

Soft Ferrites



COSMO FERRITES LIMITED

www.cosmoferrites.com

COSMO FERRITES LIMITED, founded in 1986 by promoters with over five decades of standing in the Indian Industry, is today the leading manufacturer of Soft Ferrites in India. The Company has its unit operating in the foothills of the Himalayas at a distance of 300 Kms. from Delhi.

State of the art equipment from leading manufacturers in Western Europe, rigorous quality standards and well equipped in-house R&D set up ensures delivery of high quality ferrites to our customers and continuous product upgradation. The Company places overriding value on developing close and long lasting relationships with its customers.

COSMO FERRITES has a leading position in the Indian soft ferrites market. It pioneered the exports of Soft Ferrites from India in 1988 and has been the leading exporter of soft ferrites since then. More than 60% of production is exported to U.S.A., Western Europe and the Far East.

The company has been following the Quality Management System ISO 9000 since 1993 and accredited to ISO 9001:2000 in the year 2003.

MATERIAL TABLE

PROPERTY	SYMBOL	UNIT	TEMP (°C)	MATERIAL								
				CF196	CF138	CF124	CF140	CF101	CF191	CF195	CF190	CF197
Initial Permeability	μ_{iac}	–	25	2000±20%	2100±20%	2500±20%	2500±20%	3000±20%	4300±20%	5000±20%	6000±20%	7000±20%
Saturation Flux Density	Bs (H=1kA/m)	mT	25	500	480	490	390	490	450	400	400	400
			100	400	380	390	310	390	300	260	280	260
Residual Flux Density	Br	mT	25	210	180	200	110	200	150	150	150	150
Coercivity	Hc	A/m	25	16	15	16	24	15	12	12	10	12
Power Loss Density	Pc (16KHz) 200mT	Kw/m ³	25	≤ 120	–	≤ 100	–	≤ 100	–	–	–	–
			100	≤ 110	–	≤ 90	–	≤ 120	–	–	–	–
	Pc (25KHz) 200mT	Kw/m ³	25	≤ 160	–	≤ 150	–	≤ 150	–	–	–	–
			100	≤ 140	–	≤ 130	–	≤ 170	–	–	–	–
	Pc (100KHz) 100mT	Kw/m ³	25	–	≤ 120	–	–	–	–	–	–	–
			100	–	≤ 60	–	–	–	–	–	–	–
	Pc (100KHz) 200mT	Kw/m ³	25	–	≤ 700	–	–	–	–	–	–	–
			100	–	≤ 450	–	–	–	–	–	–	–
Relative Loss Factor	$\tan \delta / \mu_{\text{iac}}$ x 10 ⁻⁶	(10KHz)	25	≤ 4	≤ 2.5	≤ 2.5	–	≤ 2.5	≤ 5.0	≤ 5.0	≤ 5.0	≤ 7.0
		(100KHz)	25	–	–	–	< 2.5	–	< 20	< 60	< 40	–
Hysteresis Mat. Constant	η_B	x 10 ⁻⁶	25	–	–	–	≤ 0.4	–	≤ 1.5	–	≤ 1.5	–
Relative Temp. Coefficient	α_F	x 10 ⁻⁶	25-55	–	–	–	0.4 - 1.5	–	0 - 1.5	–	–	–
Disaccommodation Factor	D _F	x 10 ⁻⁶	25	–	–	–	≤ 3.0	–	–	–	–	–
Sec. Max. Permeability	SPM	°C	–	70 – 90	90 – 110	60 – 80	–	50 – 70	–	–	–	–
Curie Temperature	Tc	°C	–	≥ 200	≥ 220	≥ 200	≥ 150	≥ 190	≥ 140	≥ 120	≥ 120	≥ 120
Resistivity	ρ	Ωm	25	0.4	2 - 4	0.5	1.0	0.4	0.8	0.2	0.5	0.2
Density	d	Kg/m ³	25	4.8 x 10 ³	4.8 x 10 ³	4.8 x 10 ³	4.8 x 10 ³	4.8 x 10 ³	4.8 x 10 ³	4.85 x 10 ³	4.8 x 10 ³	4.85 x 10 ³
Geometry	–	–	–	EE, EI EER, EC UU TOROIDS	EE, ETD EFF, EVD RM, PQ PLANER	EE, UU	RM, POT PTS	TOROIDS EE, EI	TOROIDS EE	EE, UU TOROIDS	TOROIDS	TOROIDS ET, UT

Note :

- The values are obtained with Toroids T 2512.
- Initial Permeability, Relative Loss Factor and Curie Temperature are measured at f = 10KHz & B = 0.1 mT.
- Disaccommodation factor - Done 10 minutes and 100 minutes after demagnetization.

