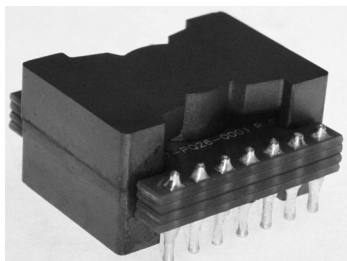


Low Profile Wide Vin & Offline Active Clamp Forward : 19-420Vin to 12Vout 120W



- Footprint: 27 wide x 31.5 mm length x 11 mm Height -- Low Profile
- Meets UL and IEC 60950-1 Clearance/Creepage Class II, Reinforced Insulation, Peak Working Voltage 1400Vpk
- Meets IEC 61180-1 Peak Impulse Withstand Voltage 6KV.
- Derived from customer verification in Analog / Linear Ref Design using LT3752 & LT8311 ICs.
- Optimized for Active Clamp Forward Topology & Wide Input Range.
- Typical Efficiency 93-94%. Typical Temperature Rise 45C above ambient
- Available with Thermal Pad and Heat Sink affording lower Temperature Rise.
- Lowest achievable volume for AC offline applications including lowest achievable Leakage Inductance.
- Multilayer PCB optimization for lowest AC resistance & Proximity Loss Effect. Repeatability by design.
- Wide variety of PNs, Designs and Turns Ratios in stock. If not listed, Contact Us.
- Surface Mount, Thru-Hole, Pad-to-Pad, Embedded Planar Windings as Options.

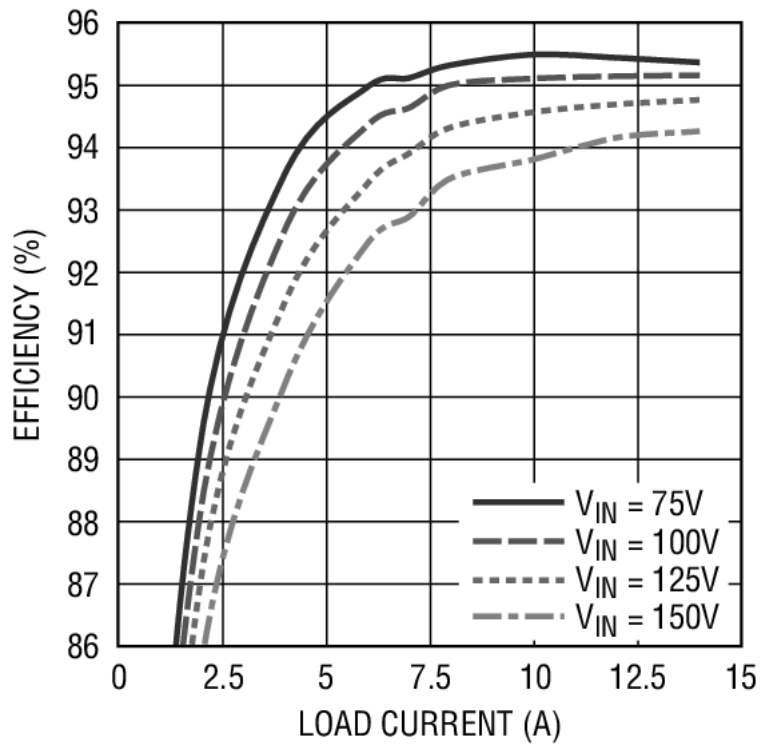
Champs-Tech P26R26LF-AC_Offline Catalog

Table I: P26R26LF-AC_Offline Series 38-430 Vin -- Rated to 120W Output.

