 1320	≈ 0	E18/4/10/R-3C96
3F3	100 ±3%	≈ 41	≈ 870	E18/4/10/R-3F3-A100-P
	160 ±3%	≈ 65	≈ 470	E18/4/10/R-3F3-A160-P
	250 ±5%	≈ 102	≈ 240	E18/4/10/R-3F3-A250-P
	315 ±8%	≈ 129	≈ 170	E18/4/10/R-3F3-A315-P
	3100 ±25%	≈ 1270	≈ 0	E18/4/10/R-3F3
3F35 des	2500 ±25%	≈ 1020	≈ 0	E18/4/10/R-3F35
3F4 des	100 ±3%	≈ 41	≈ 870	E18/4/10/R-3F4-A100-P
	160 ±3%	≈ 65	≈ 470	E18/4/10/R-3F4-A160-P
	250 ±5%	≈ 102	≈ 240	E18/4/10/R-3F4-A250-P
	315 ±8%	≈ 129	≈ 170	E18/4/10/R-3F4-A315-P
	1800 ±25%	≈ 740	≈ 0	E18/4/10/R-3F4
3F45 prot	1800 ±25%	≈ 740	≈ 0	E18/4/10/R-3F45
3E6	15500 +40/–30%	≈ 6400	≈ 0	E18/4/10/R-3E6

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at				
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E18/R+PLT18/S-3C90	≥320	≤ 0.095	–	–	–	–
E18/R+PLT18/S-3C92	≥370	≤ 0.075	–	≤ 0.5	–	–
E18/R+PLT18/S-3C93	≥320	≤ 0.075[1]	–	≤ 0.5[1]	–	–
E18/R+PLT18/S-3C94	≥320	≤ 0.075	–	≤ 0.5	–	–
E18/R+PLT18/S-3C95	≥320	–	≤ 0.46	≤ 0.43	–	–
E18/R+PLT18/S-3C96	≥320	≤ 0.06	–	≤ 0.4	≤ 0.15	≤ 0.3
E18/R+PLT18/S-3F3	≥300	≤ 0.09	–	–	≤ 0.16	–
E18/R+PLT18/S-3F35	≥300	–	–	–	≤ 0.08	≤ 0.12
E18/R+PLT18/S-3F4	≥250	–	–	–	–	–
E18/R+PLT18/S-3F45	≥250	–	–	–	–	–

1. Measured at 140 °C.

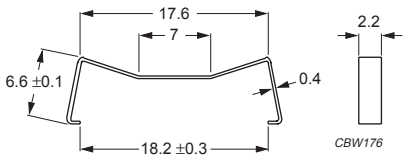
Properties of core sets under power conditions (continued)

GRADE	B (mT) at				
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E18/R+PLT18/S-3C90	≥320	–	–	–	–
E18/R+PLT18/S-3C92	≥370	–	–	–	–
E18/R+PLT18/S-3C93	≥320	–	–	–	–
E18/R+PLT18/S-3C94	≥320	–	–	–	–
E18/R+PLT18/S-3C95	≥320	–	–	–	–
E18/R+PLT18/S-3C96	≥320	–	–	–	–
E18/R+PLT18/S-3F3	≥300	–	–	–	–
E18/R+PLT18/S-3F35	≥300	≤ 0.9	–	–	–
E18/R+PLT18/S-3F4	≥250	–	≤ 0.24	–	≤ 0.39
E18/R+PLT18/S-3F45	≥250	–	≤ 0.18	≤ 0.67	≤ 0.32

MOUNTING PARTS

General data and ordering information

ITEM	MATERIAL	FIGURE	TYPE NUMBER
Clamp	stainless steel (CrNi)	3	CLM-E18/PLT18



Dimensions in mm.

Fig.3 Clamp for E18/R+PLT18/S.

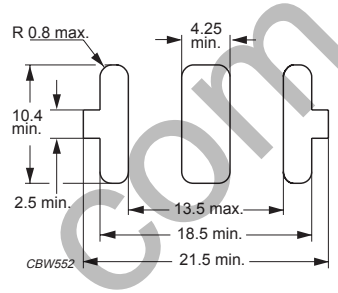


Fig.4 Recommended PCB cut-out for clamped cores.

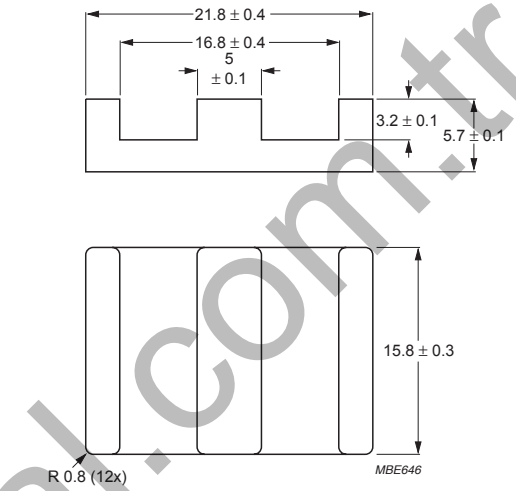
BLISTER TAPE AND REEL

For blister tape dimensions and construction and reel dimensions, see data sheet “E18/4/10”.

CORES

Effective core parameters of a set of E cores

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.414	mm^{-1}
V_e	effective volume	2550	mm^3
l_e	effective length	32.5	mm
A_e	effective area	78.3	mm^2
A_{min}	minimum area	78.3	mm^2
m	mass of core half	≈ 6.5	g



Dimensions in mm.

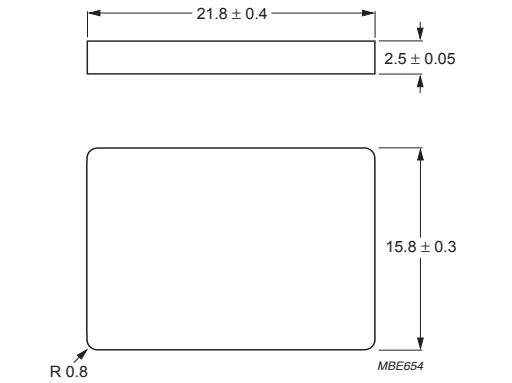
Fig.1 E22/6/16.

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.332	mm^{-1}
V_e	effective volume	2040	mm^3
l_e	effective length	26.1	mm
A_e	effective area	78.5	mm^2
A_{min}	minimum area	78.5	mm^2
m	mass of plate	≈ 4	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT22/16/2.5-3C90
3C92 des	PLT22/16/2.5-3C92
3C93 des	PLT22/16/2.5-3C93
3C94	PLT22/16/2.5-3C94
3C95 des	PLT22/16/2.5-3C95
3C96 des	PLT22/16/2.5-3C96
3F3	PLT22/16/2.5-3F3
3F35 des	PLT22/16/2.5-3F35
3F4 des	PLT22/16/2.5-3F4
3F45 prot	PLT22/16/2.5-3F45
3E6	PLT22/16/2.5-3E6



Dimensions in mm.

Fig.2 PLT22/16/2.5.

Core halves for use in combination with an non-gapped E core

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 20 ±10 N, using a PCB coil containing 5 layers of 20 tracks each, total height 2.5 mm.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	160 ±3%	≈ 53	≈ 900	E22/6/16-3C90-A160-E
	250 ±3%	≈ 82	≈ 490	E22/6/16-3C90-A250-E
	315 ±3%	≈ 104	≈ 360	E22/6/16-3C90-A315-E
	400 ±5%	≈ 132	≈ 280	E22/6/16-3C90-A400-E
	630 ±8%	≈ 208	≈ 160	E22/6/16-3C90-A630-E
	5150 ±25%	≈ 1700	≈ 0	E22/6/16-3C90
3C92 des	3700 ±25%	≈ 1220	≈ 0	E22/6/16-3C92
3C93 des	4300 ±25%	≈ 1420	≈ 0	E22/6/16-3C93
3C94	160 ±3%	≈ 53	≈ 900	E22/6/16-3C94-A160-E
	250 ±3%	≈ 82	≈ 490	E22/6/16-3C94-A250-E
	315 ±3%	≈ 104	≈ 360	E22/6/16-3C94-A315-E
	400 ±5%	≈ 132	≈ 280	E22/6/16-3C94-A400-E
	630 ±8%	≈ 208	≈ 160	E22/6/16-3C94-A630-E
	5150 ±25%	≈ 1700	≈ 0	E22/6/16-3C94
3C95 des	6220 ±25%	≈ 2050	≈ 0	E22/6/16-3C95
3C96 des	4600 ±25%	≈ 1520	≈ 0	E22/6/16-3C96
3F3	160 ±3%	≈ 53	≈ 900	E22/6/16-3F3-A160-E
	250 ±3%	≈ 82	≈ 490	E22/6/16-3F3-A250-E
	315 ±3%	≈ 104	≈ 360	E22/6/16-3F3-A315-E
	400 ±5%	≈ 132	≈ 280	E22/6/16-3F3-A400-E
	630 ±8%	≈ 208	≈ 160	E22/6/16-3F3-A630-E
	4300 ±25%	≈ 1420	≈ 0	E22/6/16-3F3
3F35 des	3500 ±25%	≈ 1160	≈ 0	E22/6/16-3F35
3F4 des	160 ±3%	≈ 53	≈ 900	E22/6/16-3F4-A160-E
	250 ±3%	≈ 82	≈ 490	E22/6/16-3F4-A250-E
	315 ±3%	≈ 104	≈ 360	E22/6/16-3F4-A315-E
	400 ±5%	≈ 132	≈ 280	E22/6/16-3F4-A400-E
	630 ±8%	≈ 208	≈ 160	E22/6/16-3F4-A630-E
	2400 ±25%	≈ 790	≈ 0	E22/6/16-3F4
3F45 prot	2400 ±25%	≈ 790	≈ 0	E22/6/16-3F45
3E6	22000 +40/–30%	≈ 7250	≈ 0	E22/6/16-3E6

