



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



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LOCAD

DIST00

REVISONS

F	LTR	DESCRIPTION	DATE	DWN	APVD
	A1	REVISED PER ECO-11-004587	11MAR11	RK	HMR

Component name	Base material	Finish
Case	LCP, black, UL94 V-0	
Terminal, wire lug (gold)	Brass	Gold over nickel
Terminal, PC, RA & VRA (gold)	Brass	Gold over nickel in contact area, Tin over nickel in solder area
Terminal, PC & wire lug (silver)	Silver clad copper	Silver over nickel
Contact (gold)	Copper alloy or brass	Gold over nickel
Contact (silver)	Silver clad copper or copper	Silver over nickel
Frame	Steel	Tin over copper
Spring	Music wire	
Plunger Button	Nylon 6/6, black, red or blue. UL94 HB (extended) or UL94V-2 (flush)	
Support bracket (RA*ES versions only)	Brass	Tin over copper
Support bracket, VRA	Steel	Tin over copper
Bushing	Brass	Nickel over copper
ES Housing (ES versions)	Nylon 6/6, natural, UL94 V-2	
ES boot (ES versions)	Vinyl plastisol, black	

Specifications	
Rating	Gold: .4VA max. @ 20VDC or peak AC resistive Silver: 1 A @ 125VAC or 28 VDC resistive
Initial termination resistance	20 milliohms max.
Insulation resistance	1,000 Megohms min @ 500 VDC
Dielectric strength	1,000 volts RMS at sea lever
Timing	Break before make
Plunger travel	.030
Actuation force	50 to 400 grams
Life expectancy	.4 VA, 1 pole: 100,000 .4 VA, 2 poles: 80,000 1 A, 1 pole: 60,000 1 A, 2 poles: 50,000
Operating temperature	-30° C to +65° C
Storage temperature	-30° C to +65° C
Terminal seal	Single pole: epoxy Double pole: epoxy optional

Model	Actuator	Poles	Rating	Function	Plating	Terminations	Process Seal	Button color	04
TPB	Blank = extended	1	1 = Gold .4VA	C = SPST momentary	G = Gold	Blank = Wire lug	ES = process sealed 2	0 = Black	
	F = flush	2 (1+1)	3 = Silver 1 Amp 1	F = SPDT momentary	Blank = Silver 1	PC = printed circuit		2 = Red	
		2		M = DPST momentary		RA = right angle 2		6 = Blue	
				R = DPDT momentary		VRA = vertical right angle 3			

NOTES:
1. Silver only available in wire lug and pc terminations
2. RAES available with B and C bushing only
3. VRA only available in single pole

