



**THE DATASHEET OF
CTX20-4-R**



ECONO-PAC™ /OCTA-PAC® OCTA-PAC® PLUS

Dual winding toroid power inductors/transformers



Product features

- Surface mount magnetics that can be used as single or coupled inductors or 1:1 transformers that provide isolation between two windings
- OCTA-PAC's are designed around high frequency, low loss core material
- ECONO-PAC's are a lower cost version of OCTA-PAC's offering high saturation flux density, Iron powder core material
- OCTA-PAC PLUS's offer higher current ratings and higher saturation flux densities than OCTA-PAC and ECONO-PAC, Amorphous metal core material
- Secure 4 Terminal Mounting
- Inductor more versatile inductance combination by series or parallel connections

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: 1:1 300 Vdc isolation, flyback, sepic

Part number

- CTX___-__-R(First three digits CTX; Second 2-3 digits = Inductance Value; Last 1-2 digits, product size & type)
- -R indicates RoHS compliant

Product size/type

- CTX___-1 (-1 = size; no suffix = OCTA-PAC®)
- CTX___-1P (-1 = size; P suffix = ECONO-PAC™)
- CTX___-1A (-1 = size; A suffix = OCTA-PAC® PLUS)

Environmental data

- Storage temperature range (component): -40 °C to +125 °C
- Operating temperature range: -40 °C to +125 °C (ambient plus self-temperature rise)
- Solder reflow temperature: J-STD-020 (latest revision) compliant



Octa-Pac Plus
(-1A, -2A, -3A)
discontinued October 31,
2017 or until inventory is
depleted.