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT), clamping force for A_L measurements, 20 ±10 N, using a PCB coil containing 5 layers of 20 tracks each, total height 2.5 mm.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	160 ±3%	≈ 42	≈ 950	E22/6/16-A160-P
	250 ±3%	≈ 66	≈ 550	E22/6/16-3C90-A250-P
	315 ±3%	≈ 83	≈ 400	E22/6/16-3C90-A315-P
	400 ±5%	≈ 106	≈ 280	E22/6/16-3C90-A400-P
	630 ±8%	≈ 166	≈ 160	E22/6/16-3C90-A630-P
	6150 ±25%	≈ 1620	≈ 0	E22/6/16-3C90
3C92 des	4410 ±25%	≈ 1170	≈ 0	E22/6/16-3C92
3C93 des	5000 ±25%	≈ 1320	≈ 0	E22/6/16-3C93
3C94	160 ±3%	≈ 42	≈ 950	E22/6/16-3C94-A160-P
	250 ±3%	≈ 66	≈ 550	E22/6/16-3C94-A250-P
	315 ±3%	≈ 83	≈ 400	E22/6/16-3C94-A315-P
	400 ±5%	≈ 106	≈ 280	E22/6/16-3C94-A400-P
	630 ±8%	≈ 166	≈ 160	E22/6/16-3C94-A630-P
	6150 ±25%	≈ 1620	≈ 0	E22/6/16-3C94
3C95 des	7360 ±25%	≈ 1950	≈ 0	E22/6/16-3C95
3C96 des	5450 ±25%	≈ 1440	≈ 0	E22/6/16-3C96
3F3	160 ±3%	≈ 42	≈ 950	E22/6/16-3F3-A160-P
	250 ±3%	≈ 66	≈ 550	E22/6/16-3F3-A250-P
	315 ±3%	≈ 83	≈ 400	E22/6/16-3F3-A315-P
	400 ±5%	≈ 106	≈ 280	E22/6/16-3F3-A400-P
	630 ±8%	≈ 166	≈ 160	E22/6/16-3F3-A630-P
	5000 ±25%	≈ 1320	≈ 0	E22/6/16-3F3
3F35 des	4100 ±25%	≈ 1080	≈ 0	E22/6/16-3F35
3F4 des	160 ±3%	≈ 42	≈ 950	E22/6/16-3F4-A160-P
	250 ±3%	≈ 66	≈ 550	E22/6/16-3F4-A250-P
	315 ±3%	≈ 83	≈ 400	E22/6/16-3F4-A315-P
	400 ±5%	≈ 106	≈ 280	E22/6/16-3F4-A400-P
	630 ±8%	≈ 166	≈ 160	E22/6/16-3F4-A630-P
	2900 ±25%	≈ 770	≈ 0	E22/6/16-3F4
3F45 prot	2900 ±25%	≈ 770	≈ 0	E22/6/16-3F45
3E6	26000 +40/–30%	≈ 6900	≈ 0	E22/6/16-3E6

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at				
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E+E22-3C90	≥320	≤ 0.28	–	–	–	–
E+PLT22-3C90	≥320	≤ 0.23	–	–	–	–
E+E22-3C92	≥370	≤ 0.22	–	≤ 1.5	–	–
E+PLT22-3C92	≥370	≤ 0.18	–	≤ 1.25	–	–
E+E22-3C93	≥320	≤ 0.22[1]	–	≤ 1.5[1]	–	–
E+PLT22-3C93	≥320	≤ 0.18[1]	–	≤ 1.25[1]	–	–
E+E22-3C94	≥320	≤ 0.22	–	≤ 1.5	–	–
E+PLT22-3C94	≥320	≤ 0.18	–	≤ 1.25	–	–
E+E22-3C95	≥320	–	≤ 1.5	≤ 1.43	–	–
E+PLT22-3C95	≥320	–	≤ 1.2	≤ 1.14	–	–
E+E22-3C96	≥320	≤ 0.17	–	≤ 1.1	≤ 0.45	≤ 1.0
E+PLT22-3C96	≥320	≤ 0.14	–	≤ 1.0	≤ 0.38	≤ 0.75
E+E22-3F3	≥300	≤ 0.28	–	–	≤ 0.5	–
E+PLT22-3F3	≥300	≤ 0.23	–	–	≤ 0.40	–
E+E22-3F35	≥300	–	–	–	≤ 0.25	≤ 0.4
E+PLT22-3F35	≥300	–	–	–	≤ 0.2	≤ 0.3

1. Measured at 140 °C.

Properties of core sets under power conditions (continued)

GRADE	B (mT) at				
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E+E22-3F35	≥300	≤ 3.0	–	–	–
E+PLT22-3F35	≥300	≤ 2.2	–	–	–
E+E22-3F4	≥250	–	≤ 0.8	–	≤ 1.2
E+PLT22-3F4	≥250	–	≤ 0.6	–	≤ 1.0
E+E22-3F45	≥250	–	≤ 0.6	≤ 2.2	≤ 1.0
E+PLT22-3F45	≥250	–	≤ 0.45	≤ 1.7	≤ 0.8

MOUNTING INFORMATION

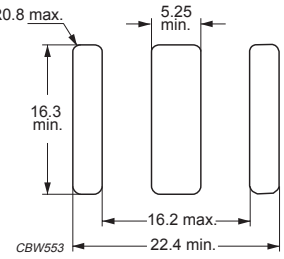


Fig.3 Recommended PCB cut-out for glued cores.

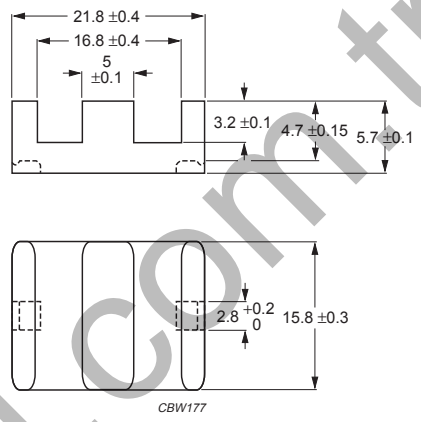
CORES

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.324	mm^{-1}
V_e	effective volume	2100	mm^3
l_e	effective length	26.1	mm
A_e	effective area	78.5	mm^2
A_{min}	minimum area	72.6	mm^2
m	mass of E core half	≈ 6.5	g
m	mass of plate	≈ 4	g

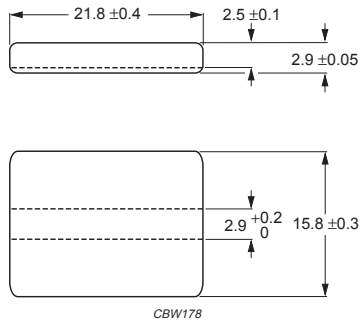
Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT22/16/2.5/S-3C90
3C92 des	PLT22/16/2.5/S-3C92
3C93 des	PLT22/16/2.5/S-3C93
3C94	PLT22/16/2.5/S-3C94
3C95 des	PLT22/16/2.5/S-3C95
3C96 des	PLT22/16/2.5/S-3C96
3F3	PLT22/16/2.5/S-3F3
3F35 des	PLT22/16/2.5/S-3F35
3F4 des	PLT22/16/2.5/S-3F4
3F45 prot	PLT22/16/2.5/S-3F45
3E6	PLT22/16/2.5/S-3E6



Dimensions in mm.

Fig.1 E22/6/16/R.



Dimensions in mm.

Fig.2 PLT22/16/2.5/S.