TOROIDS

TYPE	FIG.	DIMENSIONS (mm)			EFFECTIVE PARAMETERS			WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}				
		A	B	C	Le(mm)	Ae(mm²)	Ve(mm³)		CF196	CF138	CF101	CF195	CF197
T 10215	1	102.0 ±2.0	65.8 ±1.3	15.0 ±0.5	255	262	67067	330	2550	2700	3850	6400	—
T 8714	2	87.4 ±1.35	54.0 ±1.0	13.8 ±0.45	213	226	48320	232	2600	2700	3900	6600	—
T 8530	1	85.0 ±1.5	62.0 ±1.5	30.0 ±1.0	227	342	77710	360	3800	4000	5700	9300	—
T 8520	1	85.0 ±1.5	62.0 ±1.5	20.0 ±1.0	230	228	52620	240	2450	2600	3700	6210	—
T 8022	2	80.0 ±1.5	50.0 ±0.9	22.0 ±1.0	196	324	63790	324	4100	4300	6200	10300	—
T 8015A	2	80.0 ±2.5	40.0 ±1.2	15.0 ±0.5	174	288	50219	235	4100	4400	6200	10300	—
T 6325	1	63.0 ±1.3	38.0 ±0.8	25.0 ±0.5	152	306	46528	236	5050	5300	7400	12600	—
T 6313	1	63.0 ±1.3	38.0 ±0.8	12.7 ±0.3	152	155	23636	122	2550	2650	3850	6400	8900
T 5818	2	58.3 ±1.0	40.8 ±0.8	17.6 ±0.5	152	146	22296	110	2400	2500	3600	6000	8400
T 5618	2	56.0 ±1.2	32.0 ±0.65	18.0 ±0.5	131	210	27626	135	4000	4200	6000	10000	14000
T 5030	2	50.0 ±1.0	34.0 ±0.8	30.0 ±0.6	128	237	30516	148	4600	4850	6950	11500	16200
T 5020	2	50.0 ±1.0	30.0 ±0.65	20.0 ±0.5	120	195	23555	114	4000	4200	6100	10200	14300
T 5019	2	50.0 ±1.0	34.0 ±0.8	19.0 ±0.5	128	150	19330	93	2900	3100	4400	7300	10200
T 4919	2	49.0 ±1.0	31.8 ±0.7	19.0 ±0.5	123	161	19796	100	3300	3450	4950	8200	11500
T 4511	2	45.0 ±1.35	28.0 ±0.8	11.0 ±0.4	110	91	10138	53	2100	2200	3100	5200	7300
T 4212	1	41.8 ±1.0	26.2 ±0.6	12.5 ±0.3	103	95	9864	48	2300	2400	3500	5800	8100
T 4016	2	39.9 ±0.6	24.1 ±0.5	16.0 ±0.3	96	123	11930	58	3200	3400	4800	8000	11000
T 3819A	2	38.0 ±0.6	22.0 ±0.45	18.5 ±0.35	89	144	12950	63	4000	4200	6000	10000	14100
T 3816	2	38.1 ±0.7	25.4 ±0.5	15.8 ±0.4	97	97	9419	47.5	2500	2600	3750	6250	8750
T 3813	2	38.1 ±0.5	25.4 ±0.5	12.7 ±0.2	97	77	7525	39	2000	2100	3000	5000	7000
T 3813A	2	38.1 ±0.7	19.0 ±0.5	12.7 ±0.4	82	116	9652	45	3500	3700	5200	8800	12300
T 3615	2	36.0 ±0.7	23.0 ±0.5	15.0 ±0.4	89	96	8597	43	2650	2800	4050	6650	9300
T 3115	2	31.5 ±1.0	19.0 ±0.6	15.0 ±0.4	76	93	7129	35	3100	3250	4650	7700	10800
T 3113	2	31.0 ^{+0.8} _{-0.5}	19.0 ±0.6	13.0 ±0.5	75	77	5855	32.5	2550	2650	3800	6800	9600
T 3112	2	31.5 ±1.0	19.0 ±0.6	12.5 ±0.4	76	76	5814	29	2500	2650	3800	6300	8800
T 2915	2	29.6 ±0.7	18.4 ±0.6	14.9 ±0.4	72	81	5947	29	2850	2950	4250	7100	9900
T 2615	2	26.0 ±0.55	14.5 ±0.35	15.0 ±0.3	60	83	5042	25	3500	3650	5250	8750	12300
T 2610	2	26.0 ±0.55	14.5 ±0.35	10.0 ±0.3	63	57	3657	16	2250	2350	3400	5700	7900
T 2515	2	25.0 ±0.5	15.05 ±0.5	15.0 ±0.5	61	74	4587	24	3050	3200	4550	7600	10600
T 2513	2	25.0 ±0.5	15.05 ±0.5	13.0 ±0.5	62	65	4074	19	2600	2750	3950	6600	9200
T 2512	2	25.0 ±0.5	15.05 ±0.5	12.0 ±0.5	62	58	3626	18.5	2400	2450	3650	6000	8400
T 2510	2	25.0 ±0.5	15.05 ±0.5	10.0 ±0.5	61	49	3056	15	2050	2100	3000	5000	7000
T 2212A	2	22.1 ±0.4	13.7 ±0.3	12.7 ±0.4	54	53	2888	14	2450	2600	3700	6200	8650
T 2208	2	22.1 ±0.4	13.7 ±0.3	8.0 ±0.3	54	34	1884	9	1600	1700	2400	4000	5600
T 2206	2	22.1 ±0.4	13.7 ±0.3	6.35 ±0.3	54	26	1417	7	1200	1300	1800	3000	4200
T 2106	2	21.0 _{-0.5}	13.0 ±0.5	6.0 _{-0.5}	51	23	1207	6	1150	1200	1700	2800	3900
T 2010	2	20.0 ±0.4	10.0 ±0.25	10.0 ±0.4	43	48	2092	11.5	2750	2900	4150	6900	9600
T 2007	2	20.0 ±0.4	10.0 ±0.25	7.0 ±0.3	43	33	1465	7.5	1950	2050	2900	4850	6800
T 1807	2	17.5 ±0.5	11.05 ±0.3	7.0 ±0.2	44	20	910	5	1200	1250	1750	2900	4000
T 1606	2	16.0 ±0.4	9.6 ±0.3	6.3 ±0.2	38	20	770	4	1300	1350	1950	3200	4500
T 1605	2	16.0 ±0.4	9.6 ±0.3	5.0 ±0.2	38	15	603	3.3	1025	1075	1550	2600	3600
T 1405	2	14.0 ±0.3	9.0 ±0.2	4.9 ±0.2	35	12	422	2	880	900	1325	2150	3000
T 1306A	2	12.9 ±0.25	7.9 ±0.2	6.2 ±0.2	31	15	477	2.2	1200	1250	1825	3050	4250
T 1305	2	13.0 ±0.4	7.0 ±0.3	5.0 ±0.3	30	14	451	2.1	1200	1250	1800	3000	—
T 1303	2	13.0 ±0.4	7.0 ±0.3	3.2 ±0.2	29	9	274	1.2	800	825	1200	1950	—
T 1004	2	10.0 ±0.3	6.0 ±0.2	4.0 ±0.3	25	8	200	1	800	850	1200	2000	—
T 0903	2	9.53 ±0.3	4.75 ±0.2	3.18 ±0.2	20	7	151	0.85	880	925	1300	2200	—

* Coated Toroids available.