Powering Business Worldwide

| Part Number | PARALLEL | | | | SERIES | | | |
|--------------|--------------------------------------|---------------------------------|--------------------------|----------------------------|--------------------------------------|---------------------------------|--------------------------|----------------------------|
| | Open Circuit Inductance μH +/-20% | Full Load Inductance μH min. | Full Load Current Acd | DC Resistance ohms max. | Open Circuit Inductance μH +/-20% | Full Load Inductance μH min. | Full Load Current Acd | DC Resistance ohms max. |
| CTX0.47-1P-R | .42 | .31 | 5.50 | .005 | 1.67 | 1.25 | 2.75 | .021 |
| CTX0.68-1P-R | .60 | .43 | 5.10 | .006 | 2.40 | 1.74 | 2.55 | .025 |
| CTX1-1P-R | 1.07 | .73 | 4.50 | .008 | 4.28 | 2.92 | 2.25 | .032 |
| CTX2-1P-R | 2.02 | 1.36 | 3.40 | .013 | 8.08 | 5.44 | 1.70 | .054 |
| CTX5-1P-R | 4.83 | 3.37 | 2.00 | .040 | 19.31 | 13.47 | 1.00 | .161 |
| CTX8-1P-R | 8.08 | 5.31 | 1.80 | .052 | 32.33 | 21.23 | .90 | .207 |
| CTX10-1P-R | 9.62 | 6.23 | 1.70 | .057 | 38.48 | 24.94 | .85 | .227 |
| CTX15-1P-R | 15.03 | 9.62 | 1.40 | .087 | 60.12 | 38.47 | .70 | .348 |
| CTX20-1P-R | 20.46 | 14.12 | 1.00 | .158 | 81.83 | 56.47 | .50 | .634 |
| CTX25-1P-R | 25.40 | 17.07 | .96 | .177 | 101.60 | 68.29 | .48 | .708 |
| CTX33-1P-R | 32.33 | 22.27 | .80 | .250 | 129.32 | 89.06 | .40 | 1.001 |
| CTX50-1P-R | 50.52 | 33.57 | .70 | .316 | 202.07 | 134.27 | .35 | 1.263 |
| CTX68-1P-R | 68.40 | 43.65 | .66 | .373 | 273.61 | 174.61 | .33 | 1.490 |
| CTX100-1P-R | 99.01 | 63.64 | .54 | .557 | 396.06 | 254.55 | .27 | 2.227 |
| CTX150-1P-R | 150.72 | 96.64 | .44 | .844 | 602.87 | 386.56 | .22 | 3.376 |
| CTX200-1P-R | 198.41 | 130.79 | .36 | 1.208 | 793.65 | 523.16 | .18 | 4.831 |
| CTX300-1P-R | 299.87 | 190.05 | .32 | 1.525 | 1199.46 | 760.19 | .16 | 6.100 |
| CTX0.47-2P-R | .54 | .42 | 5.90 | .006 | 2.18 | 1.69 | 2.95 | .024 |
| CTX0.68-2P-R | .85 | .64 | 5.40 | .007 | 3.40 | 2.55 | 2.70 | .029 |
| CTX1-2P-R | 1.22 | .89 | 5.00 | .008 | 4.90 | 3.57 | 2.50 | .033 |
| CTX2-2P-R | 2.18 | 1.56 | 3.90 | .014 | 8.70 | 6.26 | 1.95 | .055 |
| CTX5-2P-R | 4.90 | 3.57 | 2.50 | .032 | 19.58 | 14.26 | 1.25 | .128 |
| CTX8-2P-R | 7.65 | 5.31 | 2.30 | .040 | 30.60 | 21.23 | 1.15 | .158 |
| CTX10-2P-R | 9.83 | 6.73 | 2.10 | .045 | 39.30 | 26.92 | 1.05 | .179 |
| CTX15-2P-R | 14.99 | 10.51 | 1.60 | .085 | 59.98 | 42.02 | .80 | .339 |
| CTX20-2P-R | 19.58 | 13.37 | 1.50 | .097 | 78.34 | 53.48 | .75 | .387 |
| CTX25-2P-R | 24.79 | 16.60 | 1.40 | .109 | 99.14 | 66.38 | .70 | .436 |
| CTX33-2P-R | 32.67 | 21.29 | 1.30 | .126 | 130.70 | 85.17 | .65 | .503 |
| CTX50-2P-R | 49.10 | 35.31 | .82 | .305 | 196.38 | 141.24 | .41 | 1.221 |
| CTX68-2P-R | 68.85 | 47.93 | .76 | .362 | 275.40 | 191.71 | .38 | 1.445 |