P/N	Alco P/N	Flush Actuator?	Poles	Throws	Plating	Terminals	Process sealed?	Button Color	Function		Connected Terminals		Dim A
									ALCO	ALCO	ALCO	ALCO	
1825097-1	TPB11CGPC004	no	1	1	Gold	PC	No	Black	Off	Mom	Off	1-3	.133
1825097-2	TPB11CGPC204	no	1	1	Gold	PC	No	Red	Off	Mom	Off	1-3	.133
1825097-3	TPB11CGPCES004	no	1	1	Gold	PC	yes	Black	Off	Mom	Off	1-3	.133
1825097-6	TPB11CGRA004	no	1	1	Gold	Right Angle	No	Black	Off	Mom	Off	1-3	.133
1825097-4	TPB11CGRA204	no	1	1	Gold	Right Angle	No	Red	Off	Mom	Off	1-3	.133
1825097-5	TPB11CGRAES004	no	1	1	Gold	Right Angle	yes	Black	Off	Mom	Off	1-3	.133
1825097-7	TPB11CGRAES204	no	1	1	Gold	Right Angle	yes	Red	Off	Mom	Off	1-3	.133
1825097-8	TPB11CGVRA004	no	1	1	Gold	VRA	No	Black	Off	Mom	Off	1-3	.117
1825097-9	TPB11FGPC004	no	1	2	Gold	PC	No	Black	On	Mom	1-2	2-3	.133
1-1825097-0	TPB11FGPCES204	no	1	2	Gold	PC	yes	Red	On	Mom	1-2	2-3	.133
1-1825097-1	TPB11FGRA004	no	1	2	Gold	Right Angle	No	Black	On	Mom	1-2	2-3	.133
1-1825097-2	TPB11FGRA204	no	1	2	Gold	Right Angle	No	Red	On	Mom	1-2	2-3	.133
1-1825097-3	TPB11FGRA604	no	1	2	Gold	Right Angle	No	Blue	On	Mom	1-2	2-3	.133
1-1825097-4	TPB11FGRAES004	no	1	2	Gold	Right Angle	yes	Black	On	Mom	1-2	2-3	.133
1-1825097-5	TPB11FGRAES604	no	1	2	Gold	Right Angle	yes	Blue	On	Mom	1-2	2-3	.133
1-1825097-6	TPB11FGVRA004	no	1	2	Gold	VRA	No	Black	On	Mom	1-2	2-3	.117
1-1825097-7	TPB21MGPC004	no	2	1	Gold	PC	No	Black	Off	Mom	Off	1-3, 4-6	.133
1-1825097-8	TPB21MGPC204	no	2	1	Gold	PC	No	Red	Off	Mom	Off	1-3, 4-6	.133
2-1825097-8	TPB21MGRA004	no	2	1	Gold	Right Angle	No	Black	Off	Mom	Off	1-3, 4-6	.133
1-1825097-9	TPB21RGRA004	no	2	2	Gold	Right Angle	No	Black	On	Mom	1-2, 4-5	2-3, 5-6	.133
2-1825097-0	TPBF11CGPCES004	yes	1	1	Gold	PC	yes	Black	Off	Mom	Off	1-3	.000
2-1825097-1	TPBF11CGRA004	yes	1	1	Gold	Right Angle	No	Black	Off	Mom	Off	1-3	.000
2-1825097-2	TPBF11CGRAES004	yes	1	1	Gold	Right Angle	yes	Black	Off	Mom	Off	1-3	.000
2-1825097-3	TPBF11FGPCES004	yes	1	2	Gold	PC	yes	Black	On	Mom	1-2	2-3	.000
2-1825097-4	TPBF11FGRA004	yes	1	2	Gold	Right Angle	No	Black	On	Mom	1-2	2-3	.000
2-1825097-5	TPBF11FGRA204	yes	1	2	Gold	Right Angle	No	Red	On	Mom	1-2	2-3	.000
2-1825097-6	TPBF11FGRAES004	yes	1	2	Gold	Right Angle	yes	Black	On	Mom	1-2	2-3	.000