Champs PN	Vin (Min)	Vin (Max)	Vout	Iout (A _{dc})	Pout (Watts)	Freq (KHz)	Output Inductor PN
P26R26LF-AC-0303	19	72	12	10.0	120	136	PQI2050-21-11p5-LTC2
P26R26LF-AC-0603	38	180	12	10.0	120	136	PQI2050-21-11p5-LTC2
P26R26LF-AC-3203-2M2	270	420	12	10.0	120	130	PQI2050-21-11p5-LTC2

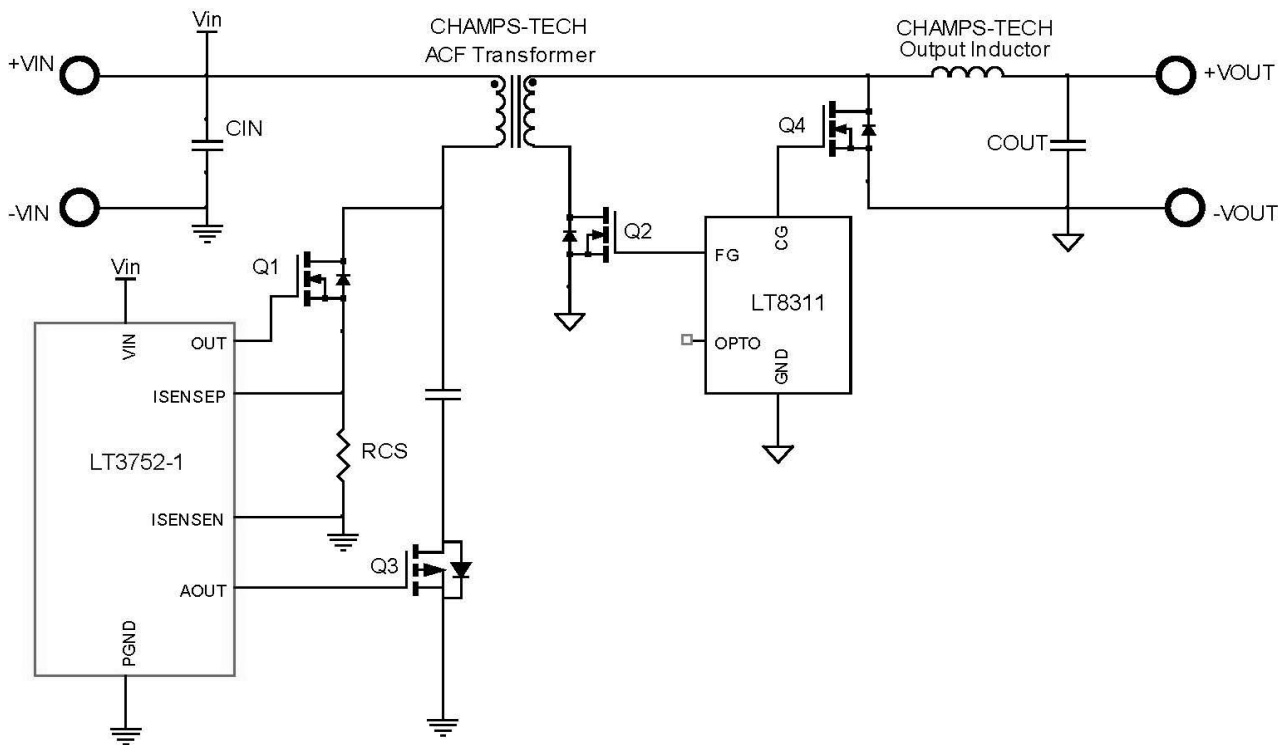
Baseline Reference Design:

<https://www.analog.com/en/design-center/reference-designs/circuit-collections/lt3752-75v-to-150v-24v-14a-340w-no-opto-active-clamp-isolated-forward-converter.html#cc-overview>



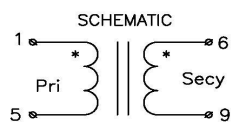
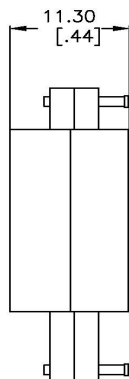
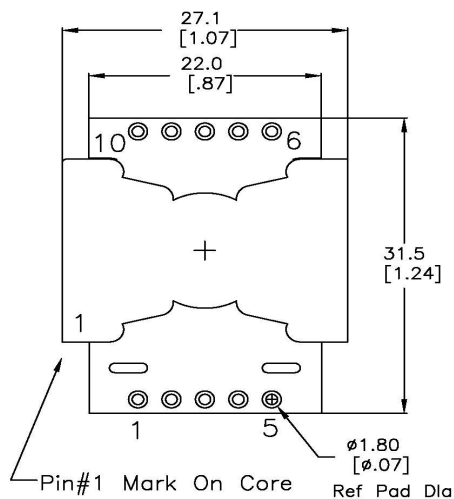
3752 TA08b