Core halves for use in combination with a slotted plate (PLT/S)

A_L measured in combination with a slotted plate (PLT/S) clamping force for A_L measurements, 20 ±10 N; measurement coil as for E22/6/16.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	160 ±3%	≈ 42	≈ 950	E22/6/16/R-3C90-A160-P
	250 ±3%	≈ 66	≈ 550	E22/6/16/R-3C90-A250-P
	315 ±3%	≈ 83	≈ 400	E22/6/16/R-3C90-A315-P
	400 ±5%	≈ 106	≈ 280	E22/6/16/R-3C90-A400-P
	630 ±8%	≈ 166	≈ 160	E22/6/16/R-3C90-A630-P
	6150 ±25%	≈ 1620	≈ 0	E22/6/16/R-3C90
3C92 des	4410 ±25%	≈ 1140	≈ 0	E22/6/16/R-3C92
3C93 des	5000 ±25%	≈ 1290	≈ 0	E22/6/16/R-3C93
3C94	160 ±3%	≈ 42	≈ 950	E22/6/16/R-3C94-A160-P
	250 ±3%	≈ 66	≈ 550	E22/6/16/R-3C94-A250-P
	315 ±3%	≈ 83	≈ 400	E22/6/16/R-3C94-A315-P
	400 ±5%	≈ 106	≈ 280	E22/6/16/R-3C94-A400-P
	630 ±8%	≈ 166	≈ 160	E22/6/16/R-3C94-A630-P
	6150 ±25%	≈ 1620	≈ 0	E22/6/16/R-3C94
3C95 des	7360 ±25%	≈ 1950	≈ 0	E22/6/16/R-3C95
3C96 des	5450 ±25%	≈ 1440	≈ 0	E22/6/16/R-3C96
3F3	160 ±3%	≈ 42	≈ 950	E22/6/16/R-3F3-A160-P
	250 ±3%	≈ 66	≈ 550	E22/6/16/R-3F3-A250-P
	315 ±3%	≈ 83	≈ 400	E22/6/16/R-3F3-A315-P
	400 ±5%	≈ 106	≈ 280	E22/6/16/R-3F3-A400-P
	630 ±8%	≈ 166	≈ 160	E22/6/16/R-3F3-A630-P
	5000 ±25%	≈ 1320	≈ 0	E22/6/16/R-3F3
3F35 des	4100 ±25%	≈ 1080	≈ 0	E22/6/16/R-3F35
3F4 des	160 ±3%	≈ 42	≈ 950	E22/6/16/R-3F4-A160-P
	250 ±3%	≈ 66	≈ 550	E22/6/16/R-3F4-A250-P
	315 ±3%	≈ 83	≈ 400	E22/6/16/R-3F4-A315-P
	400 ±5%	≈ 106	≈ 280	E22/6/16/R-3F4-A400-P
	630 ±8%	≈ 166	≈ 160	E22/6/16/R-3F4-A630-P
	2900 ±25%	≈ 770	≈ 0	E22/6/16/R-3F4
3F45 prot	2900 ±25%	≈ 770	≈ 0	E22/6/16/R-3F45
3E6	26000 +40/–30%	≈ 6900	≈ 0	E22/6/16/R-3E6

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at				
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E22/R+PLT22/S-3C90	≥320	≤ 0.23	–	–	–	–
E22/R+PLT22/S-3C92	≥370	≤ 0.18	–	≤ 1.25	–	–
E22/R+PLT22/S-3C93	≥320	≤ 0.18[1]	–	≤ 1.25[1]	–	–
E22/R+PLT22/S-3C94	≥320	≤ 0.18	–	≤ 1.25	–	–
E22/R+PLT22/S-3C95	≥320	–	≤ 1.24	≤ 1.18	–	–
E22/R+PLT22/S-3C96	≥320	≤ 0.14	–	≤ 1.0	≤ 0.38	≤ 0.75
E22/R+PLT22/S-3F3	≥300	≤ 0.23	–	–	≤ 0.4	–
E22/R+PLT22/S-3F35	≥300	–	–	–	≤ 0.2	≤ 0.3
E22/R+PLT22/S-3F4	≥250	–	–	–	–	–
E22/R+PLT22/S-3F45	≥250	–	–	–	–	–

1. Measured at 140 °C.

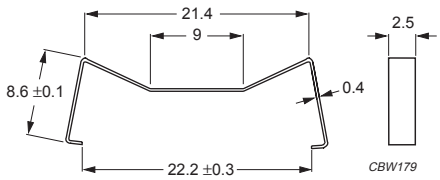
Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E22/R+PLT22/S-3C90	≥320	–	–	–	–
E22/R+PLT22/S-3C92	≥370	–	–	–	–
E22/R+PLT22/S-3C93	≥320	–	–	–	–
E22/R+PLT22/S-3C94	≥320	–	–	–	–
E22/R+PLT22/S-3C95	≥320	–	–	–	–
E22/R+PLT22/S-3C96	≥320	–	–	–	–
E22/R+PLT22/S-3F3	≥300	–	–	–	–
E22/R+PLT22/S-3F35	≥300	≤ 2.2	–	–	–
E22/R+PLT22/S-3F4	≥250	–	≤ 0.62	–	≤ 1.0
E22/R+PLT22/S-3F45	≥250	–	≤ 0.45	≤ 1.7	≤ 0.8

MOUNTING PARTS

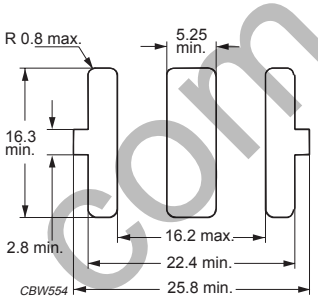
General data and ordering information

ITEM	MATERIAL	FIGURE	TYPE NUMBER
Clamp	stainless steel (CrNi)	3	CLM-E22/PLT22



Dimensions in mm.

Fig.3 Clamp for E22/R+PLT22/S.



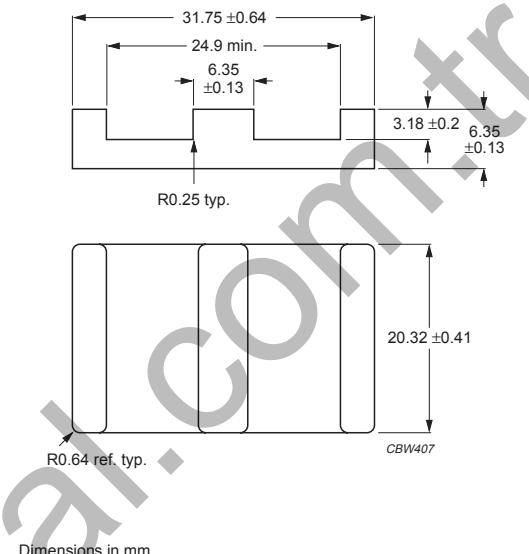
Dimensions in mm.

Fig.4 Recommended PCB cut-out for clamped cores.

CORES

Effective core parameters of a set of E cores

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.323	mm^{-1}
V_e	effective volume	5380	mm^3
l_e	effective length	41.4	mm
A_e	effective area	130	mm^2
A_{min}	minimum area	130	mm^2
m	mass of core half	≈ 13	g



Dimensions in mm.

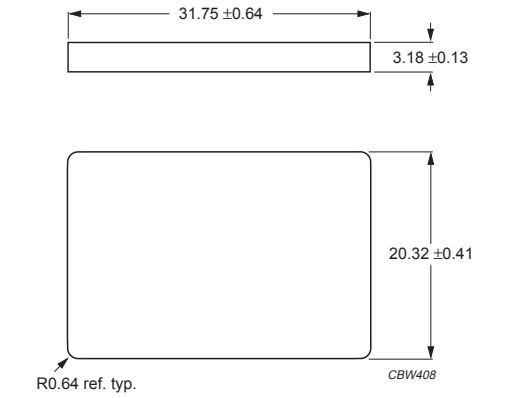
Fig.1 E32/6/20.

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.278	mm^{-1}
V_e	effective volume	4560	mm^3
l_e	effective length	35.1	mm
A_e	effective area	130	mm^2
A_{min}	minimum area	130	mm^2
m	mass of plate	≈ 10	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT32/20/3.2-3C90
3C92 des	PLT32/20/3.2-3C92
3C93 des	PLT32/20/3.2-3C93
3C94	PLT32/20/3.2-3C94
3C95 des	PLT32/20/3.2-3C95
3C96 des	PLT32/20/3.2-3C96
3F3	PLT32/20/3.2-3F3
3F4 des	PLT32/20/3.2-3F4



Dimensions in mm.

Fig.2 PLT32/20/3.2.

Core halves for use in combination with an E core

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 30 ±10 N, unless stated otherwise.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER
3C90	160 ±3%(1)	≈ 41	≈ 1200	E32/6/20-3C90-E160-E
	250 ±3%(1)	≈ 64	≈ 700	E32/6/20-3C90-E250-E
	315 ±3%	≈ 81	≈ 550	E32/6/20-3C90-A315-E
	400 ±5%	≈ 103	≈ 450	E32/6/20-3C90-A400-E
	630 ±8%	≈ 162	≈ 260	E32/6/20-3C90-A630-E
	6425 ±25%	≈ 1650	≈ 0	E32/6/20-3C90
3C92 des	5000 ±25%	≈ 1290	≈ 0	E32/6/20-3C92
3C93 des	5900 ±25%	≈ 1520	≈ 0	E32/6/20-3C93
3C94	160 ±3%(1)	≈ 41	≈ 1200	E32/6/20-3C94-E160-E
	250 ±3%(1)	≈ 64	≈ 700	E32/6/20-3C94-E250-E
	315 ±3%	≈ 81	≈ 550	E32/6/20-3C94-A315-E
	400 ±5%	≈ 103	≈ 450	E32/6/20-3C94-A400-E
	630 ±8%	≈ 162	≈ 260	E32/6/20-3C94-A630-E
	6425 ±25%	≈ 1650	≈ 0	E32/6/20-3C94
3C95 des	7690 ±25%	≈ 1950	≈ 0	E32/6/20-3C95
3C96 des	6425 ±25%	≈ 1650	≈ 0	E32/6/20-3C96
3F3	160 ±3%(1)	≈ 41	≈ 1200	E32/6/20-3F3-E160-E
	250 ±3%(1)	≈ 64	≈ 700	E32/6/20-3F3-E250-E
	315 ±3%	≈ 81	≈ 550	E32/6/20-3F3-A315-E
	400 ±5%	≈ 103	≈ 450	E32/6/20-3F3-A400-E
	630 ±8%	≈ 162	≈ 260	E32/6/20-3F3-A630-E
	5900 ±25%	≈ 1520	≈ 0	E32/6/20-3F3
3F4 des	160 ±3%(1)	≈ 41	≈ 1200	E32/6/20-3F4-E160-E
	250 ±3%(1)	≈ 64	≈ 700	E32/6/20-3F4-E250-E
	315 ±3%	≈ 81	≈ 550	E32/6/20-3F4-A315-E
	400 ±5%	≈ 103	≈ 450	E32/6/20-3F4-A400-E
	630 ±8%	≈ 162	≈ 260	E32/6/20-3F4-A630-E
	3200 ±25%	≈ 820	≈ 0	E32/6/20-3F4

