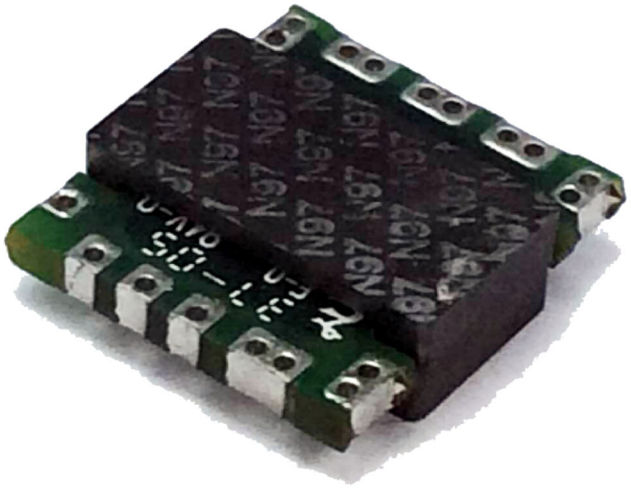
Champs 168R1 Series Active Clamp Forward Solutions LT3753



- Footprint: 16 x 16.2 x 7.6mm Height!!
- Low Profile: 5.0mm Height with Pad-to-Pad Mounting
- Proven in actual DC-DC converter using LT3753 IC.
- Optimized for Opto Isolated Active Clamp Forward & Synchronous FET Secondary Winding Drive
- Typical Efficiency 94%
- Aggressive Interleave planar construction -- lowest achievable Leakage Inductance.
- Multilayer PCB optimization for lowest AC resistance & Proximity Loss Effect.
- Wide variety of PNs, Designs and Turns Ratios in stock. If not listed, Contact Us.
- Integer Turns 1 thru 16 Available [Contact Us if Not Shown in Table].
- Surface Mount, Thru-Hole, Pad-to-Pad, Embedded Planar Windings as Options

168R1 Series LT3753 Based ACF Catalog

1. This subset of Champs' 168R1 series is earmarked to function in Opto Isolated Active Clamp Forward circuits as described by the LT3753 IC from Analog Devices.

2. Direct Drive through Secondary winding ideal for Vin range 2:1

3. Wider Vin Range with LT8311 type Secondary Controller is also facilitated with same PN.

4. Integer Turns available from 1T to 16T. Can be used as Primary or Secondary.

LT3753 Product Page & DC2324A Ref Design:

https://www.analog.com/en/design-center/evaluation-hardware-and-software/evaluation-boards-kits/dc2324a-b.html#eb-overview

https://www.analog.com/en/products/lt3753.html

1. Input Voltage Range 36-72.

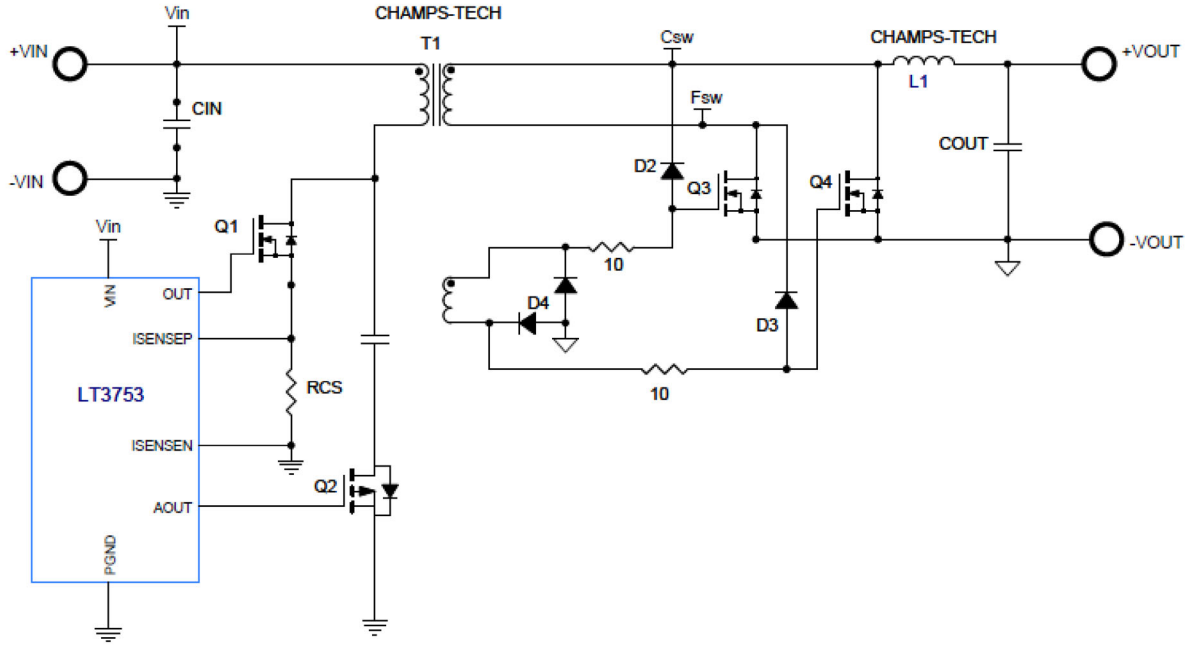
Champs PN	Vin (Min)	Vin (Max)	Vout	Iout (Adc)	Pout (Watts)	Freq (KHz)	Volt-uSec [Rated]	Output Inductor PN
168R1-1403-S02	36	72	3.3	12.0	40	200	130	PQL2050-3R3-22-TH
168R1-1204-S02	36	72	5.0	8.0	40	200	110	PQL2050-7R8-9-TH
168R1-1208-S02	36	72	12.0	3.5	42	240	110	PQI2050-30R-TH-10m
168R1-1014-S02	36	72	24.0	1.75	42	300	90	PQI2050-100-6-LTC