Typical Efficiency Curve

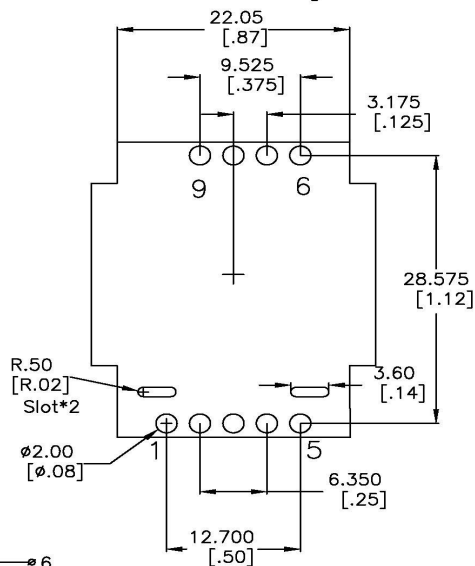


Basic Active Clamp Forward Schematic

MECHANICAL DIMENSIONS [TOP VIEW]

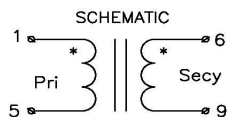
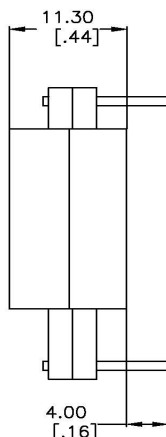
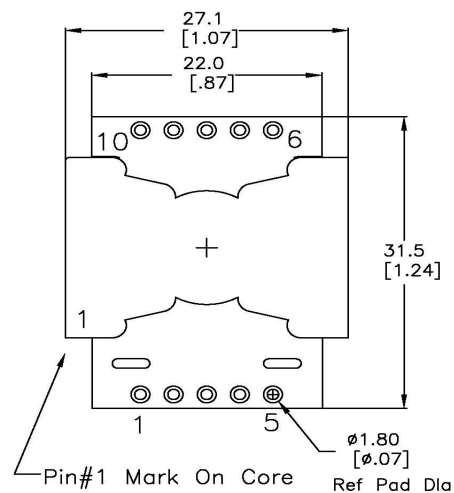


SUGGESTED PAD LAYOUT [PCB TOP VIEW]

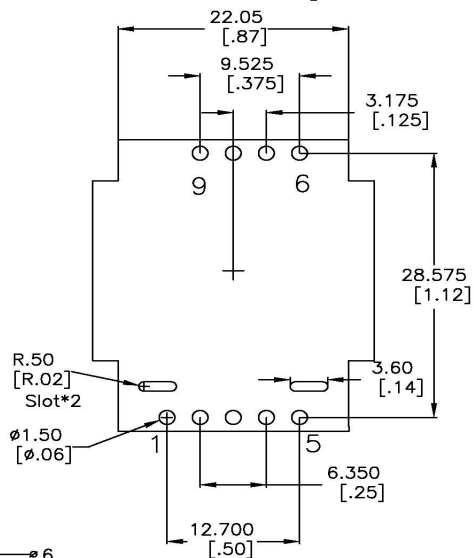


Mechanical Dimensions Drawing P26R26LF-AC Surface Mount

MECHANICAL DIMENSIONS [TOP VIEW]