Note

1. Measured in combination with an equal gapped E core half, clamping force for A_L measurements, 30 ±10 N.

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT), clamping force for A_L measurements, 30 ±10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	160 ±3%	≈ 35	≈ 1200	E32/6/20-3C90-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20-3C90-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20-3C90-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20-3C90-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20-3C90-A630-P
	7350 ±25%	≈ 1610	≈ 0	E32/6/20-3C90
3C92 des	5760 ±25%	≈ 1270	≈ 0	E32/6/20-3C92
3C93 des	6780 ±25%	≈ 1500	≈ 0	E32/6/20-3C93
3C94	160 ±3%	≈ 35	≈ 1200	E32/6/20-3C94-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20-3C94-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20-3C94-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20-3C94-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20-3C94-A630-P
	7350 ±25%	≈ 1610	≈ 0	E32/6/20-3C94
3C95 des	8750 ±25%	≈ 1880	≈ 0	E32/6/20-3C95
3C96 des	7350 ±25%	≈ 1610	≈ 0	E32/6/20-3C96
3F3	160 ±3%	≈ 35	≈ 1200	E32/6/20-3F3-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20-3F3-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20-3F3-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20-3F3-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20-3F3-A630-P
	6780 ±25%	≈ 1490	≈ 0	E32/6/20-3F3
3F4 des	160 ±3%	≈ 35	≈ 1200	E32/6/20-3F4-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20-3F4-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20-3F4-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20-3F4-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20-3F4-A630-P
	3700 ±25%	≈ 810	≈ 0	E32/6/20-3F4

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E+E32-3C90	≥320	≤ 0.65	–	–	–
E+PLT32-3C90	≥320	≤ 0.55	–	–	–
E+E32-3C92	≥370	≤ 0.48	–	≤ 3.4	–
E+PLT32-3C92	≥370	≤ 0.41	–	≤ 2.9	–
E+E32-3C93	≥320	≤ 0.48[1]	–	≤ 3.4[1]	–
E+PLT32-3C93	≥320	≤ 0.41[1]	–	≤ 2.9[1]	–
E+E32-3C94	≥320	≤ 0.48	–	≤ 3.4	–
E+PLT32-3C94	≥320	≤ 0.41	–	≤ 2.9	–
E+E32-3C95	≥320	–	≤ 3.17	≤ 3.0	–
E+PLT32-3C95	≥320	–	≤ 2.69	≤ 2.55	–
E+E32-3C96	≥320	≤ 0.36	–	≤ 2.6	≤ 0.9
E+PLT32-3C96	≥320	≤ 0.3	–	≤ 2.2	≤ 0.8
E+E32-3F3	≥300	≤ 0.65	–	–	≤ 1.0
E+PLT32-3F3	≥300	≤ 0.6	–	–	≤ 0.85
E+E32-3F4	≥250	–	–	–	–
E+PLT32-3F4	≥250	–	–	–	–

1. Measured at 140 °C.

Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E+E32-3C96	≥320	≤ 2.0	–	–	–
E+PLT32-3C96	≥320	≤ 1.7	–	–	–
E+E32-3F3	≥300	–	–	–	–
E+PLT32-3F3	≥300	–	–	–	–
E+E32-3F4	≥250	–	–	≤ 1.6	≤ 2.5
E+PLT32-3F4	≥250	–	–	≤ 1.36	≤ 2.2

CORES

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
Σ(l/A)	core factor (C1)	0.278	mm^{-1}
V_e	effective volume	4560	mm^3
l_e	effective length	35.1	mm
A_e	effective area	130	mm^2
A_{min}	minimum area	119	mm^2
m	mass of core half	≈ 13	g
m	mass of plate	≈ 10	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT32/20/3.2/R-3C90
3C92 des	PLT32/20/3.2/R-3C92
3C93 des	PLT32/20/3.2/R-3C93
3C94	PLT32/20/3.2/R-3C94
3C95 des	PLT32/20/3.2/R-3C95
3C96 des	PLT32/20/3.2/R-3C96
3F3	PLT32/20/3.2/R-3F3
3F4 des	PLT32/20/3.2/R-3F4

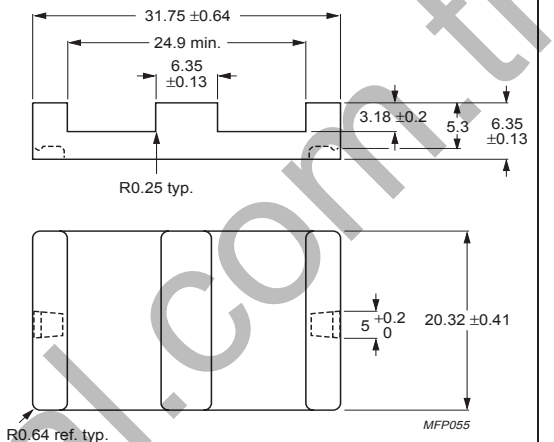


Fig.1 E32/6/20/R.

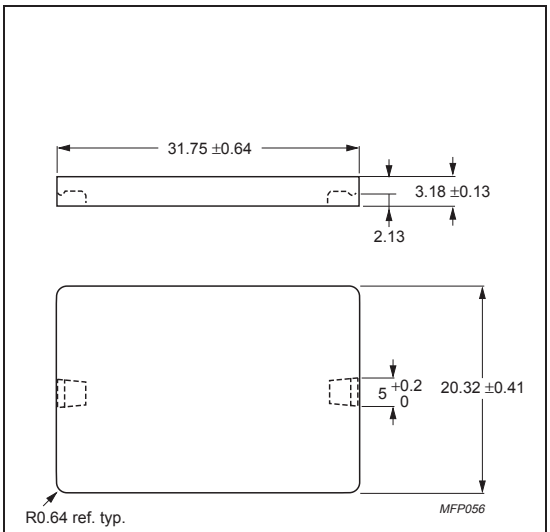


Fig.2 PLT32/20/3.2/R.

Core halves for use in combination with a recessed plate (PLT/R)

A_L measured in combination with a recessed plate (PLT/R), clamping force for A_L measurements, 30 ±10 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	160 ±3%	≈ 35	≈ 1200	E32/6/20/R-3C90-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20/R-3C90-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20/R-3C90-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20/R-3C90-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20/R-3C90-A630-P
	7350 ±25%	≈ 1610	≈ 0	E32/6/20/R-3C90
3C92 des	5760 ±25%	≈ 1270	≈ 0	E32/6/20/R-3C92
3C93 des	6780 ±25%	≈ 1500	≈ 0	E32/6/20/R-3C93
3C94	160 ±3%	≈ 35	≈ 1200	E32/6/20/R-3C94-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20/R-3C94-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20/R-3C94-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20/R-3C94-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20/R-3C94-A630-P
	7350 ±25%	≈ 1610	≈ 0	E32/6/20/R-3C94
3C95 des	8750 ±25%	≈ 1880	≈ 0	E32/6/20/R-3C95
3C96 des	7350 ±25%	≈ 1610	≈ 0	E32/6/20/R-3C96
3F3	160 ±3%	≈ 35	≈ 1200	E32/6/20/R-3F3-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20/R-3F3-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20/R-3F3-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20/R-3F3-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20/R-3F3-A630-P
	6780 ±25%	≈ 1490	≈ 0	E32/6/20/R-3F3
3F4 des	160 ±3%	≈ 35	≈ 1200	E32/6/20/R-3F4-A160-P
	250 ±3%	≈ 55	≈ 700	E32/6/20/R-3F4-A250-P
	315 ±3%	≈ 69	≈ 550	E32/6/20/R-3F4-A315-P
	400 ±5%	≈ 87	≈ 450	E32/6/20/R-3F4-A400-P
	630 ±8%	≈ 138	≈ 260	E32/6/20/R-3F4-A630-P
	3700 ±25%	≈ 810	≈ 0	E32/6/20/R-3F4

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E32/R+PLT32/R-3C90	≥320	≤ 0.55	–	–	–
E32/R+PLT32/R-3C92	≥370	≤ 0.41	–	≤ 2.9	–
E32/R+PLT32/R-3C93	≥320	≤ 0.41[1]	–	≤ 2.9[1]	–
E32/R+PLT32/R-3C94	≥320	≤ 0.41	–	≤ 2.9	–
E32/R+PLT32/R-3C95	≥320	–	≤ 2.69	≤ 2.55	–
E32/R+PLT32/R-3C96	≥320	≤ 0.3	–	≤ 2.2	≤ 0.8
E32/R+PLT32/R-3F3	≥300	≤ 0.6	–	–	≤ 0.85
E32/R+PLT32/R-3F4	≥250	–	–	–	–

