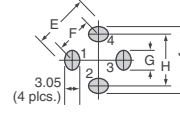
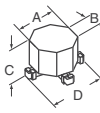




# OCTA-PAC®/ECONO-PAC™ Power Inductors and Transformers

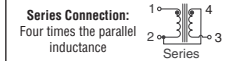
These parts are commonly used in reference designs for manufacturers like Linear Technology, Texas Instruments, On-Semiconductor™, Maxim, National Semiconductor™, Fairchild Semiconductor®, Analog Devices and many more.

**Features:** • Surface mount magnetics that can be used as single or coupled inductors or 1:1 transformers that provide isolation between two windings • OCTA-PACs are designed around high frequency, low loss MPP core material • ECONO-PACs are a lower cost version of OCTA-PACs offering high saturation flux density **Applications:** • Computer and portable power devices • LCD panels, DVD players • Inductor: DC-DC converters • Buck, boost, forward and resonant converters • Noise filtering and filter chokes • Transformers: 1:1 300Vdc isolation, flyback, sepic **Specifications:** • Operating Temperature Range: -40°C – 85°C (Range is application specific) **Solder Reflow Temperature:** 260°C for 10 seconds maximum



Series	Dimensions (mm)								
	A (sq.)	B (ref.)	C (max.)	D	E	F	G	H	J
CTX-1,-1P	8.89	3.68	4.19	11.43	10.72	7.04	3.68	9.96	13.00
CTX-2,-2P	8.89	3.68	5.97	11.43	10.72	7.04	3.68	9.96	13.00
CTX-3,-3P	11.43	4.72	4.83	13.97	12.50	8.84	4.06	12.50	15.54
CTX-4,-4P	11.43	4.72	6.35	13.97	12.50	8.84	4.06	12.50	15.54