2. Input Voltage Range 18-36.

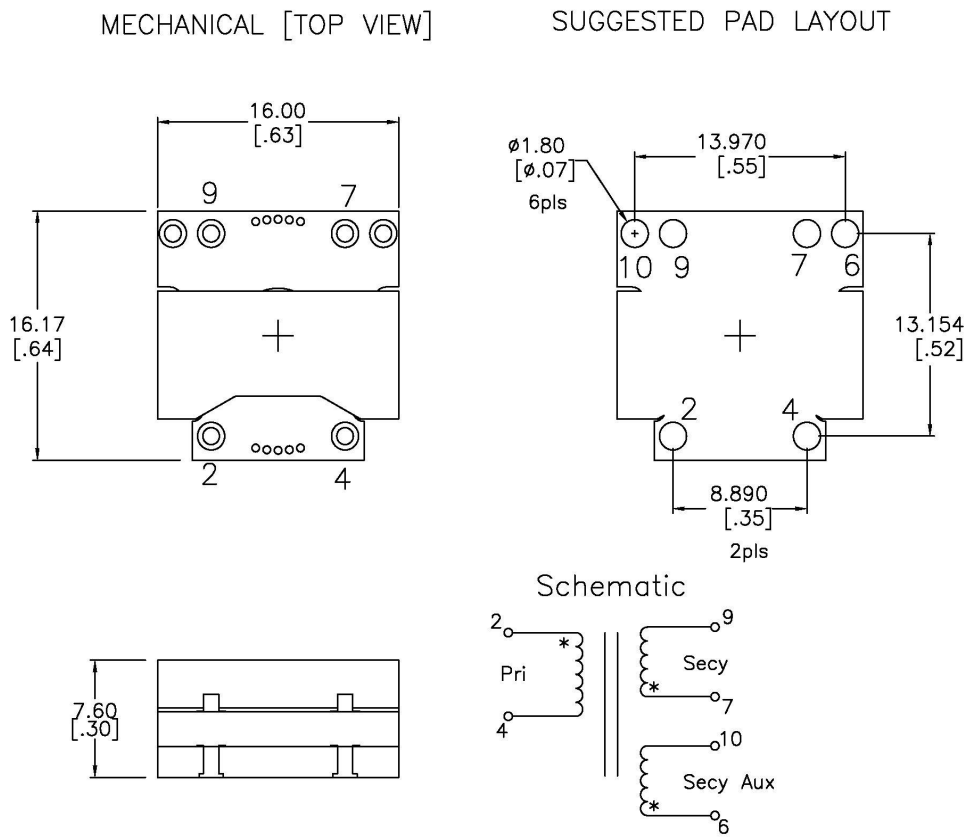
Champs PN	Vin (Min)	Vin (Max)	Vout	Iout (Adc)	Pout (Watts)	Freq (KHz)	Volt-uSec [Rated]	Output Inductor PN
168R1-0803-S02-40R	18	36	3.3	12.0	40	240	70	PQL2050-3R3-22-TH
168R1-0804-S02-40R	18	36	5.0	8.0	40	240	70	PQL2050-6R8-11-TH
168R1-0808-S02-60R	18	36	12.0	3.0	36	250	70	PQI2050-30R-TH-10m
168R1-0614-S02	18	36	24.0	1.5	36	300	55	PQI2050-100-6-LTC

3. Input Voltage Range 9-18.

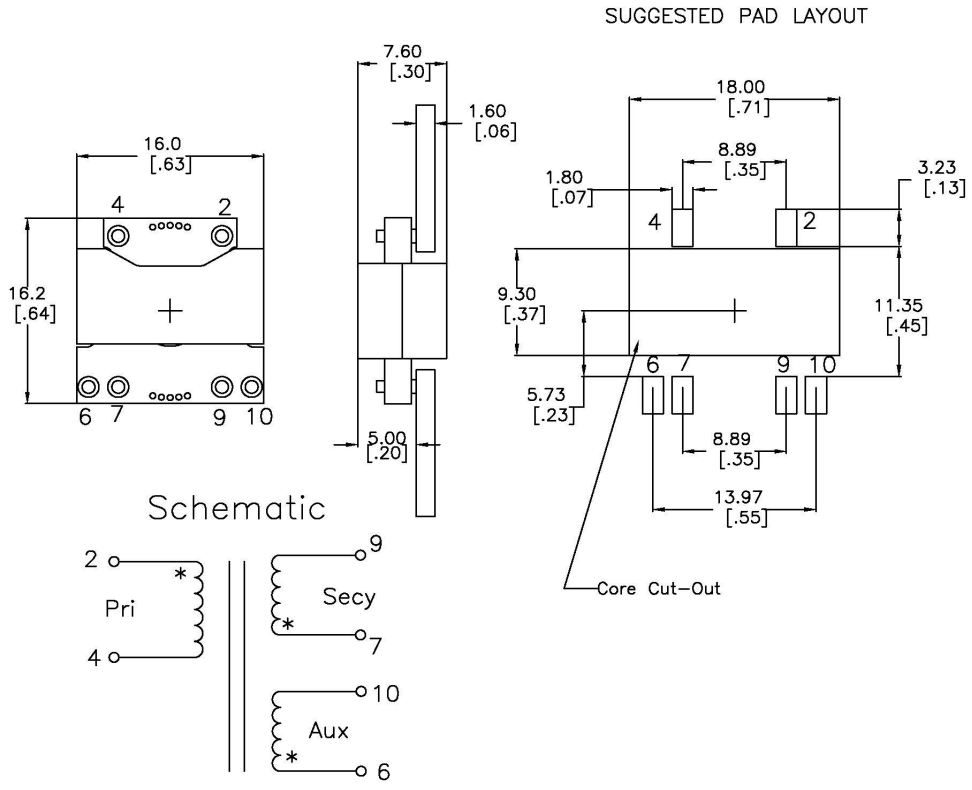
Champs PN	Vin (Min)	Vin (Max)	Vout	Iout (Adc)	Pout (Watts)	Freq (KHz)	Volt-uSec [Rated]	Output Inductor PN
168R1-0503-S02	9	18	3.3	11.0	33	240	46	PQL2050-3R3-22-TH
168R1-0404-S02	9	18	5.0	8.0	40	240	36	PQL2050-6R8-11-TH
168R1-0408-S02	9	18	12.0	3.0	36	250	36	PQI2050-30R-TH-10m
168R1-0312-S02	9	18	24.0	1.5	36	300	36	PQI2050-100-6-LTC



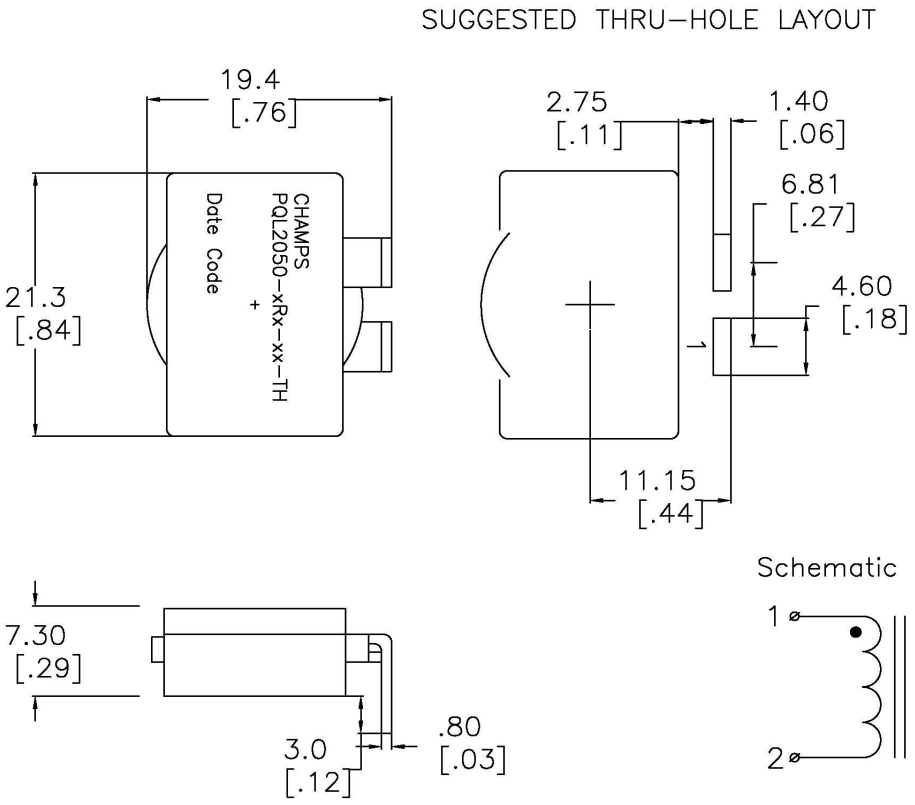
168R1 Series LT3753 Schematic -- SR Drive via Secondary Winding