| CTX100-2P-R | 99.14 | 69.56 | .62 | .541 | 396.58 | 278.22 | .31 | 2.162 |
| CTX150-2P-R | 148.10 | 100.07 | .56 | .665 | 592.42 | 400.27 | .28 | 2.660 |
| CTX200-2P-R | 201.59 | 138.49 | .46 | .951 | 806.34 | 553.97 | .23 | 3.804 |
| CTX300-2P-R | 300.42 | 197.52 | .42 | 1.176 | 1201.70 | 790.08 | .21 | 4.703 |
| CTX0.47-3P-R | .46 | .35 | 6.20 | .006 | 1.85 | 1.42 | 3.10 | .025 |
| CTX0.68-3P-R | .67 | .50 | 5.70 | .007 | 2.66 | 1.98 | 2.85 | .028 |
| CTX1-3P-R | .91 | .65 | 5.40 | .008 | 3.63 | 2.62 | 2.70 | .032 |
| CTX2-3P-R | 1.85 | 1.24 | 4.60 | .011 | 7.40 | 4.97 | 2.30 | .045 |
| CTX5-3P-R | 4.74 | 3.04 | 3.20 | .022 | 18.94 | 12.15 | 1.60 | .090 |
| CTX8-3P-R | 8.16 | 4.90 | 2.80 | .030 | 32.63 | 19.60 | 1.40 | .119 |
| CTX10-3P-R | 9.79 | 5.71 | 2.70 | .033 | 39.15 | 22.85 | 1.35 | .131 |
| CTX15-3P-R | 14.50 | 8.50 | 2.20 | .050 | 58.02 | 34.01 | 1.10 | .198 |
| CTX20-3P-R | 20.15 | 13.12 | 1.50 | .111 | 80.59 | 52.48 | .75 | .443 |
| CTX25-3P-R | 25.33 | 16.16 | 1.40 | .125 | 101.31 | 64.66 | .70 | .499 |
| CTX33-3P-R | 32.63 | 20.32 | 1.30 | .146 | 130.54 | 81.30 | .65 | .571 |
| CTX50-3P-R | 50.02 | 33.06 | .92 | .277 | 200.10 | 132.24 | .46 | 1.108 |
| CTX68-3P-R | 68.84 | 44.15 | .84 | .328 | 275.35 | 176.61 | .42 | 1.312 |
| CTX100-3P-R | 101.31 | 65.50 | .68 | .501 | 405.22 | 262.02 | .34 | 2.005 |
| CTX150-3P-R | 149.85 | 90.92 | .64 | .621 | 599.40 | 363.68 | .32 | 2.483 |
| CTX200-3P-R | 200.10 | 116.51 | .60 | .731 | 800.38 | 466.03 | .30 | 2.925 |
| CTX300-3P-R | 298.39 | 172.12 | .50 | .926 | 1193.55 | 688.50 | .25 | 3.702 |
| CTX0.47-4P-R | .49 | .37 | 7.90 | .005 | 1.95 | 1.49 | 3.95 | .019 |
| CTX0.68-4P-R | .76 | .56 | 7.20 | .006 | 3.05 | 2.24 | 3.60 | .023 |
| CTX1-4P-R | 1.10 | .81 | 5.90 | .008 | 4.39 | 3.24 | 2.95 | .033 |
| CTX2-4P-R | 1.95 | 1.42 | 4.60 | .014 | 7.81 | 5.69 | 2.30 | .055 |
| CTX5-4P-R | 5.15 | 3.56 | 3.30 | .027 | 20.62 | 14.23 | 1.65 | .107 |
| CTX8-4P-R | 7.81 | 5.15 | 3.00 | .033 | 31.23 | 20.61 | 1.50 | .131 |
| CTX10-4P-R | 9.88 | 6.70 | 2.50 | .047 | 39.53 | 26.79 | 1.25 | .187 |
| CTX15-4P-R | 14.76 | 9.52 | 2.30 | .057 | 59.05 | 38.09 | 1.15 | .228 |
| CTX20-4P-R | 20.62 | 13.44 | 1.90 | .084 | 82.47 | 53.76 | .95 | .337 |
| CTX25-4P-R | 25.65 | 17.17 | 1.60 | .115 | 102.60 | 68.68 | .80 | .461 |
| CTX33-4P-R | 33.21 | 22.93 | 1.30 | .166 | 132.86 | 91.72 | .65 | .662 |
| CTX50-4P-R | 48.80 | 32.21 | 1.20 | .201 | 195.20 | 128.83 | .60 | .805 |
| CTX68-4P-R | 67.37 | 43.04 | 1.10 | .238 | 269.50 | 172.16 | .55 | .952 |
| CTX100-4P-R | 99.09 | 69.54 | .72 | .565 | 396.38 | 278.15 | .36 | 2.259 |
| CTX150-4P-R | 149.45 | 101.46 | .64 | .696 | 597.80 | 405.83 | .32 | 2.784 |
| CTX200-4P-R | 200.11 | 131.37 | .60 | .810 | 800.44 | 525.47 | .30 | 3.240 |
| CTX300-4P-R | 298.93 | 188.03 | .54 | 1.003 | 1195.72 | 752.13 | .27 | 4.011 |