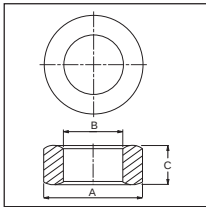


Fig. 1

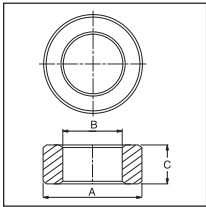


Fig. 2

EE CORES

TYPE	FIG.	DIMENSIONS (mm)						EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) +30% -20%			
		A	B	C	D	E	F	Le(mm)	Ae(mm ²)	Amin(mm)	Ve(mm ³)		CF196	CF138	CF101	CF195
EE 10028	3	100.3 ±2.0	73.2 ±1.4	59.5 ±0.5	46.8 ±0.8	27.5 ±0.5	27.6 ±0.5	274	739	739	202725	510	5900	6200	—	—
EE 8020	3	80.0 ±0.9	60.3 ±0.9	38.1 ±0.33	28.53 ±0.33	19.8 ±0.3	19.8 ±0.3	185	387	379	71698	177	4500	4700	—	—
EE 7219	3	72.4 ±1.45	53.35 ±1.1	27.95 ±0.15	18.05 ±0.25	19.05 ±0.38	19.05 ±0.38	137	367	362	50391	130	6200	6500	8900	—
EE 6527	3	66.5 -2.7	44.2 +1.8	32.5 ±0.3	22.2 +0.7	20.0 -0.7	27.4 -0.8	147	532	531	78200	200	7800	8100	—	—
EE 6513	3	66.5 -2.7	44.2 +1.8	32.5 ±0.3	22.2 +0.7	20.0 -0.7	13.7 -0.6	147	266	263	39100	93	3900	4050	5400	—
EE 5525	3	55.0 +1.2 -0.9	37.5 +1.2	27.8 -0.6	18.5 +0.8	17.2 -0.5	25.0 -0.6	120	422	419	50640	126	7600	7950	—	—
EE 5521	3	55.0 +1.2 -0.9	37.5 +1.2	27.8 -0.6	18.5 +0.8	17.2 -0.5	21.0 -0.6	120	354	351	42500	110	6200	6400	8700	—
EE 4716	3	47.15 ±0.5	31.6 min.	19.7 ±0.13	12.1 min.	15.65 ±0.2	15.65 ±0.2	89	236	233	21169	52	5700	5850	7800	—
EE 4220	3	42.0 +1.0 -0.7	29.5 +1.2	21.2 -0.4	14.8 +0.7	12.2 -0.5	20.0 -0.8	97	240	229	23300	57	5400	5800	7500	—
EE 4215	3	42.0 +1.0 -0.7	29.5 +1.2	21.2 -0.4	14.8 +0.7	12.2 -0.5	15.2 -0.5	97	181	175	17600	43	4000	4100	5500	—
EE 4112	3	40.7 ±0.7	28.55 min.	16.4 ±0.2	10.55 ±0.2	12.4 ±0.3	12.4 ±0.3	77	146	142	11369	29	4100	4300	5600	—
EE 4012	3	41.0 +0.7 -0.5	28.5 +0.7	17.4 +0.5	10.25 +0.25	12.0 -0.7	12.0 -0.7	79	153	136	12100	30	4000	4100	—	—
EE 3611	3	36.4 ±0.7	25.2 ±0.7	17.8 ±0.2	12.15 ±0.15	9.45 ±0.25	11.25 ±0.25	80	118	106	9536	22	3100	3200	—	—
EE 3512	3	35.0 +0.8 -0.5	25.0 +0.8	14.65 ±0.55	9.0 +0.3	10.3 -0.6	12.0 -0.6	67	120	117	8090	21	3500	3600	5300	—
EE 3512A	3	34.3 ±0.7	26.0 ±0.5	14.1 ±0.2	9.8 ±0.2	9.3 ±0.2	12.7 ±0.25	69	113	105	7797	21	3550	3700	4900	—
EE 3510	3	35.0 ±0.5	25.0 ±0.5	17.55 ±0.2	12.55 ±0.2	10.0 ±0.3	10.0 ±0.3	80	100	100	8071	20	2600	2750	4000	—
EE 3213	3	31.9 ±1.0	22.77 ±0.77	14.0 ±0.4	9.65 ±0.25	8.9 ±0.25	12.7 ±0.3	66	113	110	7516	20	3450	3600	—	—
EE 3209	3	32.05 ±0.75	23.2 ±0.5	16.1 ±0.3	11.5 ±0.2	9.2 ±0.3	9.15 ±0.35	74	83	83	6265	17	3500	3650	4800	6700
EE 3109	3	30.9 ±0.5	22.2 ±0.4	13.1 ±0.15	8.6 ±0.3	9.4 ±0.25	9.4 ±0.3	61	84	84	5198	13	3000	3150	4100	—
EE 3011	3	30.0 ±0.6	20.2 ±0.5	13.15 ±0.2	8.13 ±0.2	10.7 ±0.3	10.7 ±0.3	57	108	108	6295	15	4000	4100	5500	—
EE 3007	3	30.0 +0.8 -0.6	19.5 +0.8	15.2 -0.4	9.7 +0.6	7.2 -0.5	7.3 -0.5	67	60	49	4000	11	1850	1900	—	—
EE 2811	3	28.2 ±0.4	19.2 ±0.4	10.6 ±0.3	6.6 ±0.2	7.1 ±0.4	10.7 ±0.3	50	84	76	4290	12	3600	3750	4950	6800
EE 2532	3	25.3 +0.5 -0.3	19.3 +0.4 -0.2	15.9 ±0.2	12.7 ±0.3	6.5 +0.3 -0.25	7.0 -0.5	73	42	42	3087	8	1230	1280	1700	2350
EE 2511	3	25.0 +0.8 -0.7	17.5 +0.8	12.8 -0.5	8.7 +0.5	7.5 -0.5	11.0 ±0.3	57	84	78	4870	11.5	2900	3000	—	—
EE 2507	3	25.0 +0.8 -0.7	17.5 +0.8	12.8 -0.5	8.7 +0.5	7.5 -0.5	7.5 -0.6	57	52	51	3020	7.5	1800	1900	—	3200
EE 2506M	3	25.45 ±0.65	19.2 ±0.4	9.78 -0.15	6.78 -0.3	6.3 ±0.2	6.25 ±0.25	49	38	38	1910	5	1500	1600	—	—
EE 2506	3	25.4 ±0.7	19.6 ±0.6	9.5 ±0.2	6.5 ±0.2	6.3 ±0.25	6.3 ±0.25	48	40	39	1950	5	1600	1700	2200	3050
EE 2105	3	20.6 ±0.5	16.4 ±0.4	8.5 ±0.2	6.2 ±0.2	4.8 ±0.2	4.8 ±0.2	43	21	20	937	2.5	900	950	1100	—
EE 2011S	3	20.4 -0.8	14.1 +0.8	10.1 -0.4	7.0 +0.4	5.9 -0.4	11.0 ±0.25	44	65	62	2928	7.3	2850	2950	3950	5350
EE 2005A	3	20.0 ±0.4	14.6 ±0.3	10.95 ±0.15	8.25 ±0.15	5.6 ±0.15	5.6 ±0.2	50	30	30	1552	4	1150	1200	1500	2050
EE 2005S	3	20.4 -0.8	14.1 +0.8	10.1 -0.4	7.0 +0.4	5.9 -0.4	5.9 -0.5	44	33	31	1500	3.7	1400	1450	—	2750
EE 2005K	3	20.0 +0.7 -0.4	12.8 +0.7 -0.4	10.2 -0.4	6.3 +0.5	5.2 -0.4	5.3 -0.4	43	31	25	1340	3.8	1300	1350	—	2600
EE 1905S	3	19.0 ±0.3	14.5 ±0.3	7.9 ±0.2	5.6 ±0.15	4.7 -0.5	5.2 -0.4	39	22	22	891	2.3	1050	1100	—	2000
EE 1905	3	19.3 ±0.3	14.0 ±0.3	7.9 ±0.2	5.5 -0.2	5.2 -0.5	5.2 -0.5	38	25	24	950	2.4	1200	1250	—	2050
EEL 1905	3	19.0 ±0.3	14.0 ±0.3	13.55 ±0.2	11.3 ±0.3	4.85 ±0.25	4.85 ±0.2	61	23	23	1443	3.5	800	850	1100	1550
EE 1605	3	16.0 +0.7 -0.5	11.3 +0.6	8.2 -0.3	5.7 +0.4	4.7 -0.3	4.7 -0.4	37	20	19	754	2	1000	1050	1450	1850
EEL 1605	3	16.0 ±0.3	12.1 ±0.3	12.45 ±0.2	10.25 ±0.2	4.0 ±0.2	4.8 ±0.2	55	19	17	1075	2.8	700	750	950	1350
EEL 1605B	3	16.1 ±0.6	12.1 ±0.3	6.95 ±0.15	5.4 ±0.2	4.0 ±0.2	4.8 ±0.2	34	17	17	604	1.5	875	900	1150	1550
EE 1404	3	13.95 ±0.35	10.8 ±0.3	7.65 ±0.15	5.4 ±0.2	4.15 ±0.15	4.15 ±0.15	33	15	13	525	1.4	—	750	1050	—
EE 1306	3	12.65 ±0.45	9.2 ±0.3	6.5 -0.2	4.5 +0.3	3.7 -0.3	6.3 -0.3	29	22	22	663	1.7	1350	1450	2050	2250
EE 1304	3	12.65 ±0.45	9.2 ±0.3	6.5 -0.2	4.5 +0.3	3.7 -0.3	3.7 -0.3	29	13	12	384	1	800	850	—	1300
EE 1005	3	10.2 ±0.3	7.8 ±0.3	5.55 ±0.15	4.15 ±0.15	2.4 ±0.2	5.0 -0.3	25	12	11	305	1	850	900	1300	—