Mechanical Design Drawing 168R1 Surface Mount Secondary Aux

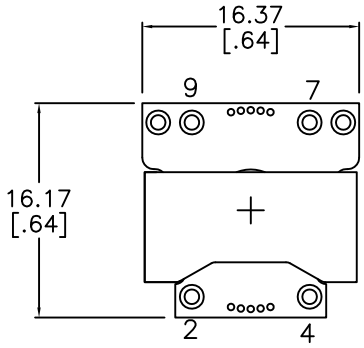


Mechanical Design Drawing 20R1 Pad-to-Pad

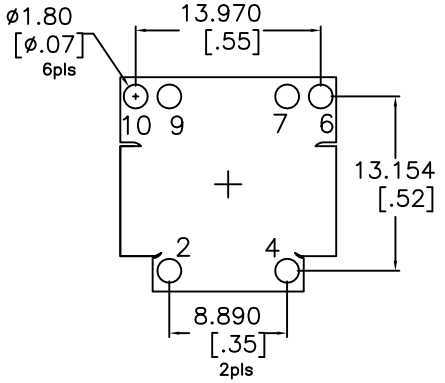


Mechanical Design Drawing PQL2050-TH Output Inductor

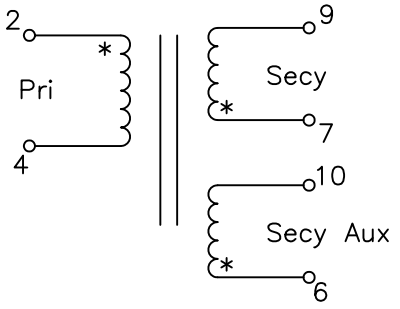
MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



Schematic



Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 0.214 ±2% || [6–10] : [2–4] = 0.143 ±2%
2. INDUCTANCE [2–4]= 480 uH Nom ±25% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 200 nH Nom. @100kHz
4. DCR [2–4]= 155 mohms Nom, [7–9]= 4.6 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

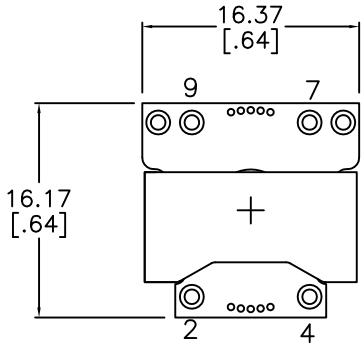
Champs–Tech PN 168R1–1403–S02

Customer Part #:

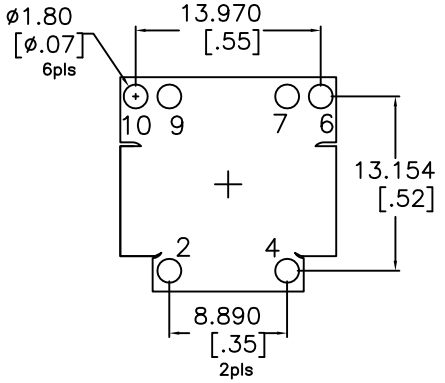
ISSUE A | REV 00

SIZE | SCALE 2:1

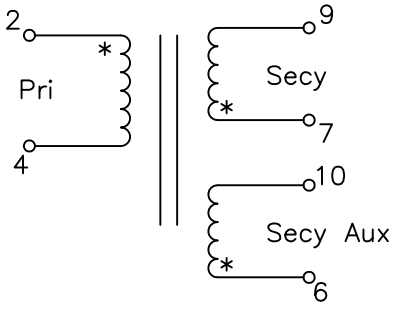
MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



Schematic



Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 0.333 ±2% || [6–10] : [2–4] = 0.167 ±2%
2. INDUCTANCE [2–4]= 348 uH Nom ±10% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 150 nH Nom. @100kHz
4. DCR [2–4]= 91 mohms Nom, [7–9]= 7.2 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

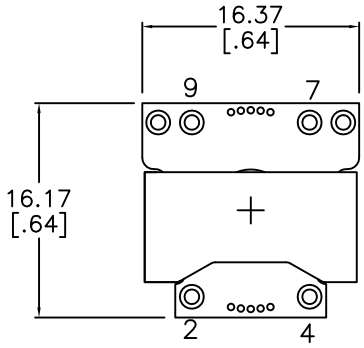
Champs–Tech PN 168R1–1204–S02

Customer Part #:

ISSUE A | REV 00

SIZE | SCALE 2:1

MECHANICAL [TOP VIEW]



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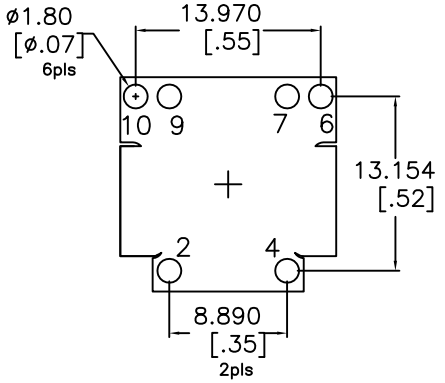
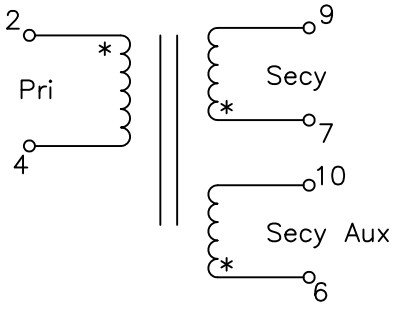


Schematic



Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 0.667 ±2% || [6–10] : [2–4] = 0.167 ±2%
2. INDUCTANCE [2–4]= 348 uH Nom ±10% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 150 nH Nom. @100kHz
4. DCR [2–4]= 91 mohms Nom, [7–9]= 33 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

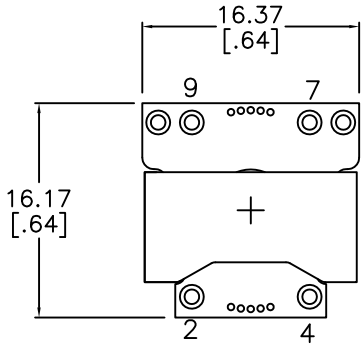
Champs–Tech PN 168R1–1208–S02

Customer Part #:

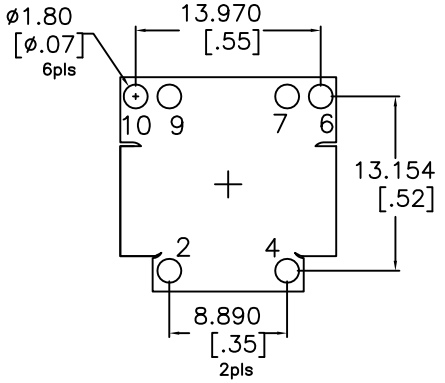
ISSUE A | REV 00

SIZE | SCALE 2:1

MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



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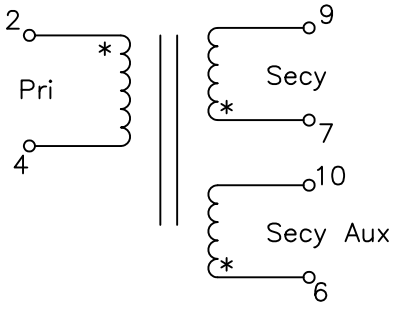


Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 1.4 ±2% || [6–10] : [2–4] = 0.20 ±2%
2. INDUCTANCE [2–4]= 245 uH Nom ±25% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 300 nH Nom. @100kHz
4. DCR [2–4]= 65 mohms Nom, [7–9]= 155 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

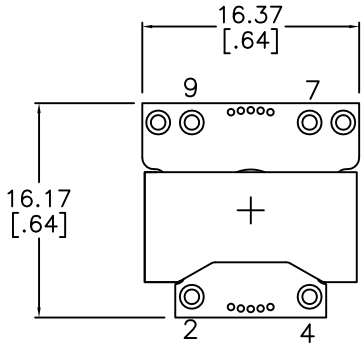
Champs–Tech PN 168R1–1014–S02

Customer Part #:

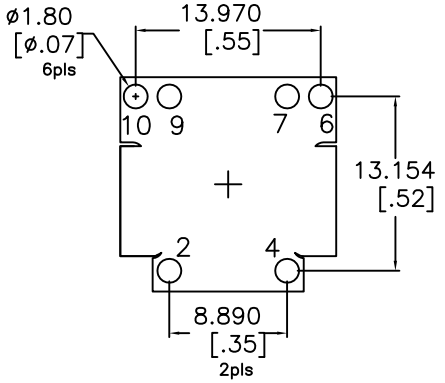
ISSUE A | REV 00

SIZE | SCALE 2:1

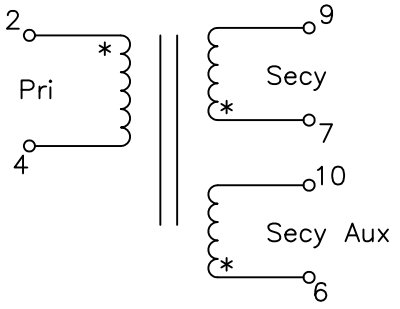
MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



Schematic



Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 0.375 ±2% || [6–10] : [2–4] = 0.25 ±2%
2. INDUCTANCE [2–4]= 40 uH Nom ±10% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 150 nH Nom. @100kHz
4. DCR [2–4]= 33 mohms Nom, [7–9]= 4.6 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

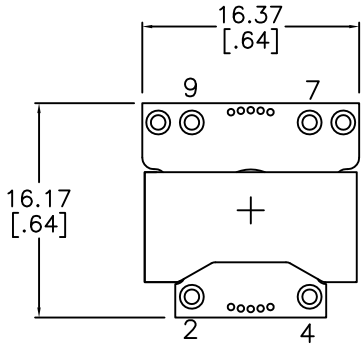
Champs-Tech PN 168R1-0803-S02-40R

Customer Part #:

ISSUE A | REV 00

SIZE | SCALE 2:1

MECHANICAL [TOP VIEW]



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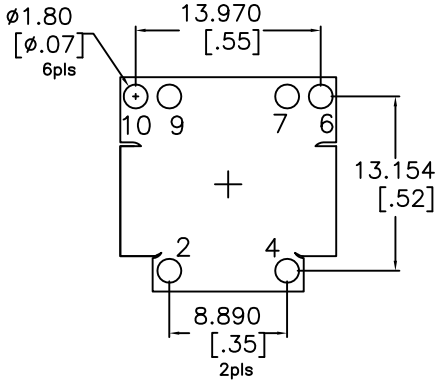

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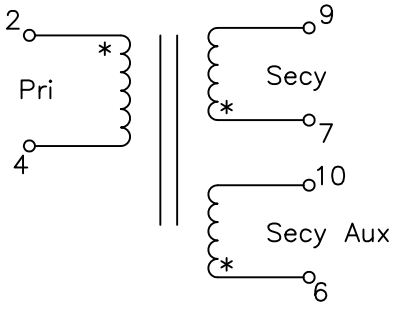


Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 0.50 ±2% || [6–10] : [2–4] = 0.25 ±2%
2. INDUCTANCE [2–4]= 40 uH Nom ±10% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 150 nH Nom. @100kHz
4. DCR [2–4]= 33 mohms Nom, [7–9]= 7.2 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

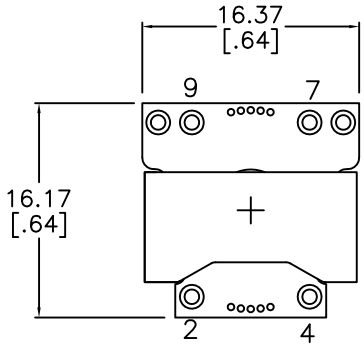
Champs–Tech PN 168R1–0804–S02–40R

Customer Part #:

ISSUE A | REV 00

SIZE | SCALE 2:1

MECHANICAL [TOP VIEW]



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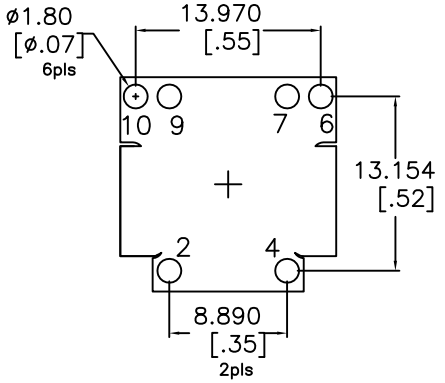

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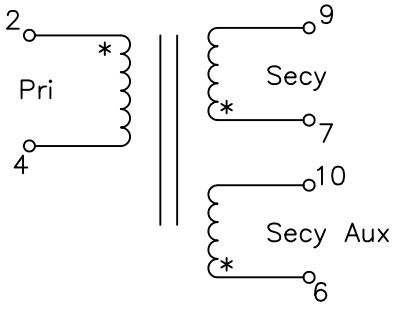


Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 1.0 ±2% || [6–10] : [2–4] = 0.25 ±2%
2. INDUCTANCE [2–4]= 60 uH Nom ±10% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 180 nH Nom. @100kHz
4. DCR [2–4]= 33 mohms Nom, [7–9]= 33 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

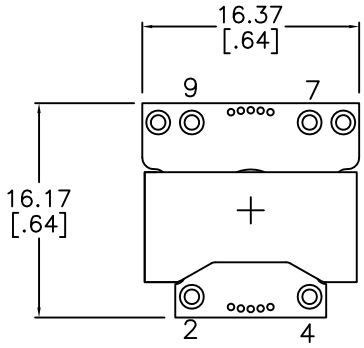
Champs-Tech PN 168R1-0808-S02-60R

Customer Part #:

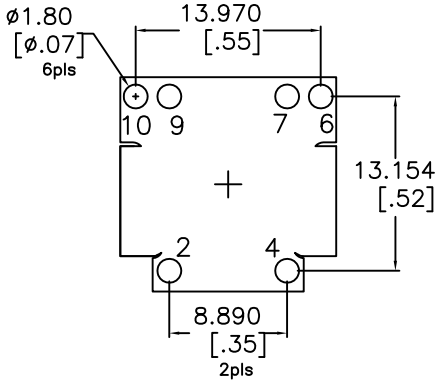
ISSUE A | REV 00

SIZE | SCALE 2:1

MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



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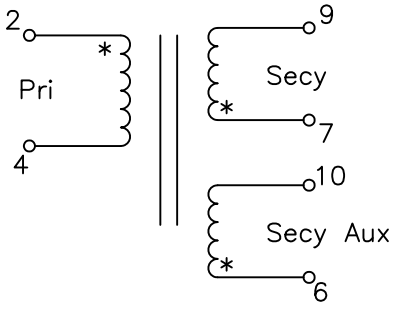


Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 2.33 ±2% || [6–10] : [2–4] = 0.333 ±2%
2. INDUCTANCE [2–4]= 88 uH Nom ±25% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 200 nH Nom. @100kHz
4. DCR [2–4]= 20 mohms Nom, [7–9]= 155 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

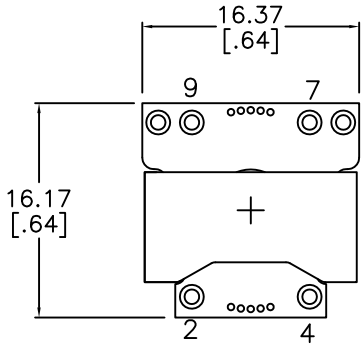
Champs–Tech PN 168R1–0614–S02

Customer Part #:

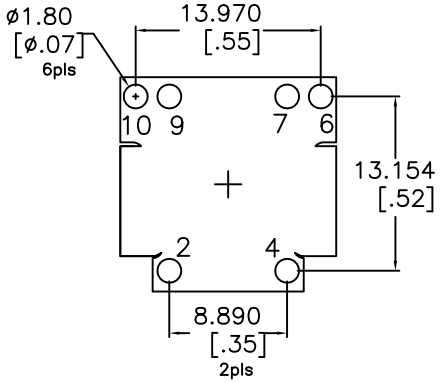
ISSUE A | REV 00

SIZE | SCALE 2:1

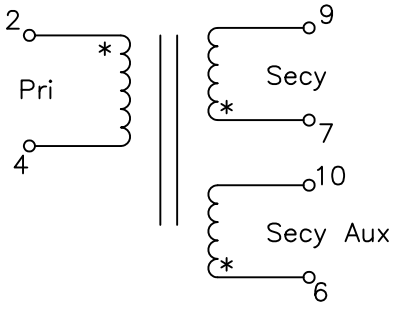
MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



Schematic



Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 0.60 ±2% || [6–10] : [2–4] = 0.40 ±2%
2. INDUCTANCE [2–4]= 61 uH Nom ±25% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 65 nH Nom. @100kHz
4. DCR [2–4]= 13.5 mohms Nom, [7–9]= 4.6 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

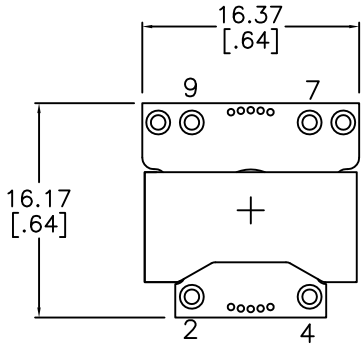
Champs–Tech PN 168R1–0503–S02

Customer Part #:

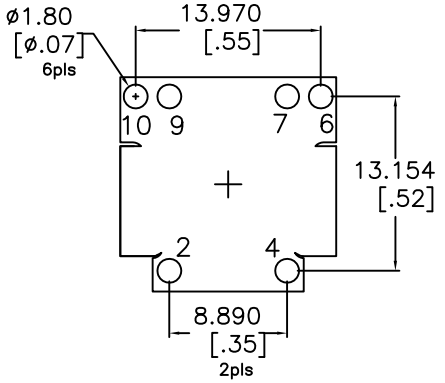
ISSUE A | REV 00

SIZE | SCALE 2:1

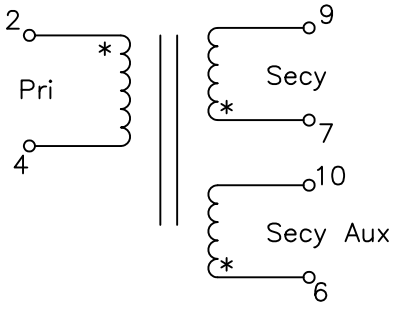
MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



Schematic



Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 1.0 ±2% || [6–10] : [2–4] = 0.50 ±2%
2. INDUCTANCE [2–4]= 39 uH Nom ±25% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 50 nH Nom. @100kHz
4. DCR [2–4]= 7.2 mohms Nom, [7–9]= 7.2 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

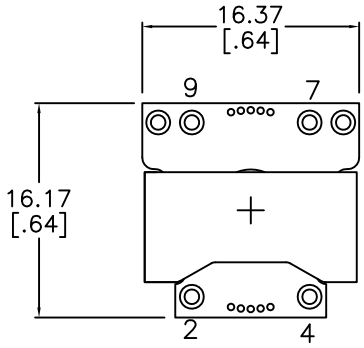
Champs–Tech PN 168R1–0404–S02

Customer Part #:

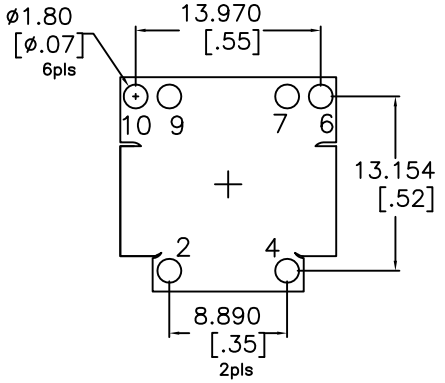
ISSUE A | REV 00

SIZE | SCALE 2:1

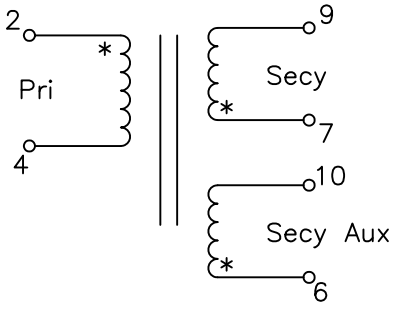
MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



Schematic



Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 2:1 ±2% || [6–10] : [2–4] = 0.50 ±2%
2. INDUCTANCE [2–4]= 39 uH Nom ±25% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 80 nH Nom. @100kHz
4. DCR [2–4]= 7.2 mohms Nom, [7–9]= 33 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

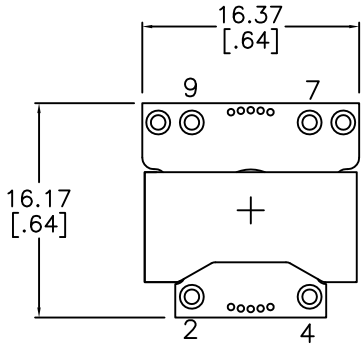
Champs–Tech PN 168R1–0408–S02

Customer Part #:

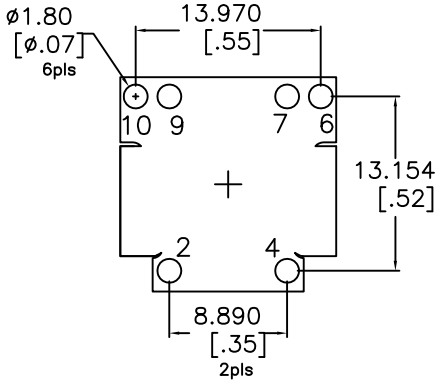
ISSUE A | REV 00

SIZE | SCALE 2:1

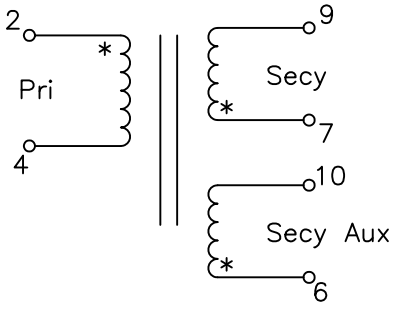
MECHANICAL [TOP VIEW]



SUGGESTED PAD LAYOUT



Schematic



Electrical Information:

1. TURNS RATIO [7–9] : [2–4]= 4:1 ±2% || [6–10] : [2–4] = 0.667 ±2%
2. INDUCTANCE [2–4]= 22 uH Nom ±25% @100kHz/1.0V
3. LEAKAGE INDUCTANCE [2–4] : SHORT 7–9 = 120 nH Nom. @100kHz
4. DCR [2–4]= 4.6 mohms Nom, [7–9]= 91 mohms Nom., [6–10] = 300 mohms Max
5. DIELECTRIC ISOLATION: [2,4] : [7,9] > 1500 VDC
   DIELECTRIC ISOLATION: [2,4] : CORE > 1500 VDC
   DIELECTRIC ISOLATION: [7,9] : CORE > 500 Vdc
6. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
7. Temperature Rating: –55C to +130C

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.50
.X ± 0.78
ANGLE ±

CHAMPS TECHNOLOGIES

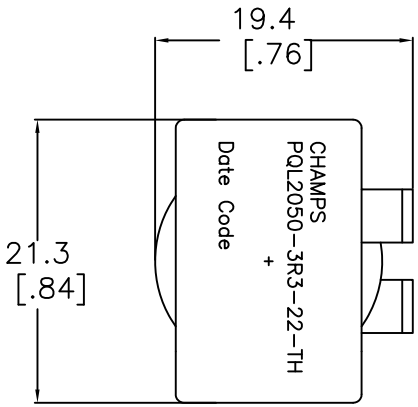
	SIGN	DATE
DRAWN	HE	3/3/15
CHKD		
APPR		

Champs–Tech PN 168R1–0312–S02

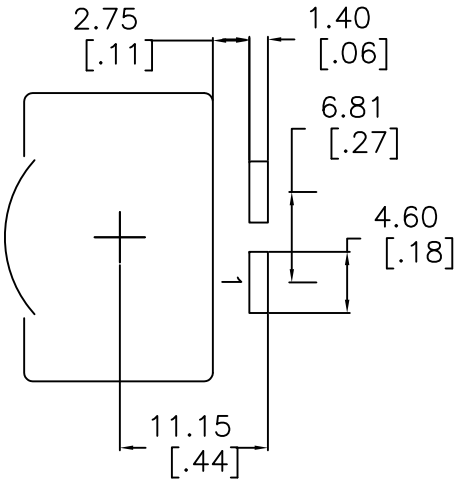
Customer Part #:

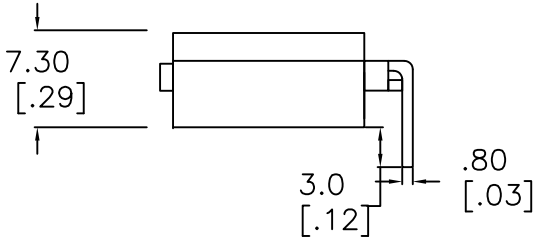
ISSUE A | REV 00

SIZE | SCALE 2:1

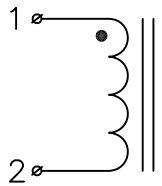


SUGGESTED THRU-HOLE LAYOUT





Schematic



NOTES:

1. INDUCTANCE [1-2] = 3.3 uH ±10% @100kHz 1.0V @ 0Adc
2. INDUCTANCE [1-2] = Within Range ±10% Measured Value at 0Adc @Irated 22Adc
3. DCR [1-2] = 2.2 mohms Nom.
4. DIELECTRIC ISOLATION > 500 VDC [1-2] : CORE
5. SATURATION CURRENT @25C = 26Adc | @100C = 24Adc
6. HEATING CURRENT FOR 45C RISE AT 25C AMBIENT = 32 Adc
7. Operating Ambient Temperature: -55C to +130C
8. RoHS Level 6/6, REACH & CMRT Compliant || 96/4 Sn/Ag Pin Composition

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

CHAMPS TECHNOLOGIES

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED
.XXX ± 0.254
.XX ± 0.38
.X ± 0.78
ANGLE ±

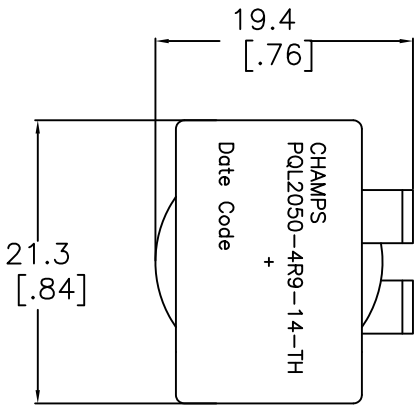
	SIGN	DATE
DRAWN	HE	01.15.18
CHKD		
APPR		

Champs-Tech PN PQL2050-3R3-22-TH

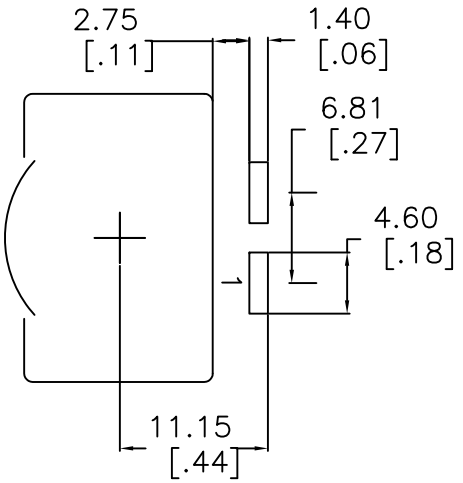
Customer Part #:

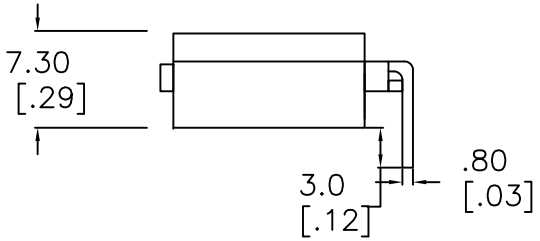
ISSUE A | REV 00

SIZE | SCALE 2:1

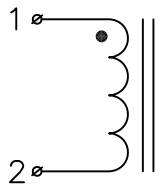


SUGGESTED THRU-HOLE LAYOUT





Schematic



NOTES:

1. INDUCTANCE [1-2] = 4.9 uH ±10% @100kHz 1.0V @ 0Adc
2. INDUCTANCE [1-2] = Within Range ±10% Measured Value at 0Adc @Irated 14Adc
3. DCR [1-2] = 2.2 mohms Nom.
4. DIELECTRIC ISOLATION > 500 VDC [1-2] : CORE
5. SATURATION CURRENT @25C = 16Adc | @100C = 15Adc
6. HEATING CURRENT FOR 45C RISE AT 25C AMBIENT = 32 Adc
7. Operating Ambient Temperature: -55C to +130C
8. RoHS Level 6/6, REACH & CMRT Compliant || 96/4 Sn/Ag Pin Composition

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

CHAMPS TECHNOLOGIES

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± 0.254
.XX ± 0.38
.X ± 0.78
ANGLE ±

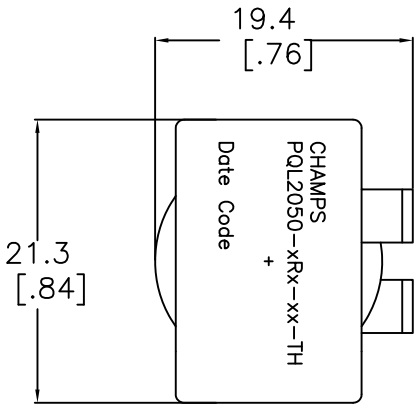
	SIGN	DATE
DRAWN	HE	01.15.18
CHKD		
APPR		

Champs-Tech PN PQL2050-4R9-14-TH

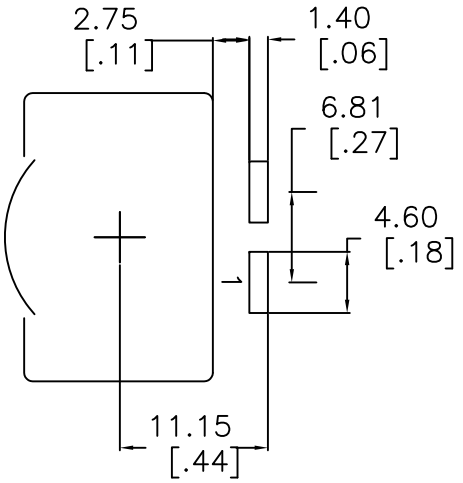
Customer Part #:

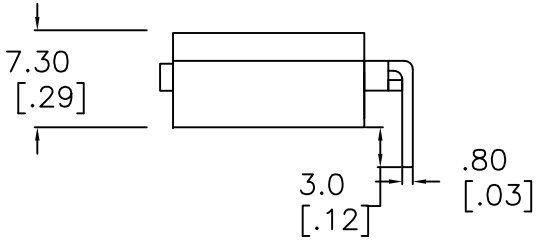
ISSUE A | REV 00

SIZE | SCALE 2:1

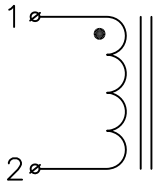


SUGGESTED THRU-HOLE LAYOUT





Schematic



NOTES:

1. INDUCTANCE [1-2] = 6.8 uH ±10% @100kHz 1.0V @ 0Adc
2. INDUCTANCE [1-2] = Within Range ±10% Measured Value at 0Adc @Irated 11Adc
3. DCR [1-2] = 2.2 mohms Nom.
4. DIELECTRIC ISOLATION > 500 VDC [1-2] : CORE
5. SATURATION CURRENT @25C = 12Adc | @100C = 11Adc
6. HEATING CURRENT FOR 40C RISE AT 25C AMBIENT = 22 Adc
7. Operating Ambient Temperature: -55C to +130C
8. RoHS Level 6/6, REACH & CMRT Compliant || 96/4 Sn/Ag Pin Composition

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

CHAMPS TECHNOLOGIES

TOLERANCES/UNITS in MM
UNLESS OTHERWISE INDICATED
.XXX ± 0.254
.XX ± 0.38
.X ± 0.78
ANGLE ±

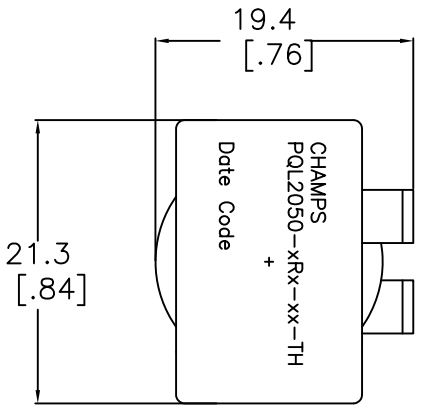
	SIGN	DATE
DRAWN	HE	01.15.18
CHKD		
APPR		

Champs-Tech PN PQL2050-6R8-11-TH

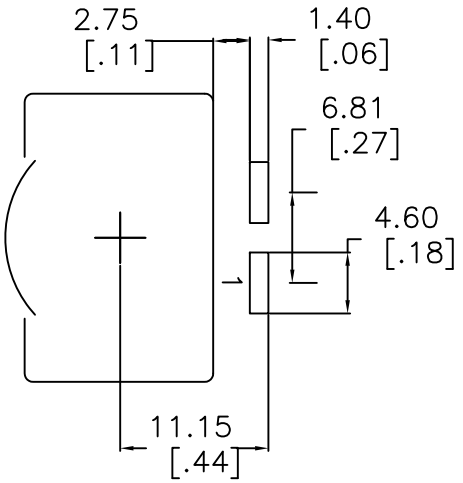
Customer Part #:

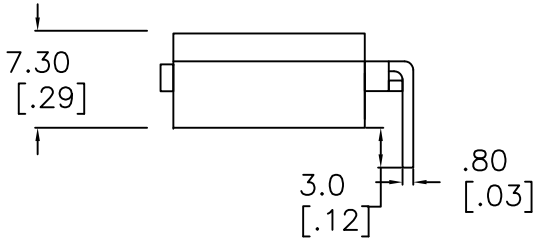
ISSUE A | REV 00

SIZE | SCALE 2:1



SUGGESTED THRU-HOLE LAYOUT





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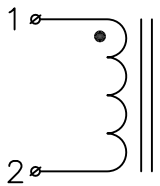


NOTES:
1. INDUCTANCE [1-2] = 7.8 uH ±10% @100kHz 1.0V @ 0Adc
2. INDUCTANCE [1-2] = Within Range ±10% Measured Value at 0Adc @Irated 8.8Adc
3. DCR [1-2] = 2.2 mohms Nom.
4. DIELECTRIC ISOLATION > 500 VDC [1-2] : CORE
5. SATURATION CURRENT @25C = 10Adc | @100C = 9.5Adc
6. HEATING CURRENT FOR 40C RISE AT 25C AMBIENT = 22 Adc
7. Operating Ambient Temperature: -55C to +130C
8. RoHS Level 6/6, REACH & CMRT Compliant || 96/4 Sn/Ag Pin Composition

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

CHAMPS TECHNOLOGIES

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED
.XXX ± 0.254
.XX ± 0.38
.X ± 0.78
ANGLE ±

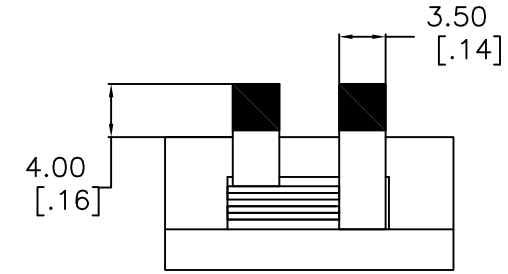
	SIGN	DATE
DRAWN	HE	01.15.18
CHKD		
APPR		