| Part Number | PARALLEL | | | | SERIES | | | |
|-------------|--|---|-----------------------|-------------------------|--|---|-----------------------|-------------------------|
| | Open Circuit Inductance μH $\pm 20\%$ | Full Load Inductance μH min. | Full Load Current Adc | DC Resistance ohms max. | Open Circuit Inductance μH $\pm 20\%$ | Full Load Inductance μH min. | Full Load Current Adc | DC Resistance ohms max. |
| CTX0.47-1-R | .40 | .26 | 5.50 | .005 | 1.60 | 1.05 | 2.75 | .020 |
| CTX0.68-1-R | .63 | .41 | 4.50 | .006 | 2.50 | 1.63 | 2.25 | .024 |
| CTX1-1-R | .90 | .56 | 4.20 | .007 | 3.60 | 2.24 | 2.10 | .028 |
| CTX2-1-R | 2.03 | 1.00 | 4.10 | .010 | 8.10 | 4.01 | 2.05 | .040 |
| CTX5-1-R | 4.90 | 2.66 | 2.30 | .030 | 19.60 | 10.64 | 1.15 | .122 |
| CTX8-1-R | 8.10 | 4.08 | 2.00 | .039 | 32.40 | 16.34 | 1.00 | .157 |
| CTX10-1-R | 10.00 | 4.85 | 1.90 | .044 | 40.00 | 19.40 | .95 | .176 |
| CTX15-1-R | 14.40 | 8.74 | 1.10 | .080 | 57.60 | 34.96 | .55 | .319 |
| CTX20-1-R | 19.60 | 11.54 | 1.00 | .146 | 78.40 | 46.15 | .50 | .583 |
| CTX25-1-R | 25.60 | 16.35 | .74 | .167 | 102.40 | 65.42 | .37 | .668 |
| CTX33-1-R | 32.40 | 19.84 | .72 | .293 | 129.60 | 79.37 | .36 | 1.171 |
| CTX50-1-R | 50.63 | 29.34 | .64 | .365 | 202.50 | 117.38 | .32 | 1.461 |
| CTX68-1-R | 67.60 | 39.73 | .54 | .516 | 270.40 | 158.92 | .27 | 2.064 |
| CTX100-1-R | 99.23 | 58.72 | .44 | .784 | 396.90 | 234.88 | .22 | 3.137 |
| CTX150-1-R | 148.23 | 85.16 | .38 | .965 | 592.90 | 340.64 | .19 | 3.861 |
| CTX200-1-R | 202.50 | 107.60 | .37 | 1.142 | 810.00 | 430.39 | .19 | 4.567 |
| CTX300-1-R | 302.50 | 191.38 | .22 | 1.431 | 1210.00 | 765.54 | .11 | 5.724 |
| CTX0.47-2-R | .42 | .29 | 6.50 | .005 | 1.69 | 1.17 | 3.25 | .019 |
| CTX0.68-2-R | .75 | .50 | 5.50 | .006 | 3.01 | 1.98 | 2.75 | .024 |
| CTX1-2-R | 1.18 | .76 | 4.60 | .007 | 4.70 | 3.04 | 2.30 | .028 |
| CTX2-2-R | 2.30 | 1.27 | 4.50 | .010 | 9.21 | 5.07 | 2.25 | .038 |
| CTX5-2-R | 4.70 | 2.66 | 3.00 | .021 | 18.80 | 10.65 | 1.50 | .084 |
| CTX8-2-R | 7.94 | 4.18 | 2.60 | .027 | 31.77 | 16.72 | 1.30 | .108 |
| CTX10-2-R | 10.58 | 5.18 | 2.50 | .031 | 42.30 | 20.72 | 1.25 | .125 |
| CTX15-2-R | 15.23 | 8.53 | 1.70 | .059 | 60.91 | 34.10 | .85 | .236 |
| CTX20-2-R | 20.73 | 12.36 | 1.30 | .107 | 82.91 | 49.46 | .65 | .426 |
| CTX25-2-R | 24.86 | 16.09 | 1.00 | .117 | 99.45 | 64.35 | .50 | .466 |
| CTX33-2-R | 31.77 | 15.90 | 1.40 | .105 | 127.09 | 63.59 | .70 | .420 |
| CTX50-2-R | 51.18 | 28.79 | .92 | .210 | 204.73 | 115.16 | .46 | .839 |
| CTX68-2-R | 67.87 | 38.71 | .78 | .303 | 271.47 | 154.83 | .39 | 1.214 |
| CTX100-2-R | 99.45 | 57.45 | .63 | .457 | 397.81 | 229.79 | .32 | 1.828 |
| CTX150-2-R | 147.39 | 93.46 | .43 | .560 | 589.57 | 373.84 | .22 | 2.241 |
| CTX200-2-R | 198.58 | 122.94 | .39 | .796 | 794.30 | 491.76 | .20 | 3.184 |
| CTX300-2-R | 300.80 | 169.06 | .38 | 1.231 | 1203.20 | 676.24 | .19 | 4.929 |
| CTX0.47-3-R | .38 | .27 | 6.00 | .005 | 1.54 | 1.08 | 3.00 | .020 |
| CTX0.68-3-R | .60 | .42 | 5.00 | .006 | 2.40 | 1.67 | 2.50 | .024 |
| CTX1-3-R | .86 | .57 | 4.80 | .007 | 3.46 | 2.28 | 2.40 | .028 |
| CTX2-3-R | 1.94 | 1.05 | 4.70 | .010 | 7.78 | 4.22 | 2.35 | .040 |
| CTX5-3-R | 4.70 | 2.56 | 3.00 | .019 | 18.82 | 10.26 | 1.50 | .077 |
| CTX8-3-R | 7.78 | 3.74 | 2.80 | .025 | 31.10 | 14.98 | 1.40 | .099 |
| CTX10-3-R | 9.60 | 4.38 | 2.70 | .028 | 38.40 | 17.54 | 1.35 | .111 |
| CTX15-3-R | 15.00 | 7.26 | 2.00 | .043 | 60.00 | 29.06 | 1.00 | .172 |
| CTX20-3-R | 20.18 | 10.76 | 1.50 | .078 | 80.74 | 43.04 | .75 | .312 |
| CTX25-3-R | 24.58 | 15.64 | .98 | .086 | 98.30 | 62.56 | .49 | .346 |
| CTX33-3-R | 32.86 | 19.69 | .96 | .083 | 131.42 | 78.77 | .48 | .331 |
| CTX50-3-R | 50.78 | 27.18 | .94 | .239 | 203.14 | 108.71 | .47 | .956 |
| CTX68-3-R | 67.42 | 36.53 | .80 | .277 | 269.66 | 146.11 | .40 | 1.109 |
| CTX100-3-R | 101.40 | 52.48 | .70 | .345 | 405.60 | 209.93 | .35 | 1.381 |
| CTX150-3-R | 149.78 | 97.16 | .38 | .430 | 599.14 | 388.63 | .19 | 1.718 |
| CTX200-3-R | 198.74 | 119.18 | .39 | .619 | 794.98 | 476.71 | .20 | 2.475 |
| CTX300-3-R | 301.06 | 157.44 | .40 | .951 | 1204.22 | 629.75 | .20 | 3.083 |
| CTX0.47-4-R | .44 | .32 | 7.00 | .004 | 1.76 | 1.29 | 3.50 | .016 |
| CTX0.68-4-R | .78 | .55 | 6.00 | .005 | 3.14 | 2.21 | 3.00 | .020 |
| CTX1-4-R | 1.23 | .85 | 5.00 | .006 | 4.90 | 3.41 | 2.50 | .024 |
| CTX2-4-R | 1.76 | 1.06 | 4.90 | .007 | 7.06 | 4.24 | 2.45 | .028 |
| CTX5-4-R | 4.90 | 2.59 | 4.40 | .014 | 19.60 | 10.37 | 2.20 | .056 |
| CTX8-4-R | 8.28 | 4.29 | 3.50 | .018 | 33.12 | 17.14 | 1.75 | .072 |
| CTX10-4-R | 9.60 | 4.82 | 3.40 | .019 | 38.42 | 19.28 | 1.70 | .078 |
| CTX15-4-R | 14.16 | 6.76 | 3.00 | .024 | 56.64 | 27.03 | 1.50 | .096 |
| CTX20-4-R | 19.60 | 10.68 | 2.10 | .055 | 78.40 | 42.73 | 1.05 | .220 |
| CTX25-4-R | 25.92 | 13.32 | 2.00 | .063 | 103.68 | 53.27 | 1.00 | .253 |
| CTX33-4-R | 33.12 | 16.82 | 1.80 | .072 | 132.50 | 67.27 | .90 | .287 |
| CTX50-4-R | 50.18 | 25.03 | 1.50 | .111 | 200.70 | 100.11 | .75 | .443 |
| CTX68-4-R | 67.08 | 35.29 | 1.20 | .157 | 268.32 | 141.15 | .60 | .630 |
| CTX100-4-R | 99.23 | 54.56 | .92 | .302 | 396.90 | 218.25 | .46 | 1.210 |
| CTX150-4-R | 148.23 | 77.17 | .82 | .372 | 592.90 | 308.69 | .41 | 1.488 |
| CTX200-4-R | 200.70 | 111.08 | .64 | .545 | 802.82 | 444.32 | .32 | 2.180 |
| CTX300-4-R | 298.12 | 147.92 | .62 | .672 | 1192.46 | 591.66 | .31 | 2.687 |