* Air gapping done on order

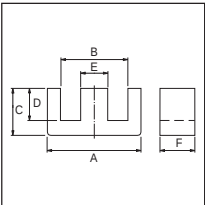


Fig. 3

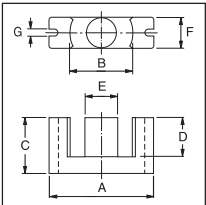


Fig. 4

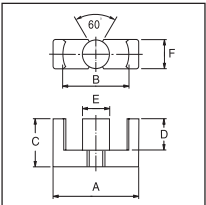


Fig. 5

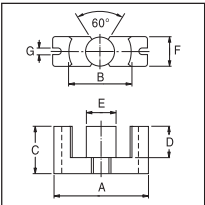


Fig. 6

EC CORES

TYPE	FIG.	DIMENSIONS (mm)							EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} -20%	
		A	B	C	D	E	F	G	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm³)		CF196	CF138
EC 7017	4	70.0 ±1.7	44.5 ±1.2	34.5 ±0.3	22.75±0.45	16.4 ±0.4	16.4 ±0.4	4.75 ±0.25	144	279	211	40176	126	4200	4400
EC 4215	5	42.0 ±0.6	29.4 min.	22.4 ±0.2	15.4 ±0.3	15.5 ±0.2	15.5 ±0.25	–	99	200	189	19820	51.5	4350	4550
EC 4112	6	40.6 ±1.0	26.3 ^{+1.5}	19.35 ^{+0.3}	13.5 ^{+0.8}	11.9 _{-0.6}	11.9 _{-0.6}	3.0 ±0.5	89	121	106	10805	28	2900	3000
EC 4013L	5	40.0 ±0.5	29.6 min.	24.0 ±0.2	17.0 ±0.25	13.25±0.25	13.4 ±0.25	–	105	147	138	15435	39.5	3100	3300
EC 4013	5	40.0 ±0.5	29.6 min.	22.32±0.2	15.75±0.2	13.25±0.25	13.4 ±0.25	–	102	147	138	14994	36.8	3100	3200
EC 3510	4	34.5 ±0.8	22.75±0.55	17.3 ±0.15	11.9 ^{+0.7}	9.8 _{-0.6}	9.8 _{-0.6}	2.75 ±0.25	77	84	71	6525	18	2200	2300

ETD CORES

TYPE	FIG.	DIMENSIONS (mm)							EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} -20%	
		A	B	C	D	E	F		Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm³)		CF196	CF138
ETD 5922	7	59.8 ±1.4	44.7 ±1.1	31.0 ±0.2	22.45 ±0.45	21.65 ±0.45	21.65 ±0.45		139	368	368	51200	130	5700	5950
ETD 5419	7	54.5 ±1.3	41.2 ±1.1	27.6 ±0.2	20.2 ±0.4	18.9 ±0.4	18.9 ±0.4		127	280	280	35500	96	4750	4850
ETD 4917	7	48.5 ^{+1.3} _{-0.9}	36.1 ^{+1.8}	24.9 _{-0.4}	18.5 ±0.3	16.7 _{-0.8}	16.7 _{-0.8}		114	211	209	24000	60	3950	4100
ETD 4415	7	43.8 ^{+1.2} _{-0.8}	32.5 ^{+1.6}	22.5 _{-0.4}	16.1 min.	15.2 _{-0.8}	15.2 _{-0.8}		103	173	172	17800	45	3600	3750
ETD 3913	7	38.9 ^{+1.1} _{-0.7}	29.3 ^{+1.6}	20.0 _{-0.4}	14.2 min.	12.8 _{-0.6}	12.8 _{-0.6}		92	125	123	11500	30	2850	2950
ETD 3411	7	34.0 ^{+1.0} _{-0.6}	25.6 ^{+1.4}	17.5 _{-0.4}	11.8 min.	11.1 _{-0.6}	11.1 _{-0.6}		78	97	91	7640	19.5	2500	2600
ETD 3411A	7	34.0 ^{+1.0} _{-0.6}	25.6 ^{+1.4}	13.0 ±0.13	7.8 ±0.13	10.8 ±0.23	10.8 ±0.23		63	98	92	6174	15.3	3350	3450
ETD 2910	7	30.6 _{-1.6}	22.0 ^{+1.4}	16.0 _{-0.4}	10.7 ^{+0.6}	9.8 _{-0.6}	9.8 _{-0.6}		71	76	71	5377	14	2250	2350