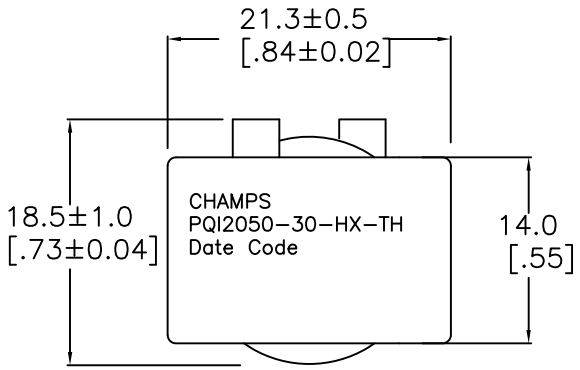
Champs-Tech PN PQL2050-7R8-9-TH

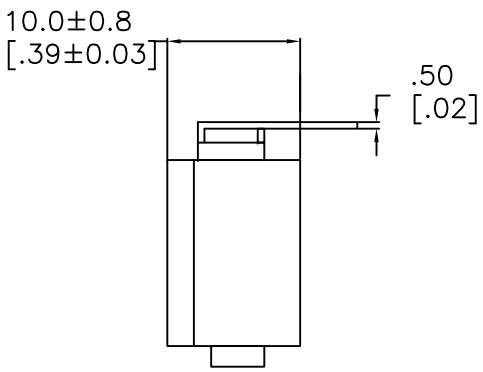
Customer Part #:

ISSUE A | REV 00

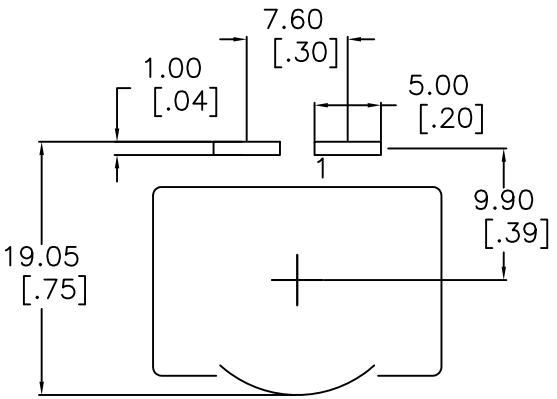
SIZE | SCALE 2:1



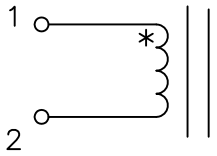




SUGGESTED THRU-HOLE LAYOUT



Schematic



ELECTRICAL INFO:

INDUCTANCE [1-2] = 30uH Nom, 27 Min. @100kHz/1.0V 4.0Adc

INDUCTANCE [1-2] = 25 uH Min. @100kHz/1.0V 4.5Adc

DCR [1-2] = 3.6 mohms Nom || 4.5Max

DIELECTRIC ISOLATION > 500 VDC [1-2] : CORE

SATURATION CURRENT @25C = 4.5Adc | @100C = 4Adc

HEATING CURRENT FOR 40C RISE AT 25C AMBIENT = 22 Adc

Operating Temp Range -55C to +130C [Inclusive of Temp Rise]

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

CHAMPS TECHNOLOGIES

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED

.XXX ± .25
.XX ± .51
.X ± 1.0
ANGLE ±

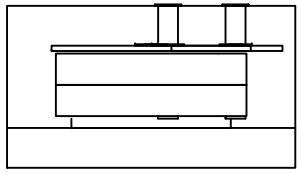
	SIGN	DATE
DRAWN	DK	11.19.18
CHKD		
APPR	HE	

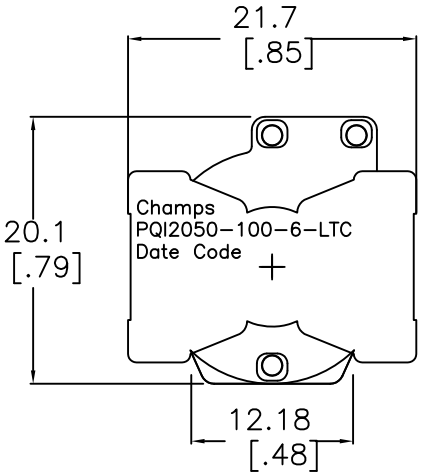
Champs-Tech PN PQI2050-30-HX-TH-10MM

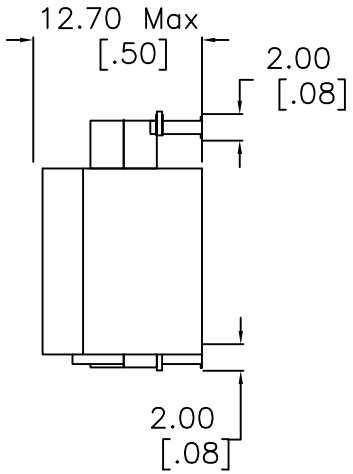
Customer Part #: INDUCTOR

ISSUE A | REV 00

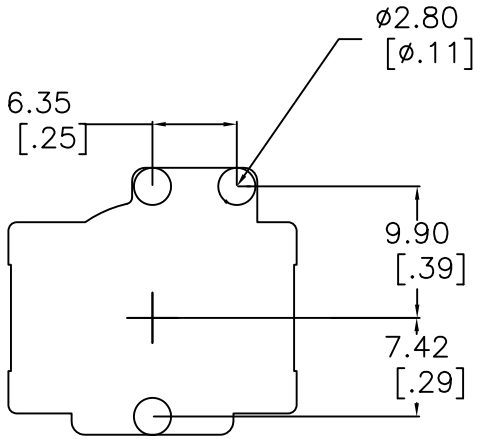
SIZE | SCALE 2:1

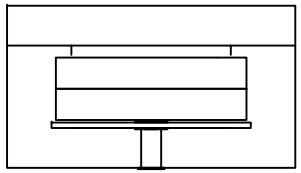




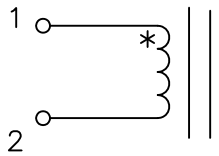


SUGGESTED
PAD
LAYOUT





Schematic



INDUCTANCE [1-2] = 100.0uH Nom, 90 Min. @10kHz/0.1V 6.0 Adc
INDUCTANCE [1-2] = 85 uH Min @10kHz/0.1V 6.8 Adc
DCR [1-2] = 76 mohms Nom, 86 Max
DIELECTRIC ISOLATION > 500 VDC [1-2] : CORE
SATURATION CURRENT @25C = 6.8 Adc | @85C = 6.0 Adc
HEATING CURRENT FOR 40C RISE AT 25C AMBIENT = 5.5Adc
RoHS Level 6/6 and REACH Compliant
OPERATING TEMP RANGE -55C to +130C [Inclusive of Temp Rise]

No.	DESCRIPTION REVISIONS	DATE	APPR

THIRD ANGLE PROJECTION

CHAMPS TECHNOLOGIES

TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED
.XXX ± 0.254
.XX ± 0.38
.X ± 1.5
ANGLE ±

	SIGN	DATE
DRAWN	DK	8/20/08
CHKD		
APPR	HE	8/27/13

Champs-Tech PN PQI2050-100-6-LTC
Customer Part #: INDUCTOR
ISSUE A
REV 00
SIZE
SCALE 2:1