1. Measured at 140 °C.

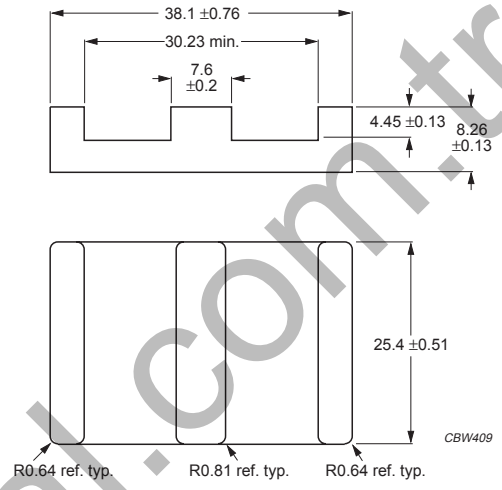
Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E32/R+PLT32/R-3C90	≥320	–	–	–	–
E32/R+PLT32/R-3C92	≥370	–	–	–	–
E32/R+PLT32/R-3C93	≥320	–	–	–	–
E32/R+PLT32/R-3C94	≥320	–	–	–	–
E32/R+PLT32/R-3C95	≥320	–	–	–	–
E32/R+PLT32/R-3C96	≥320	≤ 1.7	–	–	–
E32/R+PLT32/R-3F3	≥300	–	–	–	–
E32/R+PLT32/R-3F4	≥250	–	–	≤ 1.36	≤ 2.2

CORES

Effective core parameters of a set of E cores

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.272	mm^{-1}
V_e	effective volume	10200	mm^3
l_e	effective length	52.4	mm
A_e	effective area	194	mm^2
A_{min}	minimum area	194	mm^2
m	mass of core half	≈ 25	g



Dimensions in mm.

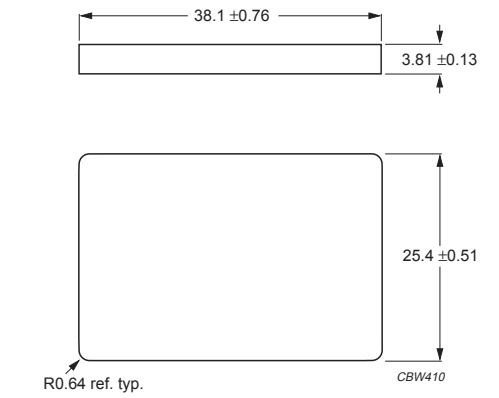
Fig.1 E38/8/25 core half.

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.226	mm^{-1}
V_e	effective volume	8460	mm^3
l_e	effective length	43.7	mm
A_e	effective area	194	mm^2
A_{min}	minimum area	194	mm^2
m	mass of plate	≈ 18	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT38/25/3.8-3C90
3C92 des	PLT38/25/3.8-3C92
3C93 des	PLT38/25/3.8-3C93
3C94	PLT38/25/3.8-3C94
3C95 des	PLT38/25/3.8-3C95
3F3	PLT38/25/3.8-3F3
3F4 des	PLT38/25/3.8-3F4



Dimensions in mm.

Fig.2 PLT38/25/3.8.

Core halves for use in combination with an E core

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 40 ±15 N, unless stated otherwise.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER
3C90	250 ±3%(1)	≈ 54	≈ 1100	E38/8/25-3C90-E250-E
	315 ±3%(1)	≈ 68	≈ 850	E38/8/25-3C90-E315-E
	400 ±3%(1)	≈ 86	≈ 650	E38/8/25-3C90-E400-E
	630 ±5%	≈ 136	≈ 400	E38/8/25-3C90-A630-E
	1000 ±10%	≈ 216	≈ 250	E38/8/25-3C90-A1000-E
	7940 ±25%	≈ 1720	≈ 0	E38/8/25-3C90
3C92 des	6100 ±25%	≈ 1320	≈ 0	E38/8/25-3C92
3C93 des	7250 ±25%	≈ 1570	≈ 0	E38/8/25-3C93
3C94	250 ±3%(1)	≈ 54	≈ 1100	E38/8/25-3C94-E250-E
	315 ±3%(1)	≈ 68	≈ 850	E38/8/25-3C94-E315-E
	400 ±3%(1)	≈ 86	≈ 650	E38/8/25-3C94-E400-E
	630 ±5%	≈ 136	≈ 400	E38/8/25-3C94-A630-E
	1000 ±10%	≈ 216	≈ 250	E38/8/25-3C94-A1000-E
	7940 ±25%	≈ 1720	≈ 0	E38/8/25-3C94
3C95 des	9600 ±25%	≈ 2060	≈ 0	E38/8/25-3C95
3F3	250 ±3%(1)	≈ 54	≈ 1100	E38/8/25-3F3-E250-E
	315 ±3%(1)	≈ 68	≈ 850	E38/8/25-3F3-E315-E
	400 ±3%(1)	≈ 86	≈ 650	E38/8/25-3F3-E400-E
	630 ±5%	≈ 136	≈ 400	E38/8/25-3F3-A630-E
	1000 ±10%	≈ 216	≈ 250	E38/8/25-3F3-A1000-E
	7250 ±25%	≈ 1570	≈ 0	E38/8/25-3F3
3F4 des	250 ±3%(1)	≈ 54	≈ 1100	E38/8/25-3F4-E250-E
	315 ±3%(1)	≈ 68	≈ 850	E38/8/25-3F4-E315-E
	400 ±3%(1)	≈ 86	≈ 650	E38/8/25-3F4-E400-E
	630 ±5%	≈ 136	≈ 400	E38/8/25-3F4-A630-E
	1000 ±10%	≈ 216	≈ 250	E38/8/25-3F4-A1000-E
	3880 ±25%	≈ 840	≈ 0	E38/8/25-3F4

Note

1. Measured in combination with an equal gapped core half, clamping force for A_L measurements, 40 ±15 N.

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT), clamping force for A_L measurements, 40 ±15 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	250 ±3%	≈ 45	≈ 1100	E38/8/25-3C90-A250-P
	315 ±3%	≈ 57	≈ 850	E38/8/25-3C90-A315-P
	400 ±3%	≈ 72	≈ 650	E38/8/25-3C90-A400-P
	630 ±5%	≈ 113	≈ 400	E38/8/25-3C90-A630-P
	1000 ±10%	≈ 180	≈ 250	E38/8/25-3C90-A1000-P
	9250 ±25%	≈ 1660	≈ 0	E38/8/25-3C90
3C92 des	7150 ±25%	≈ 1290	≈ 0	E38/8/25-3C92
3C93 des	8500 ±25%	≈ 1530	≈ 0	E38/8/25-3C93
3C94	250 ±3%	≈ 45	≈ 1100	E38/8/25-3C94-A250-P
	315 ±3%	≈ 57	≈ 850	E38/8/25-3C94-A315-P
	400 ±3%	≈ 72	≈ 650	E38/8/25-3C94-A400-P
	630 ±5%	≈ 113	≈ 400	E38/8/25-3C94-A630-P
	1000 ±10%	≈ 180	≈ 250	E38/8/25-3C94-A1000-P
	9250 ±25%	≈ 1660	≈ 0	E38/8/25-3C94
3C95 des	11200 ±25%	≈ 1990	≈ 0	E38/8/25-3C95
3F3	250 ±3%	≈ 45	≈ 1100	E38/8/25-3F3-A250-P
	315 ±3%	≈ 57	≈ 850	E38/8/25-3F3-A315-P
	400 ±3%	≈ 72	≈ 650	E38/8/25-3F3-A400-P
	630 ±5%	≈ 113	≈ 400	E38/8/25-3F3-A630-P
	1000 ±10%	≈ 180	≈ 250	E38/8/25-3F3-A1000-P
	8500 ±25%	≈ 1520	≈ 0	E38/8/25-3F3
3F4 des	250 ±3%	≈ 45	≈ 1100	E38/8/25-3F4-A250-P
	315 ±3%	≈ 57	≈ 850	E38/8/25-3F4-A315-P
	400 ±3%	≈ 72	≈ 650	E38/8/25-3F4-A400-P
	630 ±5%	≈ 113	≈ 400	E38/8/25-3F4-A630-P
	1000 ±10%	≈ 180	≈ 250	E38/8/25-3F4-A1000-P
	4600 ±25%	≈830	≈0	E38/8/25-3F4

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E+E38-3C90	≥320	≤ 1.25	–	–	–
E+PLT38-3C90	≥320	≤ 1.05	–	–	–
E+E38-3C92	≥370	≤ 1.0	–	≤ 6.0	–
E+PLT38-3C92	≥370	≤ 0.85	–	≤ 5.0	–
E+E38-3C93	≥320	≤ 1.0[1]	–	≤ 6.0[1]	–
E+PLT38-3C93	≥320	≤ 0.85[1]	–	≤ 5.0[1]	–
E+E38-3C94	≥320	≤ 1.0	–	≤ 6.0	–
E+PLT38-3C94	≥320	≤ 0.85	–	≤ 5.0	–
E+E38-3C95	≥320	–	≤ 6.43	≤ 6.12	–
E+PLT38-3C95	≥320	–	≤ 5.0	≤ 4.74	–
E+E38-3F3	≥300	≤ 1.3	–	–	≤ 2.0
E+PLT38-3F3	≥300	≤ 1.1	–	–	≤ 1.65
E+E38-3F4	≥250	–	–	–	–
E+PLT38-3F4	≥250	–	–	–	–

1. Measured at 140 °C.

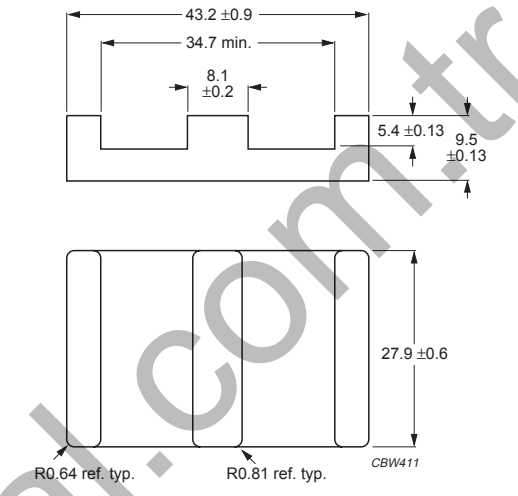
Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E+E38-3F4	≥250	–	–	≤ 3.0	≤ 5.0
E+PLT38-3F4	≥250	–	–	≤ 2.5	≤ 4.0

CORES

Effective core parameters of a set of E cores

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.276	mm^{-1}
V_e	effective volume	13900	mm^3
l_e	effective length	61.1	mm
A_e	effective area	229	mm^2
A_{min}	minimum area	229	mm^2
m	mass of core half	≈ 35	g



Dimensions in mm.