EER CORES

TYPE	FIG.	DIMENSIONS (mm)							EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} -20%	
		A	B	C	D	E	F		Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm³)		CF196	CF138
EER 5322	7	53.0 ±0.8	39.4 ±0.7	23.2 ±0.3	16.3 ±0.2	19.9 ±0.3	21.5 ±0.3		107	315	311	34020	82.5	5950	6250
EER 4518A	7	45.0 ±0.9	33.8 ±0.8	17.5 ±0.2	10.95 ±0.25	17.6 ±0.4	17.6 ±0.4		81	232	226	18889	48	6150	6400
EER 4320	7	42.8 ±0.6	32.8 ±0.5	21.4 ±0.2	15.5 ±0.2	17.3 ±0.25	19.6 ±0.3		98	233	231	22904	57	5150	5350
EER 4217	7	42.15 ±0.65	30.3 ±0.5	25.0 ±0.15	17.5 ±0.15	17.3 ±0.25	17.3 ±0.25		107	240	235	25800	65	4800	5000
EER 3913	7	39.0 ±1.4	28.6 ^{+1.0}	22.2 ±0.2	17.0 ±0.25	12.8 ±0.2	12.8 ±0.2		101	131	129	13310	34.5	2750	2850
EER 3511	7	35.0 ±0.5	25.6 ^{+1.0}	22.5 ±0.3	16.5 ±0.3	11.3 ±0.3	11.3 ±0.3		97	111	100	10800	27.5	2600	2750
EER 2811	7	28.5 ^{+0.6} _{-0.5}	21.2 min.	16.9 ±0.25	12.5 ^{+0.3} _{-0.25}	9.9 ±0.25	11.4 ±0.25		75	83	77	6270	17	2300	2400
EER 2811A	7	28.5 ^{+0.6} _{-0.5}	21.2 min.	14.0 ±0.2	9.65 ±0.25	9.9 ±0.25	11.4 ±0.25		64	82	77	5255	13.5	2750	2900
EER 2811B	7	28.5 ^{+0.6} _{-0.5}	21.2 min.	9.4 ±0.2	6.2 ±0.15	9.9 ±0.25	11.4 ±0.25		50	78	77	4010	9.5	3300	3400

EFF CORES

TYPE	FIG.	DIMENSIONS (mm)							EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} -20%	
		A	B	C	D	E	F	G	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm³)		CF196	CF138
EFF 3009	8	30.0 ±0.8	22.4 ±0.75	15.0 ±0.15	11.2 ±0.3	14.6 ±0.25	9.1 ±0.2	4.9 ±0.15	68	69	69	4692	11.3	2000	2100
EFF 2509	8	25.0 ±0.65	18.7 ±0.6	12.5 ±0.15	9.3 ±0.25	11.4 ±0.2	9.1 ±0.2	5.2 ±0.15	57	58	55	3300	8	2000	2050
EFF 2309	8	22.8 ±0.5	16.8 ±0.4	15.0 ±0.15	11.0 ±0.15	10.0 ±0.25	8.6 ±0.25	4.5 ±0.15	65	56	45	3672	8.5	1950	2050
EFF 2007	8	20.0 ±0.55	15.4 ±0.5	10.0 ±0.15	7.7 ±0.25	8.9 ±0.2	6.65±0.15	3.6 ±0.15	47	31	29	1460	3.5	1300	1350
EFF 1505	9	15.0 ±0.4	11.0 ±0.35	7.5 ±0.15	5.5 ±0.25	5.3 ±0.15	4.65±0.15	2.4 ±0.1	34	15	12	510	1.4	775	800

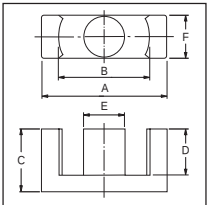


Fig. 7

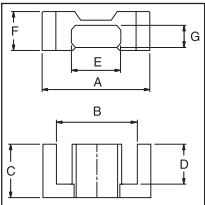


Fig. 8

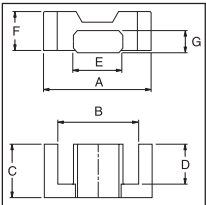


Fig. 9

RM CORES

TYPE	FIG.	DIMENSIONS (mm)								EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}			
		A	B1	B2	C	D	E	F	G	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm²)		CF196	CF138	CF101	CF195
RM 14	10	41.6 ±0.6	17.0min.	29.5 ±0.5	15.05±0.15	10.55±0.15	14.75 ±0.25	34.3 ±0.5	18.7 ±0.3	70	200	170	14000	39	5200	5450	8000	11000
RM 12	10	36.75 ±0.65	13.4min.	25.5 ±0.5	11.8 ±0.15	8.65±0.15	12.6 ±0.2	29.25±0.55	16.1 ±0.3	57	138	107	7907	21	4500	4650	5950	8100
RM 10	10	27.85 ±0.65	11.9min.	21.65±0.45	9.35±0.15	6.35±0.15	10.7 ±0.2	24.15±0.55	13.2 ±0.3	44	98	90	4310	10.3	4000	4200	5500	—
RM 8	10	22.75 ±0.45	9.8min.	17.3 ±0.3	8.2 ±0.15	5.5 ±0.15	8.4 ±0.15	19.25±0.45	10.8 ±0.2	38	64	55	2430	6	2350	2500	3950	6750
RM 6	10	17.6 ±0.35	8.4min.	12.65±0.25	6.2 ±0.15	4.1 ±0.15	6.3 ±0.15	14.4 ±0.3	8.0 ±0.3	28	36	31	1050	2.5	2000	2100	3000	5000

PQ CORES

TYPE	FIG.	DIMENSIONS (mm)								EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}	
		A	B1	B2	C	D	E	F	G	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm²)		CF196	CF138
PQ 3230	11	33.0 ±0.5	19.0 min	27.5±0.5	15.15±0.15	10.65 ±0.15	13.5 ±0.25	22.0 ±0.5	11.6 min.	74	167	142	12500	29	4350	4550
PQ 2625	11	27.3 ±0.46	15.5 min.	22.5±0.46	12.35 ±0.15	8.05 ±0.15	12.0 ±0.2	19.0 ±0.45	10.5 min.	54	120	108	6530	16	4300	4500
PQ 2610	11	27.2 ±0.45	15.5 min.	22.5±0.45	4.7 ±0.13	1.5 ±0.15	12.0 ±0.2	19.0 ±0.45	10.5 min.	27	105	93	2846	7.5	5600	6900
PQ 2020	11	21.3 ±0.4	12.0 min.	18.0±0.4	10.1 ±0.13	7.15 ±0.15	8.8 ±0.2	14.0 ±0.4	7.9 min.	45	62	59	2850	7	2650	2800
PQ 2010	11	21.2 ±0.4	12.0 min.	17.6min.	4.7 ±0.13	1.5 ±0.15	8.87±0.2	14.0 ±0.4	7.9 min.	22	62	59	1419	4.5	4800	4900