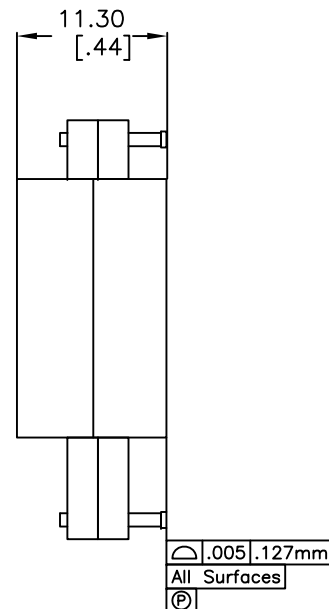
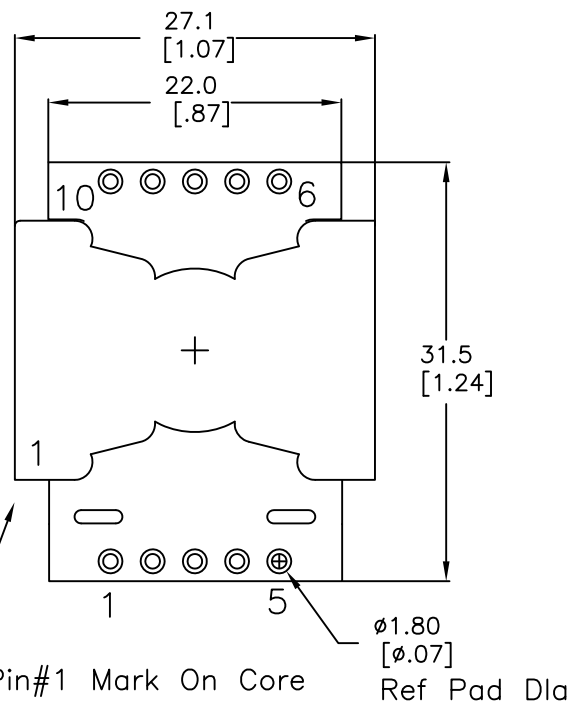


SUGGESTED PAD LAYOUT [PCB TOP VIEW]

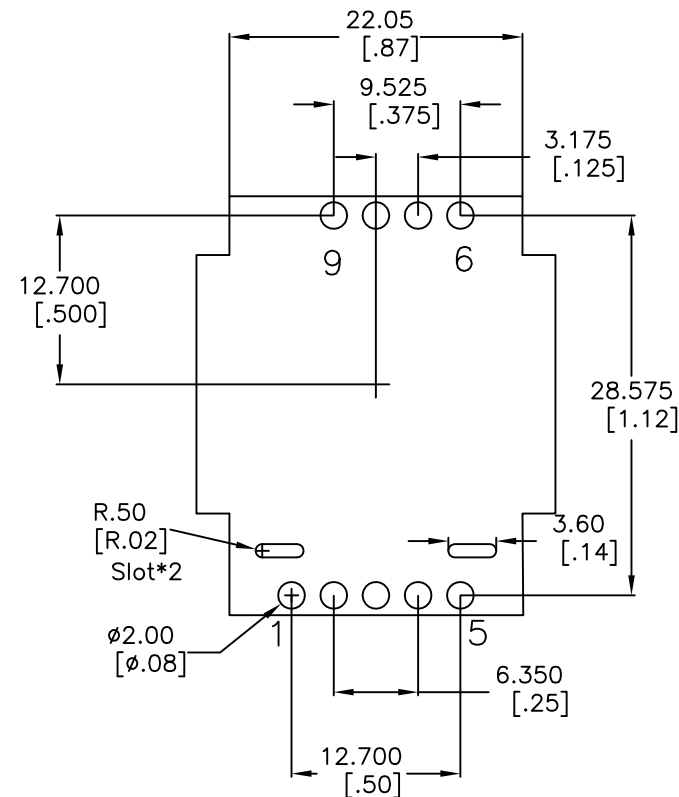


Mechanical Dimensions Drawing P26R26LF-AC Thru-Hole

MECHANICAL DIMENSIONS [TOP VIEW]



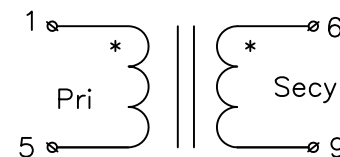
SUGGESTED PAD LAYOUT [PCB TOP VIEW]



Electrical Information:

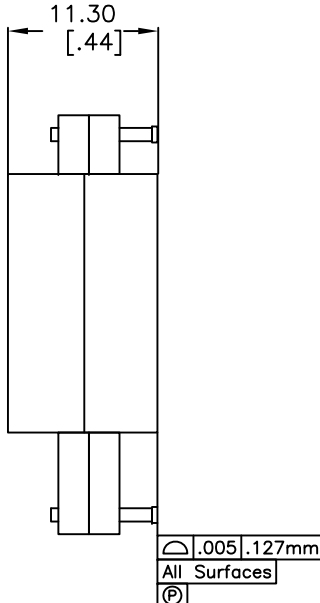
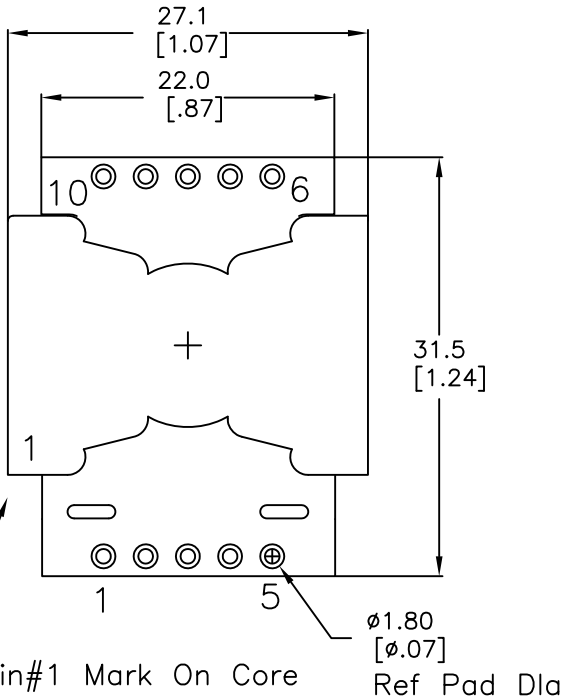
1. INDUCTANCE [1-5] = 50 uH Nom $\pm 25\%$ @100kHz/1.0V
2. TURNS RATIO [6-9] : [1-5] = 1.00 $\pm 2\%$
3. LEAKAGE INDUCTANCE [1-5] : SHORT 6-9 = 35 nH Nom @100kHz
4. DCR [1-5] = 5.4 mohms Nom, DCR [6-9] = 2.54 mohms Nom,
5. CAPACITANCE 1,5 to 6,9 = 160 pF Max @100kHz
6. DIELECTRIC ISOLATION : >3250 VAC/60Sec [1,5] : [6,9] : CORE
DIELECTRIC ISOLATION : 6KVDC [1,5],[6,9] TO GROUND
DIELECTRIC ISOLATION 500 VDC CORE : [6,9]
7. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
8. Operating Temp Range -55C to +130C [Inclusive of Application Temp Rise]
9. Storage Temp Range -55C to +155C [Materials rated to +170C]
10. Meets IEC-60950-1 Clearance, Creepage, Class II, Pk Working Voltage 1400V
11. Meets IEC 61180-1 Peak Impulse Withstand Voltage 6KV Pk