**Connection Options:**



Parallel Connection				Series Connection				Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel		Coiltronics Part No.
Open Circuit Inductance ±20% (µH)	Full Load Current DC (A)	Full Load Inductance Min. (µH)	DC Resistance Maximum (Ω)	Open Circuit Inductance ±20% (µH)	Full Load Current DC (A)	Full Load Inductance Min. (µH)	DC Resistance Maximum (Ω)		1	10	100		Qty.	Pricing	
<b>OCTA-PAC Series</b>															
4.70	3.00	2.66	.021	18.80	1.50	10.65	.084	513-1214-1-ND	6.15	5.59	4.16	513-1214-2-ND	800	2079.23	CTX5-2-R
4.90	4.40	2.59	.014	19.60	2.20	10.37	.056	513-1215-1-ND	6.32	5.75	4.28	513-1215-2-ND	600	1602.44	CTX5-4-R
9.60	3.40	4.82	.019	38.42	1.70	19.28	.078	513-1002-1-ND	6.79	6.17	4.59	513-1002-2-ND	600	1720.74	CTX10-4-R
10.00	1.90	4.85	.044	40.00	.95	19.40	.176	513-1003-1-ND	6.27	5.71	4.25	513-1003-2-ND	1,100	2652.81/M	CTX10-1-R
10.58	2.50	5.18	.031	42.30	1.25	20.72	.125	513-1004-1-ND	6.57	5.98	4.45	513-1004-2-ND	800	2222.63	CTX10-2-R
14.16	3.00	6.76	.024	56.64	1.50	27.03	.096	513-1202-1-ND	6.79	6.17	4.59	513-1202-2-ND	600	1720.74	CTX15-4-R
19.60	1.00	11.54	.146	78.40	.50	46.15	.583	513-1203-1-ND	6.27	5.71	4.25	513-1203-2-ND	1,100	2652.81/M	CTX20-1-R
19.60	2.10	10.68	.055	78.40	1.05	42.73	.220	513-1007-1-ND	6.79	6.17	4.59	513-1007-2-ND	600	1720.74	CTX20-4-R
20.18	1.50	10.76	.078	80.74	.75	43.04	.312	513-1008-1-ND	6.70	6.09	4.54	513-1008-2-ND	800	2265.64	CTX20-3-R
20.73	1.30	12.36	.107	82.91	.65	49.46	.426	513-1204-1-ND	6.57	5.98	4.45	513-1204-2-ND	800	2222.63	CTX20-2-R
25.92	2.00	13.32	.063	103.68	1.00	53.27	.253	513-1207-1-ND	6.79	6.17	4.59	513-1207-2-ND	600	1720.74	CTX25-4-R
31.77	1.40	15.90	.105	127.09	.70	63.59	.420	513-1210-1-ND	7.64	6.94	5.17	513-1210-2-ND	800	2581.11	CTX30-2-R
32.86	.96	19.69	.083	131.42	.48	78.77	.331	513-1012-1-ND	6.70	6.09	4.54	513-1012-2-ND	800	2265.64	CTX33-3-R
33.12	1.80	16.82	.072	132.50	.90	67.27	.287	513-1211-1-ND	6.79	6.17	4.59	513-1211-2-ND	600	1720.74	CTX33-4-R
50.18	1.50	25.03	.111	200.70	.75	100.11	.443	513-1014-1-ND	6.79	6.17	4.59	513-1014-2-ND	600	1720.74	CTX50-4-R
50.63	.64	29.34	.365	202.50	.32	117.38	1.461	513-1212-1-ND	6.27	5.71	4.25	513-1212-2-ND	1,100	2652.81/M	CTX50-1-R
51.18	.92	28.79	.210	204.73	.46	115.16	.839	513-1016-1-ND	7.64	6.94	5.17	513-1016-2-ND	800	2581.11	CTX50-2-R
67.08	1.20	35.29	.157	268.32	.60	141.15	.630	513-1216-1-ND	6.79	6.17	4.59	513-1216-2-ND	600	1720.74	CTX68-4-R
99.23	.44	58.72	.784	396.90	.22	234.88	3.137	513-1195-1-ND	6.27	5.71	4.25	513-1195-2-ND	1,100	2652.81/M	CTX100-1-R
99.23	.92	54.56	.302	396.90	.46	218.25	1.210	513-1198-1-ND	6.79	6.17	4.59	513-1198-2-ND	600	1720.74	CTX100-4-R
148.23	.82	77.17	.372	592.90	.41	308.69	1.488	513-1201-1-ND	6.79	6.17	4.59	513-1201-2-ND	600	1720.74	CTX150-4-R
200.70	.64	111.08	.545	802.82	.32	444.32	2.180	513-1023-1-ND	6.79	6.17	4.59	513-1023-2-ND	600	1720.74	CTX200-4-R
254.40	.60	122.30	.615	1017.60	.308	489.20	2.460	513-1206-1-ND	8.32	7.56	5.63	513-1206-2-ND	600	2107.91	CTX250-4-R
298.12	.62	147.92	.672	1192.46	.31	591.66	2.687	513-1208-1-ND	6.79	6.17	4.59	513-1208-2-ND	600	1720.74	CTX300-4-R
<b>ECONO-PAC Series</b>															
8.08	1.80	5.31	.052	32.33	.90	21.23	.207	513-1124-1-ND	3.69	3.36	2.50	513-1124-2-ND	1,100	1559.43/M	CTX8-1P-R
9.62	1.70	6.23	.057	38.48	.85	24.94	.227	513-1026-1-ND	3.69	3.36	2.50	513-1026-2-ND	1,100	1559.43/M	CTX10-1P-R
9.83	2.10	6.73	.045	39.30	1.05	26.92	.179	513-1199-1-ND	3.82	3.47	2.59	513-1199-2-ND	800	1290.56	CTX10-2P-R
9.79	2.70	5.71	.033	39.15	1.35	22.85	.131	513-1544-1-ND	3.82	3.47	2.59	513-1544-2-ND	800	1290.56	CTX10-3P-R
9.88	2.50	6.70	.047	39.53	1.25	26.79	.187	513-1200-1-ND	3.82	3.47	2.59	513-1200-2-ND	600	967.92	CTX10-4P-R
19.58	1.50	13.37	.097	78.34	.75	53.48	.387	513-1029-1-ND	3.82	3.47	2.59	513-1029-2-ND	800	1505.65	CTX20-2P-R
20.62	1.90	13.44	.084	82.47	.95	53.76	.337	513-1205-1-ND	3.82	3.47	2.59	513-1205-2-ND	600	967.92	CTX20-4P-R
24.79	1.40	16.60	.109	99.14	.70	66.38	.436	513-1235-1-ND	3.82	3.47	2.59	513-1235-2-ND	800	1290.56	CTX25-2P-R
32.33	.80	22.27	.250	129.32	.40	89.06	1.001	513-1209-1-ND	3.69	3.36	2.50	513-1209-2-ND	1,100	1559.43/M	CTX33-1P-R
32.67	1.30	21.29	.126	130.70	.65	85.17	.503	513-1033-1-ND	3.82	3.47	2.59	513-1033-2-ND	800	1290.56	CTX33-2P-R
48.80	1.20	32.21	.201	195.20	.60	128.83	.805	513-1213-1-ND	3.82	3.47	2.59	513-1213-2-ND	600	967.92	CTX50-4P-R
99.01	.54	63.64	.557	396.06	.27	254.55	2.227	513-1036-1-ND	3.69	3.36	2.50	513-1036-2-ND	1,100	1559.43/M	CTX100-1P-R
201.59	.46	138.49	.951	806.34	.23	553.97	3.804	513-1545-1-ND	3.82	3.47	2.59	513-1545-2-ND	800	1290.56	CTX200-2P-R
300.42	.42	197.52	1.176	1201.70	.21	790.08	4.703	513-1546-1-ND	3.82	3.47	2.59	513-1546-2-ND	800	1290.56	CTX300-2P-R