| Part Number | Parallel Ratings | | | | | | Series Ratings | | | | |
|--------------|-----------------------|-----------------------------|-------------------------|--------------------|------------------------|----------------|-----------------------------|-------------------------|--------------------|------------------------|----------------|
| | Rated Inductance (µH) | OCL (1) nominal +/-25% (µH) | I sat. (2) Amperes Peak | I rms. (3) Amperes | DCR Ω (4) max. @ 20°C. | Volt (7) µ-Sec | OCL (1) nominal +/-25% (µH) | I sat. (2) Amperes Peak | I rms. (3) Amperes | DCR Ω (4) max. @ 20°C. | Volt (7) µ-Sec |
| CTX0.33-1A-R | 0.33 | 0.402 | 12.5 | 10.0 | 0.0037 | .93 | 1.61 | 6.25 | 4.98 | 0.015 | 1.86 |
| CTX0.68-1A-R | 0.68 | 0.752 | 9.4 | 9.0 | 0.0046 | 1.24 | 3.01 | 4.69 | 4.48 | 0.0185 | 2.49 |
| CTX1-1A-R | 1.0 | 1.18 | 7.5 | 7.26 | 0.0070 | 1.55 | 4.70 | 3.75 | 3.63 | 0.0282 | 3.11 |
| CTX2-1A-R | 2.0 | 2.30 | 5.36 | 5.64 | 0.012 | 2.17 | 9.21 | 2.68 | 2.82 | 0.0470 | 4.35 |
| CTX5-1A-R | 5.0 | 4.70 | 3.75 | 4.27 | 0.020 | 3.11 | 18.8 | 1.88 | 2.13 | 0.082 | 6.21 |
| CTX8-1A-R | 8.0 | 7.94 | 2.88 | 3.37 | 0.033 | 4.04 | 31.77 | 1.44 | 1.69 | 0.130 | 8.08 |
| CTX10-1A-R | 10.0 | 10.58 | 2.5 | 2.84 | 0.046 | 4.66 | 42.30 | 1.25 | 1.42 | 0.183 | 9.32 |
| CTX15-1A-R | 15.0 | 15.23 | 2.08 | 2.07 | 0.087 | 5.59 | 60.91 | 1.04 | 1.03 | 0.348 | 11.2 |
| CTX20-1A-R | 20.0 | 20.73 | 1.79 | 1.71 | 0.127 | 6.52 | 82.91 | 0.89 | 0.86 | 0.507 | 13.0 |
| CTX25-1A-R | 25.0 | 24.86 | 1.63 | 1.46 | 0.173 | 7.14 | 99.45 | 0.82 | 0.73 | 0.693 | 14.3 |
| CTX33-1A-R | 33.0 | 34.26 | 1.39 | 1.22 | 0.249 | 8.39 | 137.1 | 0.61 | 0.61 | 0.95 | 16.8 |
| CTX50-1A-R | 50.0 | 51.18 | 1.14 | 0.99 | 0.381 | 10.3 | 204.7 | 0.57 | 0.49 | 1.24 | 20.5 |
| CTX68-1A-R | 68.0 | 67.87 | 0.99 | 0.92 | 0.437 | 11.8 | 271.3 | 0.49 | 0.46 | 1.749 | 23.6 |
| CTX100-1A-R | 100.0 | 99.45 | 0.82 | 0.74 | 0.686 | 14.3 | 397.8 | 0.41 | 0.37 | 2.745 | 28.6 |
| CTX150-1A-R | 150.0 | 147.4 | 0.67 | 0.67 | 0.832 | 17.4 | 589.6 | 0.33 | 0.33 | 3.329 | 34.8 |
| CTX200-1A-R | 200.0 | 198.6 | 0.58 | 0.62 | 0.967 | 20.2 | 794.3 | 0.29 | 0.31 | 3.854 | 40.4 |
| CTX300-1A-R | 300.0 | 300.8 | 0.47 | 0.56 | 1.181 | 24.9 | 1203 | 0.23 | 0.24 | 4.726 | 49.7 |
| CTX0.33-2A-R | 0.33 | 0.284 | 18.8 | 11.9 | 0.0033 | .85 | 1.14 | 9.38 | 5.47 | 0.0132 | 1.71 |
| CTX0.68-2A-R | 0.68 | 0.675 | 12.5 | 9.4 | 0.0045 | 1.23 | 2.70 | 6.25 | 4.68 | 0.0180 | 2.56 |
| CTX1-2A-R | 1.0 | 1.26 | 9.38 | 8.22 | 0.0058 | 1.71 | 5.06 | 4.69 | 4.11 | 0.0233 | 3.42 |