SCHEMATIC

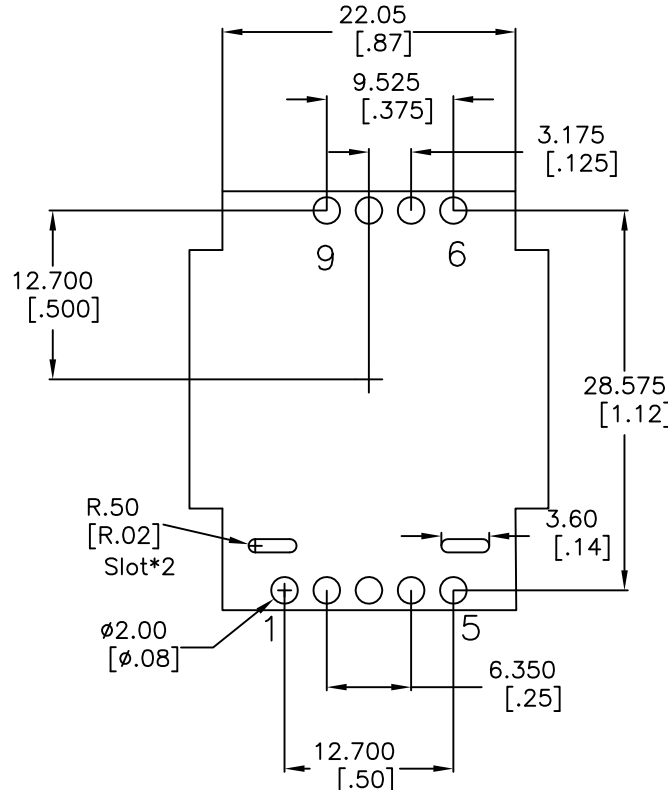


No.	DESCRIPTION	REVISIONS	DATE	APPR
THIRD ANGLE PROJECTION				
CHAMPS TECHNOLOGIES				
TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED		SIGN	DATE	Champs-Tech PN P26R26LF-AC-0303
.XXX $\pm$ 0.254	DRAWN		05.23.19	Customer
.XX $\pm$ 0.38	CHKD			Part #:
.X $\pm$ 0.78	APPR			SIZE A4 SCALE 2:1
ANGLE $\pm$				ISSUE A REV 00

MECHANICAL DIMENSIONS [TOP VIEW]



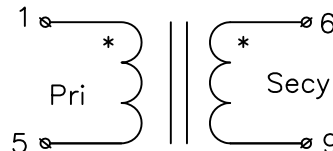
SUGGESTED PAD LAYOUT [PCB TOP VIEW]



Electrical Information:

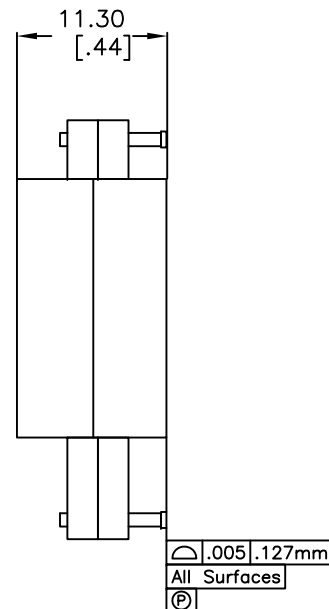
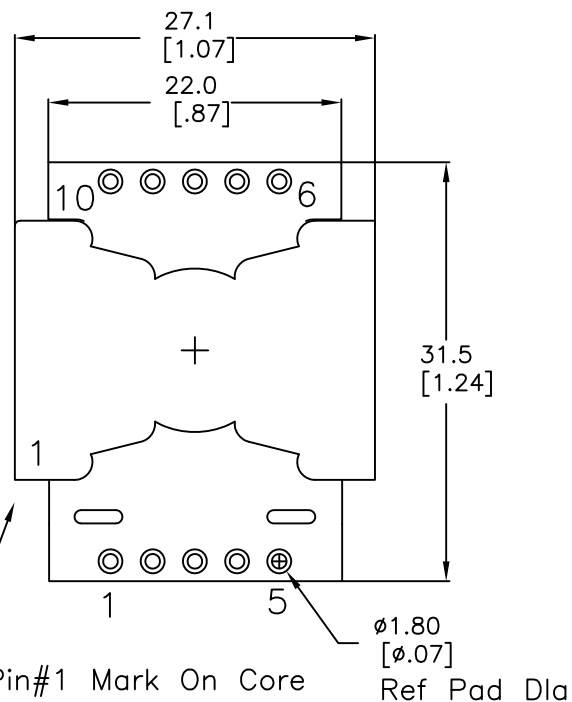
1. INDUCTANCE [1-5] = 200 μ H Nom $\pm 25\%$ @100kHz/1.0V
2. TURNS RATIO [6-9] : [1-5] = 0.50 $\pm 2\%$
3. LEAKAGE INDUCTANCE [1-5] : SHORT 6-9 = 300 nH Nom @100kHz
4. DCR [1-5] = 22 mohms Nom, DCR [6-9] = 2.54 mohms Nom,
5. CAPACITANCE 1,5 to 6,9 = 160 pF Max @100kHz
6. DIELECTRIC ISOLATION : >3250 VAC/60Sec [1,5] : [6,9] : CORE
DIELECTRIC ISOLATION : 6KVDC [1,5],[6,9] TO GROUND
DIELECTRIC ISOLATION 500 VDC CORE : [6,9]
7. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
8. Operating Temp Range -55C to +130C [Inclusive of Application Temp Rise]
9. Storage Temp Range -55C to +155C [Materials rated to +170C]
10. Meets IEC-60950-1 Clearance, Creepage, Class II, Pk Working Voltage 1400V
11. Meets IEC 61180-1 Peak Impulse Withstand Voltage 6KV Pk