## UNI-PAC™ and Amorphous Surface Mount Power Inductors

**Features:** These specified parts are designed for use in National Semiconductors Webench program, but are also used in many power applications like DC-DC converters and battery powered equipment. Miniature size with maximum power density and are rugged enough for design in high shock environments.

**Specifications:** • Operating Temperature Range: -40°C – 85°C • Solder Reflow Temperature: 260°C for 10 seconds maximum



**Fig. 1**

**Fig. 2**

**Fig. 3**

**Fig. 4**

Series	Dimensions - Max. (mm)		
	A	B	C
UP1B	8.89	6.10	5.0
UP2B	13.97	10.41	6.0
UP2C	12.90	9.40	5.2

Series	Dimensions - Max. (mm)		
	A	B	C
UP3B	19.30	13.21	6.8
CTX01	17.70	12.85	7.55
UP4B	22.10	15.00	7.87

Fig.	Rated Inductance (µH)	OCL(1) ±20% (µH)	IRMS(2) Amperes	ISAT(3) Amperes	DCR(4) (Ω)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel		Coiltronics Part No.
							1	10	100		Qty.	Pricing	
<b>UP0.4C Series</b>													
1	22	21.8	0.76	0.77	0.360	513-1061-1-ND	1.18	1.08	.81	513-1061-2-ND	2,500	501.89/M	UP0.4C-220-R
	33	32.2	0.64	0.63	0.560	513-1063-1-ND	1.18	1.08	.81	513-1063-2-ND	2,500	501.89/M	UP0.4C-330-R
	47	46.5	0.53	0.53	0.820	513-1064-1-ND	1.18	1.08	.81	513-1064-2-ND	2,500	501.89/M	UP0.4C-470-R
	68	68.2	0.45	0.43	1.10	513-1227-1-ND	1.18	1.08	.81	513-1227-2-ND	2,500	501.89/M	UP0.4C-680-R
	100	102.5	0.37	0.35	1.58	513-1060-1-ND	1.18	1.08	.81	513-1060-2-ND	2,500	501.89/M	UP0.4C-101-R
<b>UP1B Series</b>													
2	0.47	0.569	6.0	7.7	0.0097	513-1183-1-ND	1.31	1.20	.89	513-1183-2-ND	900	500.09	UP1B-R47-R
	1.0	1.20	4.4	5.3	0.0177	513-1181-1-ND	1.31	1.20	.89	513-1181-2-ND	900	500.09	UP1B-1R0-R
	2.2	2.62	3.1	3.5	0.0363	513-1668-1-ND <b>NEW!</b>	1.31	1.20	.89	513-1668-2-ND <b>NEW!</b>	900	500.09	UP1B-2R2-R

‡ Tolerance is ±25% **Note (1):** Open Circuit Inductance Test Parameters: 100KHz, 0.250Vrms, 0.0 Adc **Note (2):** RMS current for an approximate ΔT of 40°C at an ambient temperature of 85°C **Note (3):** Peak current for approximately 30% roll-off UP0.4C, UP1B, 3B, 4B, 10% roll-off UP2B at 20°C **Note (4):** DCR limits 20°C

† CTX01 Series – Mechanical package is similar to the UP3B Series. See data sheet for more information.

(Continued)

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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