EP CORES

TYPE	FIG.	DIMENSIONS (mm)								EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}			
		A	B	C	D	E	F	G		Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm²)		CF196	CF138	CF101	CF195
EP 13	12	12.5 ±0.3	10.0 ±0.3	6.5 ±0.15	4.65±0.15	4.35 ±0.15	8.8 ±0.2	2.36 ±0.13		24	19	14	478	2.4	1380	1450	2050	3500
EP 10	12	11.5 ±0.3	9.4 ±0.2	5.1 ±0.15	3.75±0.15	3.3 ±0.15	7.6 ±0.2	1.8 ±0.13		19	11	8	221	1.4	1000	1050	1150	2250
EP 7	12	9.2 ±0.2	7.4 ±0.2	3.75±0.15	2.65±0.15	3.3 ±0.15	6.35±0.15	1.7 ±0.1		15	10	8	162	0.7	1100	1150	1240	2400

PTS CORES

TYPE	FIG.	DIMENSIONS (mm)								EFFECTIVE PARAMETERS				WEIGHT (gms/set)	AL(nH) ^{+30%} _{-20%}	
		A	B1	B2	C	D	E1	E2	F	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm²)		CF196	CF138
PT 2311	13	22.9 ±0.45	18.3±0.35	3.8 ±0.6	5.5 ±0.15	3.8 ±0.15	9.7 ±0.2	5.1 ±0.15	15.2 ±0.3	28	61	53	1740	12	3300	3500
TS 2311	14	22.9 ±0.45	18.3±0.35	13.2 min	5.5 ±0.15	3.8 ±0.15	9.7 ±0.2	5.1 ±0.15	15.2 ±0.3							
PT 1811	13	17.9 ±0.3	15.1±0.25	3.8 ±0.6	5.3 ±0.15	3.7 ±0.15	7.4 ±0.15	3.1 ±0.12	11.9 ±0.3	27	40	32	1110	6	2300	2400
TS 1811	14	17.9 ±0.3	15.1±0.25	10.5 min.	5.3 ±0.15	3.7 ±0.15	7.4 ±0.15	3.1 ±0.12	11.9 ±0.3							
PT 1408	13	14.0 ±0.2	11.8±0.2	3.3 ±0.6	4.15±0.15	2.9 ±0.15	5.9 ±0.15	3.1 ±0.12	9.4 ±0.3	22	22	19	495	2.8	1500	1600
TS 1408	14	14.0 ±0.2	11.8±0.2	8.5 min	4.15±0.15	2.9 ±0.15	5.9 ±0.15	3.1 ±0.12	9.4 ±0.3							

* A_L measured by pairing PT and TS core

POT CORES

TYPE	FIG.	DIMENSIONS (mm)								EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}			
		A	B1	B2	C	D	E1	E2	F	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm²)		CF196	CF138	CF101	CF195
P 3622	15	35.5 ±0.5	26.2±0.6	5.2 ±0.4	10.85±0.2	7.6 ±0.15	15.9 ±0.3	5.5 ±0.12	26.2 ±0.6	52	202	180	10600	28	7400	7700	11000	—
P 3019	15	30.0 ±0.5	25.4±0.4	4.8 ±0.6	9.4 ±0.12	6.63±0.13	13.32±0.2	5.55±0.15	20.6 ±0.5	45	137	115	6190	18	6200	6400	8500	12200
P 2616	15	25.5 ±0.5	21.6±0.45	3.8 ±0.6	8.05±0.12	5.63±0.13	11.3 ±0.2	5.55±0.15	18.05±0.4	37	93	74	3460	10.5	4900	5100	6700	9400
P 2213	15	21.6 ±0.4	18.2±0.3	3.8 ±0.6	6.7 ±0.1	4.73±0.13	9.25±0.15	4.55±0.15	15.3 ±0.5	31	63	50	2000	6.5	3800	3950	5100	7000
P 1811	15	18.0 ±0.4	15.2±0.25	3.4 ±0.6	5.25±0.1	3.72±0.13	7.45±0.15	3.1 ±0.12	12.85±0.5	25	43	35	1120	3.5	3000	3100	3950	5300