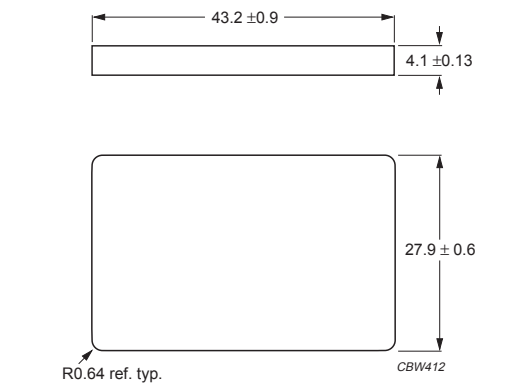
Fig.1 E43/10/28 core half.

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.226	mm^{-1}
V_e	effective volume	11500	mm^3
l_e	effective length	50.4	mm
A_e	effective area	229	mm^2
A_{min}	minimum area	229	mm^2
m	mass of core half	≈ 24	g

Ordering information

GRADE	TYPE NUMBER
3C90	PLT43/28/4.1-3C90
3C92 des	PLT43/28/4.1-3C92
3C93 des	PLT43/28/4.1-3C93
3C94	PLT43/28/4.1-3C94
3C95 des	PLT43/28/4.1-3C95
3F3	PLT43/28/4.1-3F3
3F4 des	PLT43/28/4.1-3F4



Dimensions in mm.

Fig.2 PLT43/28/4.1.

Core halves for use in combination with an E core

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 40 ±20 N, unless stated otherwise.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER
3C90	250 ±3%(1)	≈ 55	≈ 1100	E43/10/28-3C90-E250-E
	315 ±3%(1)	≈ 69	≈ 800	E43/10/28-3C90-E315-E
	400 ±3%(1)	≈ 87	≈ 700	E43/10/28-3C90-E400-E
	630 ±5%	≈ 138	≈ 400	E43/10/28-3C90-A630-E
	1000 ±10%	≈ 219	≈ 250	E43/10/28-3C90-A1000-E
	8030 ±25%	≈ 1710	≈ 0	E43/10/28-3C90
3C92 des	6300 ±25%	≈ 1380	≈ 0	E43/10/28-3C92
3C93 des	7310 ±25%	≈ 1610	≈ 0	E43/10/28-3C93
3C94	250 ±3%(1)	≈ 55	≈ 1100	E43/10/28-3C94-E250-E
	315 ±3%(1)	≈ 69	≈ 800	E43/10/28-3C94-E315-E
	400 ±3%(1)	≈ 87	≈ 700	E43/10/28-3C94-E400-E
	630 ±5%	≈ 138	≈ 400	E43/10/28-3C94-A630-E
	1000 ±10%	≈ 219	≈ 250	E43/10/28-3C94-A1000-E
	8030 ±25%	≈ 1710	≈ 0	E43/10/28-3C94
3C95 des	9700 ±25%	≈ 2060	≈ 0	E43/10/28-3C95
3F3	250 ±3%(1)	≈ 55	≈ 1100	E43/10/28-3F3-E250-E
	315 ±3%(1)	≈ 69	≈ 800	E43/10/28-3F3-E315-E
	400 ±3%(1)	≈ 87	≈ 700	E43/10/28-3F3-E400-E
	630 ±5%	≈ 138	≈ 400	E43/10/28-3F3-A630-E
	1000 ±10%	≈ 219	≈ 250	E43/10/28-3F3-A1000-E
	7310 ±25%	≈ 1600	≈ 0	E43/10/28-3F3
3F4 des	250 ±3%(1)	≈ 55	≈ 1100	E43/10/28-3F4-E250-E
	315 ±3%(1)	≈ 69	≈ 800	E43/10/28-3F4-E315-E
	400 ±3%(1)	≈ 87	≈ 700	E43/10/28-3F4-E400-E
	630 ±5%	≈ 138	≈ 400	E43/10/28-3F4-A630-E
	1000 ±10%	≈ 219	≈ 250	E43/10/28-3F4-A1000-E
	3860 ±25%	≈ 850	≈ 0	E43/10/28-3F4

Note

1. Measured in combination with an equal gapped E core half, clamping force for A_L measurements, 40 ±20 N.

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT), clamping force for A_L measurements, 40 ±20 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	250 ±3%	≈ 45	≈ 1100	E43/10/28-3C90-A250-P
	315 ±3%	≈ 57	≈ 800	E43/10/28-3C90-A315-P
	400 ±3%	≈ 72	≈ 700	E43/10/28-3C90-A400-P
	630 ±5%	≈ 113	≈ 400	E43/10/28-3C90-A630-P
	1000 ±10%	≈ 180	≈ 250	E43/10/28-3C90-A1000-P
	9250 ±25%	≈ 1710	≈ 0	E43/10/28-3C90
3C92 des	7460 ±25%	≈ 1340	≈ 0	E43/10/28-3C92
3C93 des	8700 ±25%	≈ 1560	≈ 0	E43/10/28-3C93
3C94	250 ±3%	≈ 45	≈ 1100	E43/10/28-3C94-A250-P
	315 ±3%	≈ 57	≈ 800	E43/10/28-3C94-A315-P
	400 ±3%	≈ 72	≈ 700	E43/10/28-3C94-A400-P
	630 ±5%	≈ 113	≈ 400	E43/10/28-3C94-A630-P
	1000 ±10%	≈ 180	≈ 250	E43/10/28-3C94-A1000-P
	9250 ±25%	≈ 1710	≈ 0	E43/10/28-3C94
3C95 des	11060 ±25%	≈ 1940	≈ 0	E43/10/28-3C95
3F3	250 ±3%	≈ 45	≈ 1100	E43/10/28-3F3-A250-P
	315 ±3%	≈ 57	≈ 800	E43/10/28-3F3-A315-P
	400 ±3%	≈ 72	≈ 700	E43/10/28-3F3-A400-P
	630 ±5%	≈ 113	≈ 400	E43/10/28-3F3-A630-P
	1000 ±10%	≈ 180	≈ 250	E43/10/28-3F3-A1000-P
	8700 ±25%	≈ 1560	≈ 0	E43/10/28-3F3
3F4 des	250 ±3%	≈ 45	≈ 1100	E43/10/28-3F4-A250-P
	315 ±3%	≈ 57	≈ 800	E43/10/28-3F4-A315-P
	400 ±3%	≈ 72	≈ 700	E43/10/28-3F4-A400-P
	630 ±5%	≈ 113	≈ 400	E43/10/28-3F4-A630-P
	1000 ±10%	≈ 180	≈ 250	E43/10/28-3F4-A1000-P
	4660 ±25%	≈ 850	≈ 0	E43/10/28-3F4

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E+E43-3C90	≥320	≤ 1.8	–	–	–
E+PLT43-3C90	≥320	≤ 1.5	–	–	–
E+E43-3C92	≥370	≤ 1.4	–	≤ 8.0	–
E+PLT43-3C92	≥370	≤ 1.2	–	≤ 7.0	–
E+E43-3C93	≥320	≤ 1.4[1]	–	≤ 8.0[1]	–
E+PLT43-3C93	≥320	≤ 1.2[1]	–	≤ 7.0[1]	–
E+E43-3C94	≥320	≤ 1.4	–	≤ 8.0	–
E+PLT43-3C94	≥320	≤ 1.2	–	≤ 7.0	–
E+E43-3C95	≥320	–	≤ 8.76	≤ 8.34	–
E+PLT43-3C95	≥320	–	≤ 7.25	≤ 6.9	–
E+E43-3F3	≥300	≤ 1.8	–	–	≤ 2.7
E+PLT43-3F3	≥300	≤ 1.5	–	–	≤ 2.25
E+E43-3F4	≥250	–	–	–	–
E+PLT43-3F4	≥250	–	–	–	–

1. Measured at 140 °C.

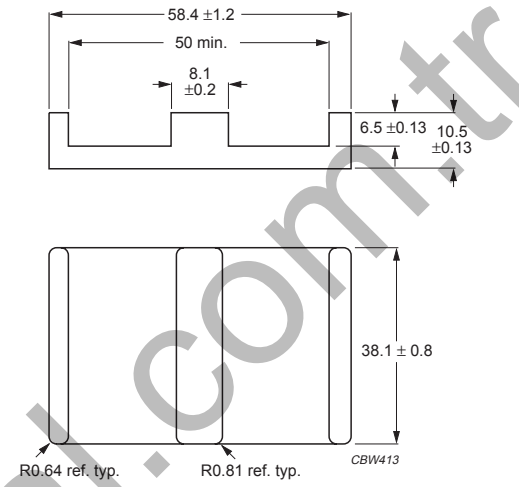
Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E+E43-3F4	≥250	–	–	≤ 4.2	≤ 6.5
E+PLT43-3F4	≥250	–	–	≤ 3.5	≤ 5.5

CORES

Effective core parameters of a set of E cores

SYMBOL	PARAMETER	VALUE	UNIT
Σ(l/A)	core factor (C1)	0.268	mm^{-1}
V_e	effective volume	24600	mm^3
l_e	effective length	80.6	mm
A_e	effective area	308	mm^2
A_{min}	minimum area	308	mm^2
m	mass of core half	≈ 62	g



Dimensions in mm.