| CTX2-2A-R | 2.0 | 1.9 | 7.50 | 6.74 | 0.0090 | 2.14 | 11.90 | 3.75 | 3.37 | 0.035 | 4.27 |
| CTX5-2A-R | 5.0 | 5.06 | 4.69 | 4.64 | 0.021 | 3.12 | 20.22 | 2.34 | 2.17 | 0.084 | 6.84 |
| CTX8-2A-R | 8.0 | 7.90 | 3.75 | 3.50 | 0.032 | 4.27 | 31.60 | 1.88 | 1.75 | 0.129 | 8.55 |
| CTX10-2A-R | 10.0 | 11.38 | 3.13 | 2.89 | 0.047 | 5.13 | 45.50 | 1.56 | 1.45 | 0.188 | 10.3 |
| CTX15-2A-R | 15.0 | 15.48 | 2.68 | 2.69 | 0.054 | 5.98 | 61.94 | 1.34 | 1.35 | 0.218 | 12.0 |
| CTX20-2A-R | 20.0 | 21.22 | 2.34 | 2.24 | 0.078 | 6.84 | 80.90 | 1.17 | 1.12 | 0.313 | 13.7 |
| CTX25-2A-R | 25.0 | 25.60 | 2.08 | 1.89 | 0.111 | 7.69 | 102.38 | 1.04 | 0.94 | 0.443 | 15.4 |
| CTX33-2A-R | 33.0 | 34.84 | 1.79 | 1.56 | 0.162 | 8.97 | 139.4 | 0.89 | 0.78 | 0.649 | 17.9 |
| CTX50-2A-R | 50.0 | 49.38 | 1.50 | 1.28 | 0.240 | 10.7 | 197.5 | 0.75 | 0.64 | 0.961 | 21.4 |
| CTX68-2A-R | 68.0 | 66.14 | 1.29 | 1.07 | 0.342 | 12.4 | 265.8 | 0.65 | 0.54 | 1.367 | 24.8 |
| CTX100-2A-R | 100.0 | 102.38 | 1.04 | 0.75 | 0.695 | 15.4 | 409.5 | 0.52 | 0.38 | 2.778 | 30.8 |
| CTX150-2A-R | 150.0 | 152.9 | 0.85 | 0.68 | 0.842 | 18.8 | 611.8 | 0.43 | 0.34 | 3.366 | 37.6 |
| CTX200-2A-R | 200.0 | 197.5 | 0.75 | 0.64 | 0.950 | 21.4 | 790.0 | 0.38 | 0.32 | 3.800 | 42.7 |
| CTX300-2A-R | 300.0 | 303.7 | 0.60 | 0.58 | 1.174 | 26.5 | 1215 | 0.30 | 0.29 | 4.697 | 53.0 |
| CTX0.33-3A-R | 0.33 | 0.368 | 15.0 | 11.4 | 0.0032 | 0.97 | 1.47 | 7.50 | 5.72 | 0.0128 | 1.93 |
| CTX0.68-3A-R | 0.68 | 0.688 | 11.3 | 9.3 | 0.0048 | 1.29 | 2.75 | 5.63 | 4.64 | 0.0194 | 2.58 |
| CTX1-3A-R | 1.0 | 1.08 | 9.0 | 8.38 | 0.0059 | 1.61 | 4.20 | 4.50 | 4.19 | 0.0238 | 3.22 |
| CTX2-3A-R | 2.0 | 2.11 | 6.43 | 7.26 | 0.0079 | 2.26 | 8.43 | 3.21 | 3.63 | 0.0317 | 4.51 |
| CTX5-3A-R | 5.0 | 5.20 | 4.09 | 5.24 | 0.015 | 3.54 | 20.81 | 2.05 | 2.62 | 0.061 | 7.09 |
| CTX8-3A-R | 8.0 | 8.43 | 3.21 | 4.23 | 0.023 | 4.51 | 33.77 | 1.61 | 2.12 | 0.093 | 9.02 |
| CTX10-3A-R | 10.0 | 9.68 | 3.00 | 3.64 | 0.032 | 4.83 | 38.70 | 1.50 | 1.82 | 0.126 | 9.67 |
| CTX15-3A-R | 15.0 | 15.52 | 2.37 | 3.25 | 0.039 | 6.12 | 62.09 | 1.18 | 1.63 | 0.158 | 12.2 |
| CTX20-3A-R | 20.0 | 20.81 | 2.05 | 2.43 | 0.071 | 7.09 | 83.25 | 1.02 | 1.22 | 0.282 | 14.2 |
| CTX25-3A-R | 25.0 | 24.77 | 1.88 | 2.34 | 0.076 | 7.73 | 99.07 | 0.94 | 1.17 | 0.306 | 15.5 |
| CTX33-3A-R | 33.0 | 33.71 | 1.61 | 1.93 | 0.112 | 9.02 | 134.8 | 0.80 | 0.96 | 0.449 | 18.0 |
| CTX50-3A-R | 50.0 | 49.71 | 1.32 | 1.56 | 0.171 | 11.0 | 198.8 | 0.66 | 0.78 | 0.686 | 21.9 |