SCHEMATIC

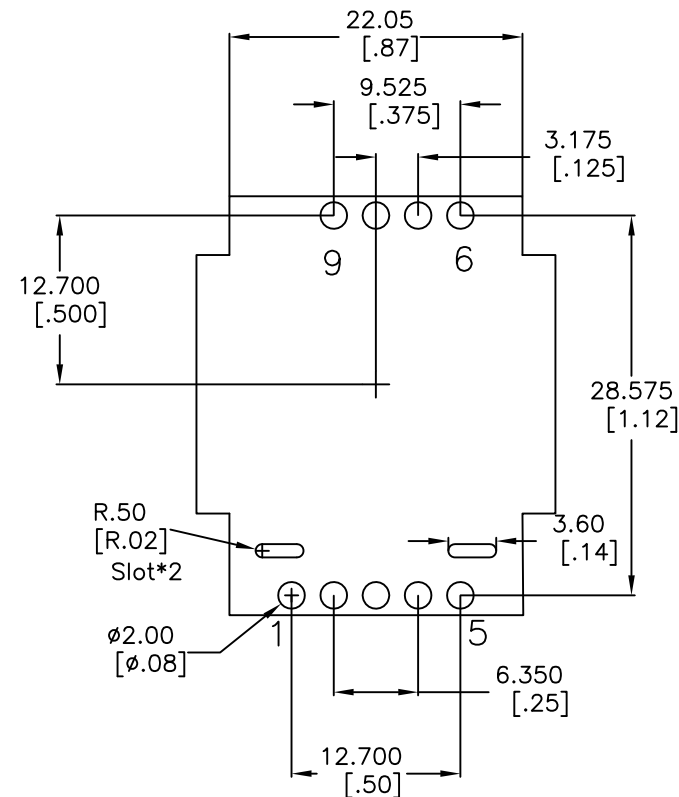


No.	DESCRIPTION					REVISIONS	DATE	APP	
THIRD ANGLE PROJECTION 	CHAMPS TECHNOLOGIES								
TOLERANCES/UNITS IN MM UNLESS OTHERWISE INDICATED	SIGN	DATE	Champs-Tech PN P26R26LF-AC-0603						
DRAWN		05.23.19	Customer					ISSUE	RE
.XXX ± 0.254 .XX ± 0.38 .X ± 0.78 ANGLE ±	CHKD		Part #:					A	O
	APPR		SIZE A4		SCALE 2:1				

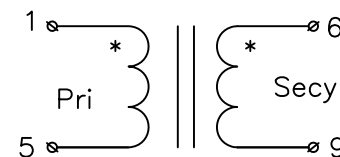
MECHANICAL DIMENSIONS [TOP VIEW]



SUGGESTED PAD LAYOUT [PCB TOP VIEW]