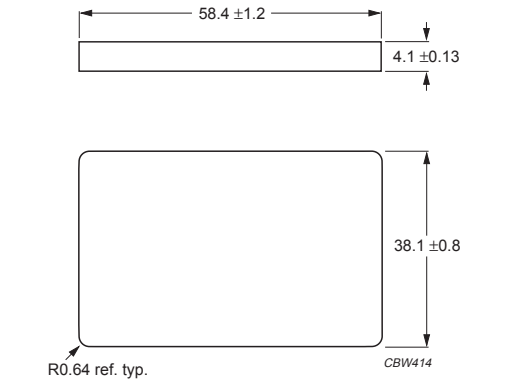
Fig.1 E58/11/38 core half.

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
Σ(l/A)	core factor (C1)	0.224	mm^{-1}
V_e	effective volume	20800	mm^3
l_e	effective length	67.7	mm
A_e	effective area	310	mm^2
A_{min}	minimum area	310	mm^2
m	mass of core half	≈ 44	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT58/38/4-3C90
3C92 des	PLT58/38/4-3C92
3C93 des	PLT58/38/4-3C93
3C94	PLT58/38/4-3C94
3C95 des	PLT58/38/4-3C95
3F3	PLT58/38/4-3F3
3F4 des	PLT58/38/4-3F4



Dimensions in mm.

Fig.2 PLT 58/38/4.

Core halves for use in combination with an E core

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 40 ±20 N, unless stated otherwise.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER
3C90	315 ±3%(1)	≈ 67	≈ 1400	E58/11/38-3C90-E315-E
	400 ±3%(1)	≈ 85	≈ 1100	E58/11/38-3C90-E400-E
	630 ±5%(1)	≈ 134	≈ 650	E58/11/38-3C90-E630-E
	1000 ±5%	≈ 213	≈ 400	E58/11/38-3C90-A1000-E
	1600 ±10%	≈ 341	≈ 200	E58/11/38-3C90-A1600-E
	8480 ±25%	≈ 1800	≈ 0	E58/11/38-3C90
3C92 des	6600 ±25%	≈ 1410	≈ 0	E58/11/38-3C92
3C93 des	7710 ±25%	≈ 1640	≈ 0	E58/11/38-3C93
3C94	315 ±3%(1)	≈ 67	≈ 1400	E58/11/38-3C94-E315-E
	400 ±3%(1)	≈ 85	≈ 1100	E58/11/38-3C94-E400-E
	630 ±5%(1)	≈ 134	≈ 650	E58/11/38-3C94-E630-E
	1000 ±5%	≈ 213	≈ 400	E58/11/38-3C94-A1000-E
	1600 ±10%	≈ 341	≈ 200	E58/11/38-3C94-A1600-E
	8480 ±25%	≈ 1800	≈ 0	E58/11/38-3C94
3C95 des	10330 ±25%	≈ 2150	≈ 0	E58/11/38-3C95
3F3	315 ±3%(1)	≈ 67	≈ 1400	E58/11/38-3F3-E315-E
	400 ±3%(1)	≈ 85	≈ 1100	E58/11/38-3F3-E400-E
	630 ±5%(1)	≈ 134	≈ 650	E58/11/38-3F3-E630-E
	1000 ±5%	≈ 213	≈ 400	E58/11/38-3F3-A1000-E
	1600 ±10%	≈ 341	≈ 200	E58/11/38-3F3-A1600-E
	7710 ±25%	≈ 1640	≈ 0	E58/11/38-3F3
3F4 des	315 ±3%(1)	≈ 67	≈ 1400	E58/11/38-3F4-E315-E
	400 ±3%(1)	≈ 85	≈ 1100	E58/11/38-3F4-E400-E
	630 ±5%(1)	≈ 134	≈ 650	E58/11/38-3F4-E630-E
	1000 ±5%	≈ 213	≈ 400	E58/11/38-3F4-A1000-E
	1600 ±10%	≈ 341	≈ 200	E58/11/38-3F4-A1600-E
	4030 ±25%	≈ 860	≈ 0	E58/11/38-3F4

Note

1. Measured in combination with an equal gapped E core half, clamping force for A_L measurements, 40 ±20 N.

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT), clamping force for A_L measurements, 40 ±20 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	315 ±3%	≈ 56	≈ 1400	E58/11/38-3C90-A315-P
	400 ±3%	≈ 71	≈ 1100	E58/11/38-3C90-A400-P
	630 ±5%	≈ 112	≈ 650	E58/11/38-3C90-A630-P
	1000 ±5%	≈ 178	≈ 400	E58/11/38-3C90-A1000-P
	1600 ±10%	≈ 285	≈ 200	E58/11/38-3C90-A1600-P
	9970 ±25%	≈ 1780	≈ 0	E58/11/38-3C90
3C92 des	7770 ±25%	≈ 1390	≈ 0	E58/11/38-3C92
3C93 des	9070 ±25%	≈ 1620	≈ 0	E58/11/38-3C93
3C94	315 ±3%	≈ 56	≈ 1400	E58/11/38-3C94-A315-P
	400 ±3%	≈ 71	≈ 1100	E58/11/38-3C94-A400-P
	630 ±5%	≈ 112	≈ 650	E58/11/38-3C94-A630-P
	1000 ±5%	≈ 178	≈ 400	E58/11/38-3C94-A1000-P
	1600 ±10%	≈ 285	≈ 200	E58/11/38-3C94-A1600-P
	9970 ±25%	≈ 1780	≈ 0	E58/11/38-3C94
3C95 des	12090 ±25%	≈ 2100	≈ 0	E58/11/38-3C95
3F3	315 ±3%	≈ 56	≈ 1400	E58/11/38-3F3-A315-P
	400 ±3%	≈ 71	≈ 1100	E58/11/38-3F3-A400-P
	630 ±5%	≈ 112	≈ 650	E58/11/38-3F3-A630-P
	1000 ±5%	≈ 178	≈ 400	E58/11/38-3F3-A1000-P
	1600 ±10%	≈ 285	≈ 200	E58/11/38-3F3-A1600-P
	9070 ±25%	≈ 1620	≈ 0	E58/11/38-3F3
3F4 des	315 ±3%	≈ 56	≈ 1400	E58/11/38-3F4-A315-P
	400 ±3%	≈ 71	≈ 1100	E58/11/38-3F4-A400-P
	630 ±5%	≈ 112	≈ 650	E58/11/38-3F4-A630-P
	1000 ±5%	≈ 178	≈ 400	E58/11/38-3F4-A1000-P
	1600 ±10%	≈ 285	≈ 200	E58/11/38-3F4-A1600-P
	4780 ±25%	≈ 850	≈ 0	E58/11/38-3F4

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E+E58-3C90	≥320	≤ 3.0	–	–	–
E+PLT58-3C90	≥320	≤ 2.6	–	–	–
E+E58-3C92	≥370	≤ 2.4	–	≤ 15	–
E+PLT58-3C92	≥370	≤ 2.0	–	≤ 13	–
E+E58-3C93	≥320	≤ 2.4[1]	–	≤ 15[1]	–
E+PLT58-3C93	≥320	≤ 2.0[1]	–	≤ 13[1]	–
E+E58-3C94	≥320	≤ 2.4	–	≤ 15	–
E+PLT58-3C94	≥320	≤ 2.0	–	≤ 13	–
E+E58-3C95	≥320	–	≤ 15.5	≤ 14.8	–
E+PLT58-3C95	≥320	–	≤ 13.1	≤ 12.5	–
E+E58-3F3	≥300	≤ 3.0	–	–	≤ 4.7
E+PLT58-3F3	≥300	≤ 2.6	–	–	≤ 4.0
E+E58-3F4	≥250	–	–	–	–
E+PLT58-3F4	≥250	–	–	–	–

1. Measured at 140 °C.

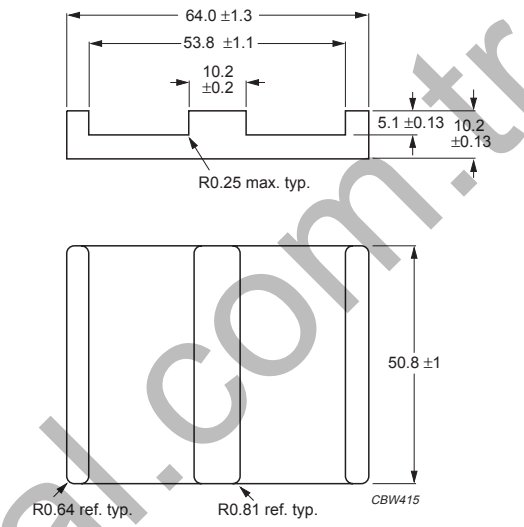
Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E+E58-3F4	≥250	–	–	≤ 7.4	≤ 12
E+PLT58-3F4	≥250	–	–	≤ 6.25	≤ 10

CORES

Effective core parameters of a set of E cores

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.156	mm^{-1}
V_e	effective volume	40700	mm^3
l_e	effective length	79.9	mm
A_e	effective area	519	mm^2
A_{min}	minimum area	519	mm^2
m	mass of core half	≈ 100	g



Dimensions in mm.