1) Open Circuit Inductance Test Parameters: 100kHz, 0.250 Vrms, 0.0 Adc
Parallel: (1,4 - 3,2) Series: (1 - 3) tie (2 - 4)
2) Peak current for approximately 30% roll-off
3) RMS current, delta temp. of 40° C ambient temperature of 85° C
4) DCR @ 20°C

5) Hipot rating: winding to winding: 300Vdc min.
6) Turns Ratio: (1-2):(4-3) 1:1
7) Applied volt-time product (v-us) across the inductor. This value represents the applied V-us at 300KHz necessary to generate a core loss equal to 10% of the total losses for a 40°C temperature rise.

| Part Number | Rated Inductance (μH) | Parallel Ratings | | | | | Series Ratings | | | | |
|--------------|-----------------------|-----------------------------|-------------------------|--------------------|------------------------|----------------|-----------------------------|-------------------------|--------------------|------------------------|----------------|
| | | OCL (1) nominal +/-25% (μH) | I sat. (2) Amperes Peak | I rms. (3) Amperes | DCR Ω (4) max. @ 20°C. | Volt (7) μ-Sec | OCL (1) nominal +/-25% (μH) | I sat. (2) Amperes Peak | I rms. (3) Amperes | DCR Ω (4) max. @ 20°C. | Volt (7) μ-Sec |
| CTX68-3A-R | 68.0 | 68.80 | 1.13 | 1.28 | 0.253 | 12.9 | 275.2 | 0.56 | 0.64 | 1.013 | 25.8 |
| CTX100-3A-R | 100.0 | 99.07 | 0.94 | 1.05 | 0.379 | 15.5 | 396.3 | 0.47 | 0.53 | 1.514 | 30.9 |
| CTX150-3A-R | 150.0 | 149.7 | 0.76 | 0.86 | 0.571 | 19.0 | 598.7 | 0.38 | 0.43 | 2.283 | 38.0 |
| CTX200-3A-R | 200.0 | 198.8 | 0.66 | 0.71 | 0.829 | 21.9 | 795.3 | 0.33 | 0.35 | 3.315 | 43.8 |
| CTX300-3A-R | 300.0 | 296.2 | 0.54 | 0.56 | 1.309 | 26.7 | 1185 | 0.27 | 0.28 | 5.236 | 53.5 |
| CTX0.33-4A-R | 0.33 | 0.313 | 22.5 | 12.2 | 0.0030 | 0.98 | 1.25 | 11.25 | 6.09 | 0.0119 | 1.96 |
| CTX0.68-4A-R | 0.68 | 0.744 | 15.0 | 10.6 | 0.0040 | 1.47 | 2.98 | 7.50 | 5.28 | 0.0158 | 2.94 |
| CTX1-4A-R | 1.0 | 1.39 | 11.25 | 9.23 | 0.0052 | 1.96 | 5.57 | 5.63 | 4.62 | 0.0207 | 3.93 |
| CTX2-4A-R | 2.0 | 2.18 | 9.00 | 8.38 | 0.0063 | 2.45 | 8.70 | 4.50 | 4.19 | 0.0251 | 4.91 |
| CTX5-4A-R | 5.0 | 4.26 | 6.43 | 7.21 | 0.0085 | 3.44 | 17.05 | 3.21 | 3.61 | 0.0339 | 6.87 |
| CTX8-4A-R | 8.0 | 8.70 | 4.50 | 5.49 | 0.015 | 4.91 | 34.80 | 2.25 | 2.74 | 0.059 | 9.81 |
| CTX10-4A-R | 10.0 | 10.53 | 4.09 | 4.67 | 0.020 | 5.40 | 42.11 | 2.05 | 2.33 | 0.081 | 10.8 |
| CTX15-4A-R | 15.0 | 14.70 | 3.46 | 3.87 | 0.029 | 6.38 | 58.81 | 1.73 | 1.94 | 0.117 | 12.8 |
| CTX20-4A-R | 20.0 | 19.58 | 3.00 | 3.62 | 0.034 | 7.36 | 78.30 | 1.50 | 1.81 | 0.135 | 14.7 |
| CTX25-4A-R | 25.0 | 25.14 | 2.65 | 3.02 | 0.048 | 8.34 | 100.51 | 1.32 | 1.51 | 0.193 | 16.7 |
| CTX33-4A-R | 33.0 | 34.80 | 2.25 | 2.49 | 0.071 | 9.81 | 139.2 | 1.13 | 1.25 | 0.283 | 19.6 |
| CTX50-4A-R | 50.0 | 50.11 | 1.88 | 2.05 | 0.104 | 11.8 | 200.4 | 0.94 | 1.03 | 0.418 | 23.6 |
| CTX68-4A-R | 68.0 | 68.21 | 1.61 | 1.70 | 0.153 | 13.7 | 272.8 | 0.80 | 0.85 | 0.612 | 27.5 |
| CTX100-4A-R | 100.0 | 100.57 | 1.32 | 1.37 | 0.235 | 16.7 | 402.3 | 0.66 | 0.69 | 0.939 | 33.4 |
| CTX150-4A-R | 150.0 | 153.5 | 1.07 | 1.10 | 0.365 | 20.6 | 613.9 | 0.54 | 0.55 | 1.462 | 41.2 |
| CTX200-4A-R | 200.0 | 200.4 | 0.94 | 0.92 | 0.521 | 23.6 | 801.8 | 0.47 | 0.46 | 2.085 | 47.1 |
| CTX300-4A-R | 300.0 | 302.8 | 0.76 | 0.75 | 0.787 | 29.0 | 1211 | 0.38 | 0.37 | 3.148 | 57.9 |

- 1) Open Circuit Inductance Test Parameters: 100kHz, 0.250 Vrms, 0.0 Adc
Parallel: (1,4 - 3,2) Series: (1 - 3) tie (2 - 4)
- 2) Peak current for approximately 30% roll-off
- 3) RMS current, delta temp. of 40° C ambient temperature of 85° C
- 4) DCR @ 20°C

- 5) Hipot rating: winding to winding: 300Vdc min.
- 6) Turns Ratio: (1-2):(4-3) 1:1
- 7) Applied volt-time product (v-us) across the inductor. This value represents the applied V-us at 300KHz necessary to generate a core loss equal to 10% of the total losses for a 40°C temperature rise.