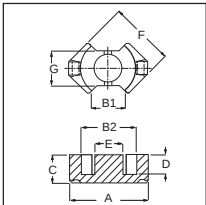


Fig. 10

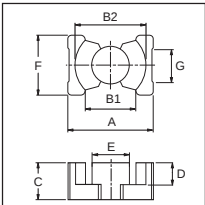


Fig. 11

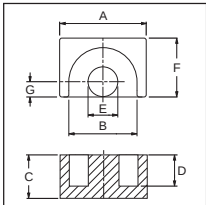


Fig. 12

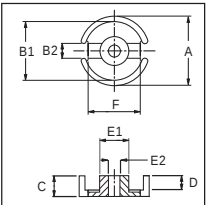


Fig. 13

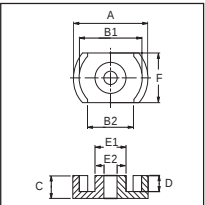


Fig. 14

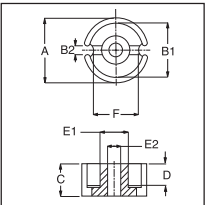


Fig. 15

UU CORES

TYPE	FIG.	DIMENSIONS (mm)					EFFECTIVE PARAMETERS			WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}			
		A	B	C	D	E	Le(mm)	Ae(mm²)	Ve(mm³)		CF196	CF138	CF101	CF195
UU 100	16	101.6 ±2.0	49.0 min.	57.1 ±0.4	31.7 ±0.4	25.2 ±0.7	300	620	186000	500	4500	4700	6350	—
UU 100A	16	101.6 ±2.0	49.0 min.	57.1 ±0.4	31.7 ±0.4	12.7 ±0.38	308	321	98868	247	2250	2350	—	—
UU 9330	16	93.0 ±1.8	36.2 ±1.2	76.0 ±0.5	48.0 ±0.9	30.0 ±0.6	354	840	297000	700	4700	5000	—	—
UU 9316	16	93.0 ±1.8	37.0 ±1.2	76.0 ±0.5	48.0 ±0.8	16.0 ±0.6	354	448	158576	390	2700	2800	3700	—
UU 8020	16	80.0 ±2.0	40.0 ±0.8	49.0 ±0.5	29.0 ±0.3	20.0 ±0.5	258	400	103533	265	3750	3900	—	—
UU 7020	16	68.4 ±1.6	28.4 ±0.6	57.5 ±0.5	37.5 ±0.5	20.0 ±5.0	269	400	107850	275	3450	3600	5000	7800
UU 6015	16	59.5 ±0.8	29.2 ±0.7	55.0 ±0.25	40.0 ±0.6	15.25±0.5	265	228	60810	155	1900	2000	2800	4200
UU 4628	16	46.8 ±0.7	17.5 min.	39.5 ±0.25	25.5 ±0.75	28.0 ±0.8	182	397	72699	180	4700	4900	6450	—
UU 2537	16	24.5 ±0.7	9.9 ±0.3	18.4 ±0.5	10.85 ±0.25	7.55±0.25	86	57	4955	12.5	1250	1300	—	2550
UU 2332	16	23.0 ±0.6	8.0 ±0.3	15.7 ±0.3	8.5 ±0.25	7.55±0.25	74	61	4514	12.5	1800	1900	2450	3350
UU 2130A	16	21.0 ±0.6	6.3 ±0.3	15.8 ±0.25	8.75 ±0.25	7.5 ±0.3	70	54	3814	9.5	1550	1650	2100	3150
UU 2130	16	21.0 ±0.6	6.3 ±0.3	15.3 ±0.5	8.25 ±0.25	7.5 ±0.3	68	55	3740	9.5	1600	1650	2000	—
UU 2036	16	20.0 ±0.4	8.0 ^{+0.4}	18.0 ^{+0.3} _{-0.2}	12.0 ±0.2	6.0 ±0.2	82	36	2980	7.5	—	—	—	1900
UU 1622	16	16.0 ±0.3	7.0 ±0.3	11.0 ±0.2	7.0 ±0.15	6.0 ±0.15	55	25	1422	3.8	900	950	1200	1950
UU 1620	16	16.0 ±0.2	7.0 ±0.3	10.6 ±0.2	6.0 ±0.15	6.0 ±0.15	52	27	1404	3.8	—	—	1320	2200
UU 1522	16	15.2 ±0.7	5.2 ±0.3	11.1 ±0.5	6.1 ±0.35	6.45±0.25	48	32	1536	4.5	1300	1350	1650	2500
UU 1116	16	10.5 ±0.2	5.5 ±0.2	7.9 ±0.2	5.3 ±0.15	5.0 ±0.15	40	13	520	1.4	650	700	900	1300
UU 1016	16	10.1 ±0.2	4.3 ±0.2	8.2 ±0.2	5.2 ±0.2	2.9 ±0.2	38	8	330	0.9	450	475	600	900

I CORES

TYPE	FIG.	DIMENSIONS (mm)			EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}	
		A	B	C	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm³)		CF196	CF138
I 10025	17	101.6 ±2.0	25.4 ±0.8	25.4 ±0.8	—	—	—	—	300	—	—
I 9330	17	93.0 ±1.8	27.5 ±0.6	30.0 ±0.6	—	—	—	—	370	—	—
I 9316	17	93.0 ±1.8	27.5 ±0.6	16.0 ±0.6	—	—	—	—	200	—	—
I 8020	17	80.0 ±0.5	20.0 ±0.8	20.0 ±0.4	—	—	—	—	150	—	—
I 7020	17	70.0 ±0.5	30.0 ±0.6	20.0 ±0.6	—	—	—	—	200	—	—

EVD, EFC CORES

TYPE	FIG.	DIMENSIONS (mm)							EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}		
		A	B	C	D	E	F	G	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm³)		CF196	CF138	CF101
EVD 2513	18	25.0 ^{+0.8} _{-0.7}	19.2 ±0.4	12.6 ±0.25	9.55±0.25	8.8 ±0.25	12.7 _{-0.5}	8.3 ±0.3	60	73	70	4300	11.5	2600	2700	3600
EVD 1509	19	14.9 ±0.6	11.1 ±0.3	8.85 ±0.15	6.2 ±0.2	5.6 ±0.2	6.8 ±0.2	4.6 ±0.2	38	27	25	1026	2.4	1150	1200	—
EFC 2508	20	25.1 ±0.4	21.0 min.	12.5 ±0.2	9.0 ±0.2	11.5 ±0.2	8.0 ±0.2	3.95±0.15	59	46	43	2748	7	1650	1750	—

EI CORES

TYPE	FIG.	DIMENSIONS (mm)							EFFECTIVE PARAMETERS				WEIGHT (gms/set)	AL(nH) ^{+30%} _{-20%}			
		A	B	C	D	E	F	G	Le(mm)	Ae(mm²)	Amin(mm²)	Ve(mm³)		CF196	CF138	CF101	CF195
EI 4012	21	40.0 ±0.5	27.2 ^{+1.0}	27.0 ^{+0.5}	20.0 ^{+0.5}	12.0 _{-0.7}	12.0 _{-0.7}	7.5 ±0.3	76	148	136	11400	59	3800	3950	5200	—
EI 3512T	21	35.0 ^{+0.8} _{-0.5}	25.0 ^{+0.8}	23.8 ^{+0.7}	18.0 ^{+0.6}	10.3 _{-0.6}	12.0 _{-0.6}	5.5 ±0.2	67	120	117	8090	41	3500	3600	—	—
EI 3313	21	33.0 ±0.5	23.2 ^{+0.8}	23.3 ±0.3	19.05±0.3	9.7 ±0.3	12.7 ±0.3	5.0 ±0.2	66	118	108	7901	40	3500	3600	4750	—
EI 3011	21	30.0 ^{+0.7} _{-0.2}	20.0 ^{+0.7}	21.0 ^{+0.6}	16.0 ^{+0.6}	11.0 _{-0.7}	11.0 _{-0.7}	5.5 ±0.2	58	110	106	6458	33	3700	3800	—	—
EI 2811	21	28.0 ±0.4	18.6 ^{+0.8}	17.3 ±0.3	12.8 ±0.2	7.5 _{-0.8}	11.0 _{-0.6}	3.5 ±0.2	49	84	76	4170	23	3400	3500	4600	6950