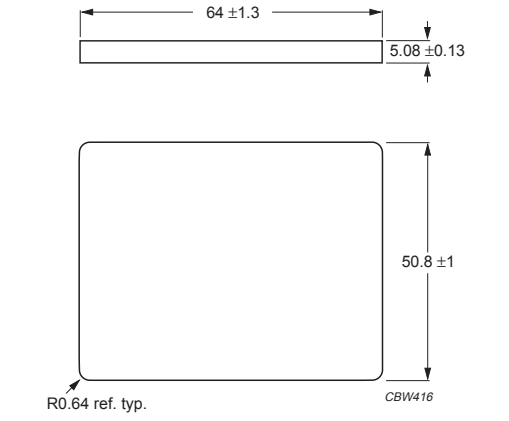
Fig.1 E64/10/50.

Effective core parameters of an E/PLT combination

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.136	mm^{-1}
V_e	effective volume	35500	mm^3
l_e	effective length	69.7	mm
A_e	effective area	519	mm^2
A_{min}	minimum area	519	mm^2
m	mass of plate	≈ 78	g

Ordering information for plates

GRADE	TYPE NUMBER
3C90	PLT64/50/5-3C90
3C92 des	PLT64/50/5-3C92
3C93 des	PLT64/50/5-3C93
3C94	PLT64/50/5-3C94
3C95 des	PLT64/50/5-3C95
3F3	PLT64/50/5-3F3
3F4 des	PLT64/50/5-3F4



Dimensions in mm.

Fig.2 PLT 64/50/5.

Core halves for use in combination with an E core

A_L measured in combination with a non-gapped core half, clamping force for A_L measurements, 100 ±30 N, unless stated otherwise.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER
3C90	630 ±3%(1)	≈ 78	≈ 1100	E64/10/50-3C90-E630-E
	1000 ±3%(1)	≈ 124	≈ 660	E64/10/50-3C90-E1000-E
	1600 ±5%	≈ 199	≈ 385	E64/10/50-3C90-A1600-E
	2500 ±10%	≈ 310	≈ 225	E64/10/50-3C90-A2500-E
	3150 ±10%	≈ 391	≈ 170	E64/10/50-3C90-A3150-E
	14640 ±25%	≈ 1820	≈ 0	E64/10/50-3C90
3C92 des	11200 ±25%	≈ 1390	≈ 0	E64/10/50-3C92
3C93 des	13300 ±25%	≈ 1650	≈ 0	E64/10/50-3C93
3C94	630 ±3%(1)	≈ 78	≈ 1100	E64/10/50-3C94-E630-E
	1000 ±3%(1)	≈ 124	≈ 660	E64/10/50-3C94-E1000-E
	1600 ±5%	≈ 199	≈ 385	E64/10/50-3C94-A1600-E
	2500 ±10%	≈ 310	≈ 225	E64/10/50-3C94-A2500-E
	3150 ±10%	≈ 391	≈ 170	E64/10/50-3C94-A3150-E
	14640 ±25%	≈ 1820	≈ 0	E64/10/50-3C94
3C95 des	17890 ±25%	≈ 2190	≈ 0	E64/10/50-3C95
3F3	630 ±3%(1)	≈ 78	≈ 1100	E64/10/50-3F3-E630-E
	1000 ±3%(1)	≈ 124	≈ 660	E64/10/50-3F3-E1000-E
	1600 ±5%	≈ 199	≈ 385	E64/10/50-3F3-A1600-E
	2500 ±10%	≈ 310	≈ 225	E64/10/50-3F3-A2500-E
	3150 ±10%	≈ 391	≈ 170	E64/10/50-3F3-A3150-E
	13300 ±25%	≈ 1650	≈ 0	E64/10/50-3F3
3F4 des	630 ±3%(1)	≈ 78	≈ 1100	E64/10/50-3F4-E630-E
	1000 ±3%(1)	≈ 124	≈ 660	E64/10/50-3F4-E1000-E
	1600 ±5%	≈ 199	≈ 385	E64/10/50-3F4-A1600-E
	2500 ±10%	≈ 310	≈ 225	E64/10/50-3F4-A2500-E
	3150 ±10%	≈ 391	≈ 170	E64/10/50-3F4-A3150-E
	6960 ±25%	≈ 860	≈ 0	E64/10/50-3F4

Note

1. Measured in combination with an equal-gapped core half, clamping force for A_L measurements, 100 ±30 N.

Core halves for use in combination with a plate (PLT)

A_L measured in combination with a plate (PLT), clamping force for A_L measurements, 100 ±30 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	630 ±3%	≈ 78	≈ 1100	E64/10/50-3C90-A630-P
	1000 ±3%	≈ 124	≈ 660	E64/10/50-3C90-A1000-P
	1600 ±5%	≈ 199	≈ 385	E64/10/50-3C90-A1600-P
	2500 ±10%	≈ 310	≈ 225	E64/10/50-3C90-A2500-P
	3150 ±10%	≈ 391	≈ 170	E64/10/50-3C90-A3150-P
	16540 ±25%	≈ 1790	≈ 0	E64/10/50-3C90
3C92 des	12700 ±25%	≈ 1370	≈ 0	E64/10/50-3C92
3C93 des	15050 ±25%	≈ 1630	≈ 0	E64/10/50-3C93
3C94	630 ±3%	≈ 78	≈ 1100	E64/10/50-3C94-A630-P
	1000 ±3%	≈ 124	≈ 660	E64/10/50-3C94-A1000-P
	1600 ±5%	≈ 199	≈ 385	E64/10/50-3C94-A1600-P
	2500 ±10%	≈ 310	≈ 225	E64/10/50-3C94-A2500-P
	3150 ±10%	≈ 391	≈ 170	E64/10/50-3C94-A3150-P
	16540 ±25%	≈ 1790	≈ 0	E64/10/50-3C94
3C95 des	20150 ±25%	≈ 2150	≈ 0	E64/10/50-3C95
3F3	630 ±3%	≈ 78	≈ 1100	E64/10/50-3F3-A630-P
	1000 ±3%	≈ 124	≈ 660	E64/10/50-3F3-A1000-P
	1600 ±5%	≈ 199	≈ 385	E64/10/50-3F3-A1600-P
	2500 ±10%	≈ 310	≈ 225	E64/10/50-3F3-A2500-P
	3150 ±10%	≈ 391	≈ 170	E64/10/50-3F3-A3150-P
	15050 ±25%	≈ 1630	≈ 0	E64/10/50-3F3
3F4 des	630 ±3%	≈ 78	≈ 1100	E64/10/50-3F4-A630-P
	1000 ±3%	≈ 124	≈ 660	E64/10/50-3F4-A1000-P
	1600 ±5%	≈ 199	≈ 385	E64/10/50-3F4-A1600-P
	2500 ±10%	≈ 310	≈ 225	E64/10/50-3F4-A2500-P
	3150 ±10%	≈ 391	≈ 170	E64/10/50-3F4-A3150-P
	7920 ±25%	≈ 860	≈ 0	E64/10/50-3F4

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C	f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C	f = 400 kHz; $\hat{B}$ = 50 mT; T = 100 °C
E+E64-3C90	≥320	≤ 4.8	–	–	–
E+PLT64-3C90	≥320	≤ 4.2	–	–	–
E+E64-3C92	≥370	≤ 3.6	–	≤ 25	–
E+PLT64-3C92	≥370	≤ 3.2	–	≤ 23	–
E+E64-3C93	≥320	≤ 3.6[1]	–	≤ 25[1]	–
E+PLT64-3C93	≥320	≤ 3.2[1]	–	≤ 23[1]	–
E+E64-3C94	≥320	≤ 3.6	–	≤ 25	–
E+PLT64-3C94	≥320	≤ 3.2	–	≤ 23	–
E+E64-3C95	≥320	–	≤ 25.6	≤ 24.4	–
E+PLT64-3C95	≥320	–	≤ 22.4	≤ 21.3	–
E+E64-3F3	≥300	≤ 4.8	–	–	≤ 7.8
E+PLT64-3F3	≥300	≤ 4.2	–	–	≤ 6.8
E+E64-3F4	≥250	–	–	–	–
E+PLT64-3F4	≥250	–	–	–	–

1. Measured at 140 °C.

Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 10 kHz; T = 100 °C	f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C	f = 500 kHz; $\hat{B}$ = 100 mT; T = 100 °C	f = 1 MHz; $\hat{B}$ = 30 mT; T = 100 °C	f = 3 MHz; $\hat{B}$ = 10 mT; T = 100 °C
E+E64-3F4	≥250	–	–	≤ 12	≤ 20
E+PLT64-3F4	≥250	–	–	≤ 10.5	≤ 17