Octa-Pac Plus
(-1A, -2A-3A) discontinued
October 31, 2017 or until
inventory is depleted.

Mechanical Diagrams

CTX 1, 1P, 1A Series



CTX 2, 2P, 2A Series



CTX 3, 3P, 3A Series



CTX 4, 4P, 4A Series



Dimensions in Millimeters.

wwllyy = (date code) R = revision level

Packaging Information

CTX 1, 1P, 1A Series



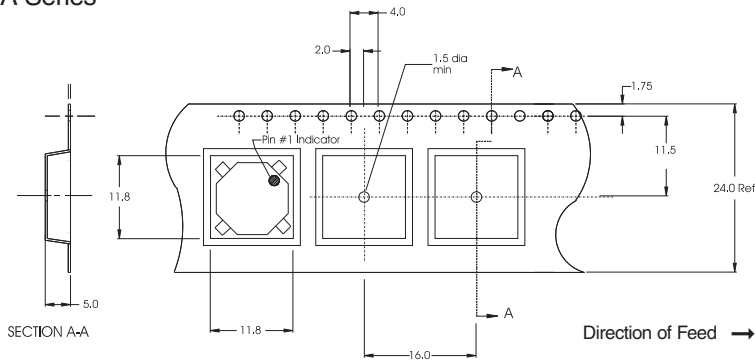
Parts packaged on 13" Diameter reel,
 1,100 parts per reel.

CTX 2, 2P, 2A Series



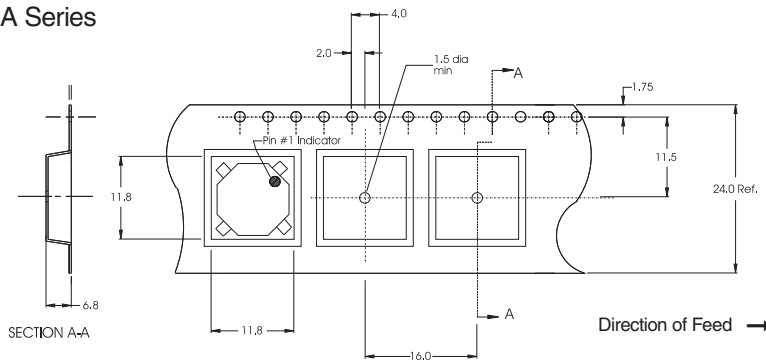
Parts packaged on 13" Diameter reel,
 800 parts per reel.

CTX 3, 3P, 3A Series



Parts packaged on 13" Diameter reel,
 800 parts per reel.

CTX 4, 4P, 4A Series



Parts packaged on 13" Diameter reel,
 600 parts per reel.

Dimensions are in millimeters.

Performance Characteristics



- **INDUCTANCE VS. CURRENT:**
Inductance will fall off as DC Current is increased. (See Inductance vs. Current graph).
- **FREQUENCY RESPONSE:**
Wide-band frequency response to 1 megaHertz.
- **CURRENT LIMITATION:**
The maximum allowable currents are defined by the internal "hot-spot" temperatures which are limited to 130°C, including ambient.

OCTA-PAC® PLUS Typical Inductance vs. DC Current



OCTA-PAC® PLUS Winding Loss Derating with Core Loss



Solder Reflow Profile



Table 1 - Standard SnPb Solder (T_c)

| Package Thickness | Volume <350 mm ³ | Volume ≥ 350 mm ³ |
|-------------------|-------------------------------|-----------------------------------|
| <2.5 mm | 235°C | 220°C |
| ≥ 2.5 mm | 220°C | 220°C |

Table 2 - Lead (Pb) Free Solder (T_c)

| Package Thickness | Volume <350 mm ³ | Volume $350 - 2000$ mm ³ | Volume >2000 mm ³ |
|-------------------|-------------------------------|-------------------------------------|--------------------------------|
| <1.6 mm | 260°C | 260°C | 260°C |
| 1.6 – 2.5mm | 260°C | 250°C | 245°C |
| >2.5 mm | 250°C | 245°C | 245°C |

Reference JDEC J-STD-020

| Profile Feature | Standard SnPb Solder | Lead (Pb) Free Solder |
|--|----------------------|-----------------------|
| Preheat and Soak | | |
| • Temperature min. (T_{smin}) | 100°C | 150°C |
| • Temperature max. (T_{smax}) | 150°C | 200°C |
| • Time (T_{smin} to T_{smax}) (t_s) | 60-120 Seconds | 60-120 Seconds |
| Average ramp up rate T_{smax} to T_p | 3°C/ Second Max. | 3°C/ Second Max. |
| Liquidous temperature (T_L) | 183°C | 217°C |
| Time at liquidous (t_L) | 60-150 Seconds | 60-150 Seconds |
| Peak package body temperature (T_p)* | Table 1 | Table 2 |
| Time (t_p)** within 5 °C of the specified classification temperature (T_c) | 20 Seconds** | 30 Seconds** |
| Average ramp-down rate (T_p to T_{smax}) | 6°C/ Second Max. | 6°C/ Second Max. |
| Time 25°C to Peak Temperature | 6 Minutes Max. | 8 Minutes Max. |

* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

** Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.

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Eaton
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Printed in USA
Publication No. DS4314
July 2017

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