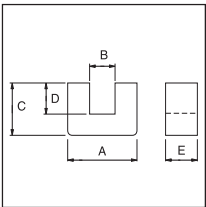


Fig. 16

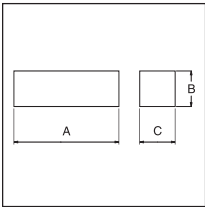


Fig. 17

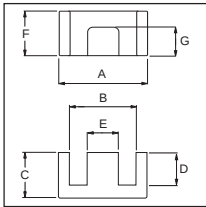


Fig. 18

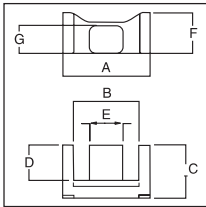


Fig. 19

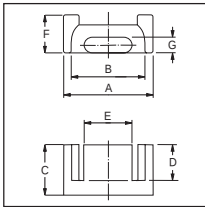


Fig. 20

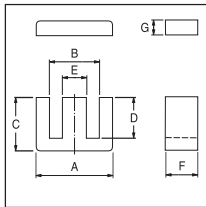


Fig. 21

ET & UT CORES

TYPE	FIG.	DIMENSIONS (mm)						EFFECTIVE PARAMETERS			WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}	
		A	B	C	D	E	F	Le(mm)	Ae(mm ²)	Ve(mm ³)		CF195	CF 197
ET 3535	22	35.3 ±0.6	26.8 min.	35.3 ±0.6	26.8 min.	7.4 ±0.25	7.4 ±0.25	86	57	4961	26	4100	5750
ET 2930	22	29.0 ±0.4	23.0 ±0.4	30.0 ±0.4	24.0 ±0.4	5.0 ±0.25	5.0 ±0.3	74	27	2075	10	1900	2650
ET 2828	22	28.4 ±0.5	22.2 min.	28.4 ±0.5	22.2 min.	5.0 ±0.3	5.0 ±0.3	70	27	1972	10	2400	3400
ET 2424	22	24.2 ±0.5	19.0 min.	24.2 ±0.5	19.0 min.	4.0 ±0.2	4.0 ±0.3	60	18	1098	5.6	1900	2650
UT 20	23	20.6 ±0.3	16.0 ±0.3	14.1 ±0.25	7.5 ±0.15	4.1 ±0.2	4.6 ±0.2	53	13	688	4	1540	2150
UT 19	23	19.5 ±0.3	13.1 ±0.25	14.2 ±0.3	7.0 ±0.2	4.0 ±0.2	5.0 ±0.3	51	16	820	4	1950	—

PLANER E CORES AND PLATE

TYPE	FIG.	DIMENSIONS (mm)						EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}	
		A	B	C	D	E	F	Le(mm)	Ae(mm ²)	Amin(mm ²)	Ve(mm ³)		CF138	
EE 6450P	24	64.0 ±1.3	53.6 ±1.1	10.2 ±0.15	5.1 ±0.15	10.2 ±0.2	50.8 ±1.1	80	519	518	41500	102	13000	
I 6450P	25	64.0 ±1.3	50.8 ±1.1	5.1 ±0.15								80	*14400	
EE 4328P	24	43.2 ±0.9	34.7 min.	9.5 ±0.15	5.4 ±0.15	8.1 ±0.2	27.9 ±0.6	62	227	227	13940	35	8300	
I 4328P	25	43.2 ±0.9	27.9 ±0.6	4.1 ±0.20								25	*9450	
EE 3825P	24	38.1 ±0.76	30.23 min.	8.26 ±0.2	4.45 ±0.2	7.6 ±0.2	25.4 ±0.51	53	194	194	10200	25	7300	
I 3825P	25	38.1 ±0.76	25.4 ±0.51	3.81 ±0.2								18	*8500	
EE 3220P	24	31.75±0.64	24.9 min.	6.35 ±0.15	3.18 ±0.2	6.35 ±0.15	20.32±0.4	42	129	129	5380	13	6200	
I 3220P	25	31.75±0.64	20.32 ±0.4	3.18 ±0.2								10	*6400	
EE 2208P	24	21.8 ±0.4	16.8 ±0.4	3.95 ±0.15	1.75 ±0.15	5.0 ±0.15	7.9 ±0.25	26	36	34	953	2.5	2850	
EE 1804P	24	18.0 ±0.35	14.0 ±0.3	4.0 ±0.1	2.0 ±0.1	4.0 ±0.1	10.0 ±0.2	24	40	40	971	2.4	2700	
I 1804P	25	18.0 ±0.35	10.0 ±0.2	2.0 ±0.1								1.7	*2850	

PLANER EH CORES AND PLATE

TYPE	FIG.	DIMENSIONS (mm)							EFFECTIVE PARAMETERS				WEIGHT (gms/piece)	AL(nH) ^{+30%} _{-20%}	
		A	B	C	D	E1	F	E 2	Le(mm)	Ae(mm ²)	Amin(mm ²)	Ve(mm ³)		CF 138	
EEH 2506	26	25.0 ±0.45	20.83 ±0.35	6.29 ±0.15	4.0 ±0.15	6.32 ±0.15	20.0 ±0.35	14.54 ±0.25	38	86	83	3273	8	4450	
I 2506	25	25.0 ±0.45	20.0 ±0.35	2.29 ±0.1									4	*5300	
EEH 2504	26	25.0 ±0.45	20.83 ±0.35	4.29 ±0.1	2.0 ±0.1	6.32 ±0.15	20.0 ±0.35	14.54 ±0.25	30	86	83	2600	6.3	5300	
I 2504	25	25.0 ±0.45	20.0 ±0.35	2.29 ±0.1									4	*5900	
EEH 2204	26	22.0 ±0.4	18.33 ±0.35	4.02 ±0.1	2.0 ±0.1	5.56 ±0.15	17.6 ±0.3	12.79 ±0.25	27	66	64	1810	4.3	4600	
I 2204	25	22.0 ±0.4	17.6 ±0.3	2.02 ±0.1									3.2	*5200	

* A_e measured in combination of I Core with E Core

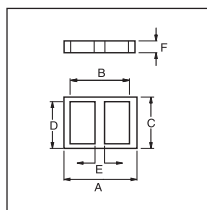


Fig. 22

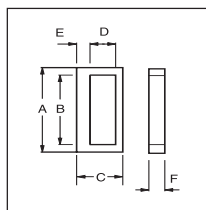


Fig. 23

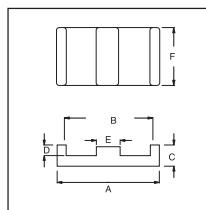


Fig. 24

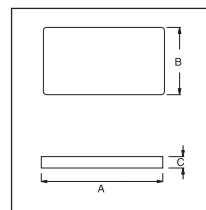


Fig. 25

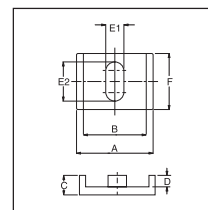


Fig. 26



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