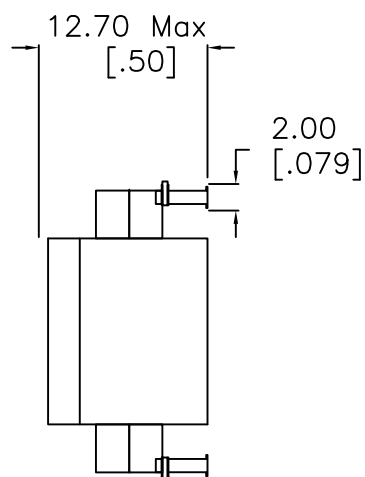
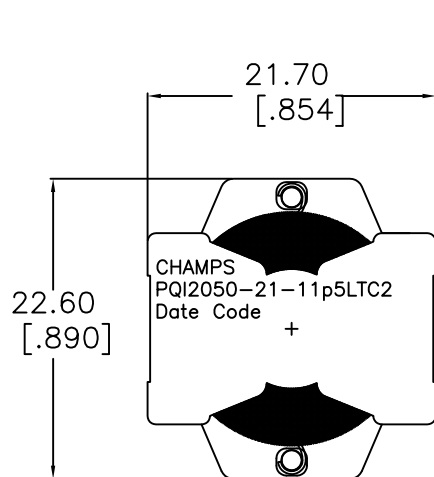
SCHEMATIC



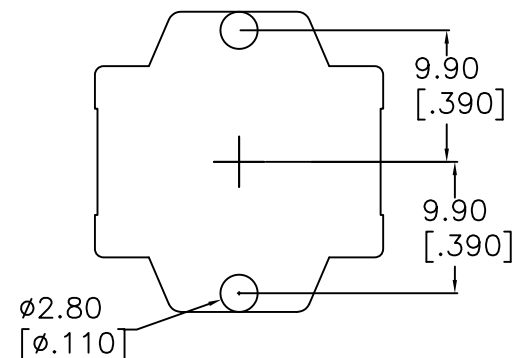
Electrical Information:

1. INDUCTANCE [1-5] = 2200 uH Nom $\pm 10\%$ @100kHz/1.0V
2. TURNS RATIO [6-9] : [1-5] = 0.0937 $\pm 2\%$
3. LEAKAGE INDUCTANCE [1-5] : SHORT 6-9 = 5.5 uH Nom @100kHz
4. DCR [1-5] = 760 mohms Nom, DCR [6-9] = 2.54 mohms Nom,
5. CAPACITANCE 1,5 to 6,9 = 160 pF Max @100kHz
6. DIELECTRIC ISOLATION : >3250 VAC/60Sec [1,5] : [6,9] : CORE
DIELECTRIC ISOLATION : 6KVDC [1,5],[6,9] TO GROUND
DIELECTRIC ISOLATION 500 VDC CORE : [6,9]
7. RoHS Level 6/6 Compliant | Pins 96/4 Sn/Ag Plating
8. Operating Temp Range -55C to +130C [Inclusive of Application Temp Rise]
9. Storage Temp Range -55C to +155C [Materials rated to +170C]
10. Meets IEC-60950-1 Clearance, Creepage, Class II, Pk Working Voltage 1400V
11. Meets IEC 61180-1 Peak Impulse Withstand Voltage 6KV Pk

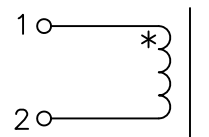
No.	DESCRIPTION	REVISIONS	DATE	APPR
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CHAMPS TECHNOLOGIES				
TOLERANCES/UNITS in MM UNLESS OTHERWISE INDICATED		SIGN	DATE	Champs-Tech PN P26R26LF-AC-3203-2M2
.XXX $\pm$ 0.254	DRAWN		05.23.19	Customer
.XX $\pm$ 0.38	CHKD			Part #:
.X $\pm$ 0.78	APPR			SIZE A4 SCALE 2:1
ANGLE $\pm$				ISSUE A REV 00



SUGGESTED PAD LAYOUT



Schematic



INDUCTANCE [1-2] = 21.0 μ H Nom, 18.9 Min. @10kHz/0.1V 11.5 Adc
 INDUCTANCE [1-2] = 17.9 μ H Min @10kHz/0.1V 13 Adc
 DCR [1-2] = 8.4 mohms Nom, 10.3 Max
 DIELECTRIC ISOLATION > 500 VDC [1-2] : CORE
 SATURATION CURRENT @25C = 13 Adc | @85C = 12 Adc
 HEATING CURRENT FOR 40C RISE AT 25C AMBIENT = 15 Adc
 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	SIGN	DATE	Champs-Tech PN PQI2050-21-11p5LTC2	
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	CHKD		Part #:	ISSUE A
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