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DIMENSIONS: INCHES

0 PLC
1 PLC
2 PLC
3 PLC
4 PLC

± -
± -
± -
± .010
± -

ANGLES

FINISH

DWN
M.BINNER
20JUL05

CHK
M.ZITTO
21JUL05

APVD
M.ZITTO
21JUL05

NAME

PRODUCT SPEC

APPLICATION SPEC

WEIGHT

SIZE
A1

CAGE CODE
00779

DRAWING NO
1825097

RESTRICTED TO

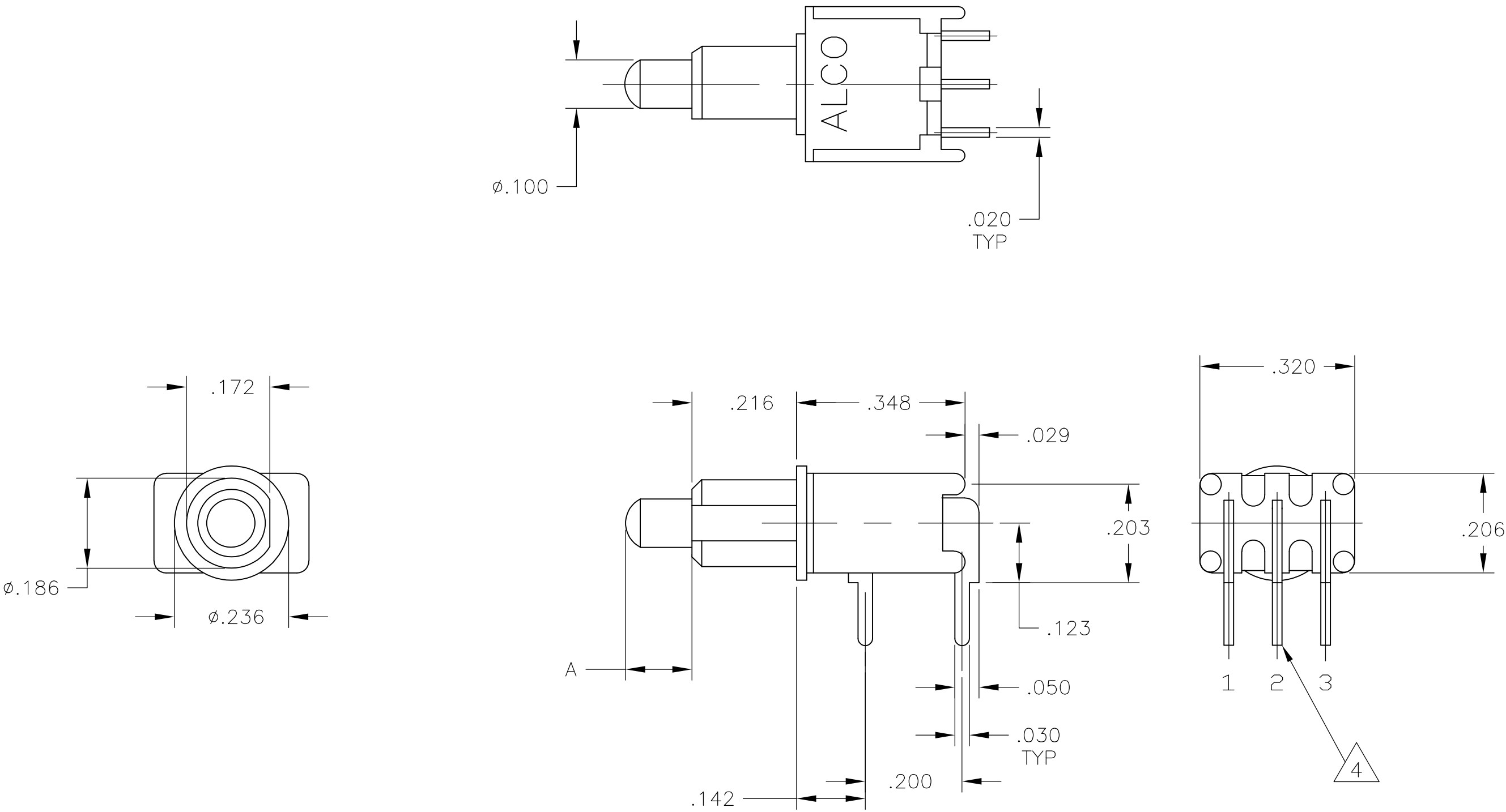
CUSTOMER DRAWING

SCALE
4:1

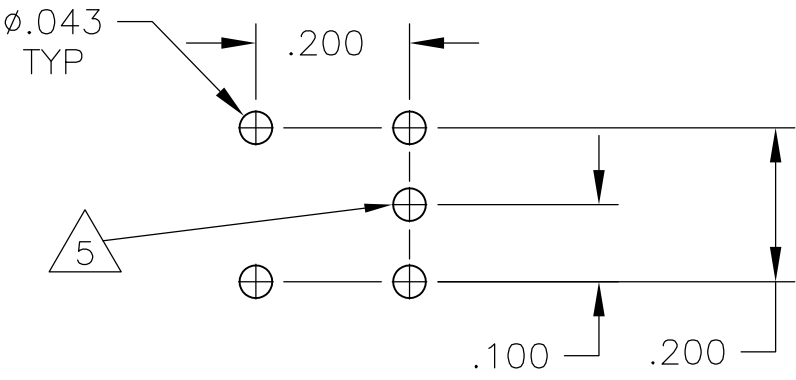
SHEET
1 OF 6

REV
A1

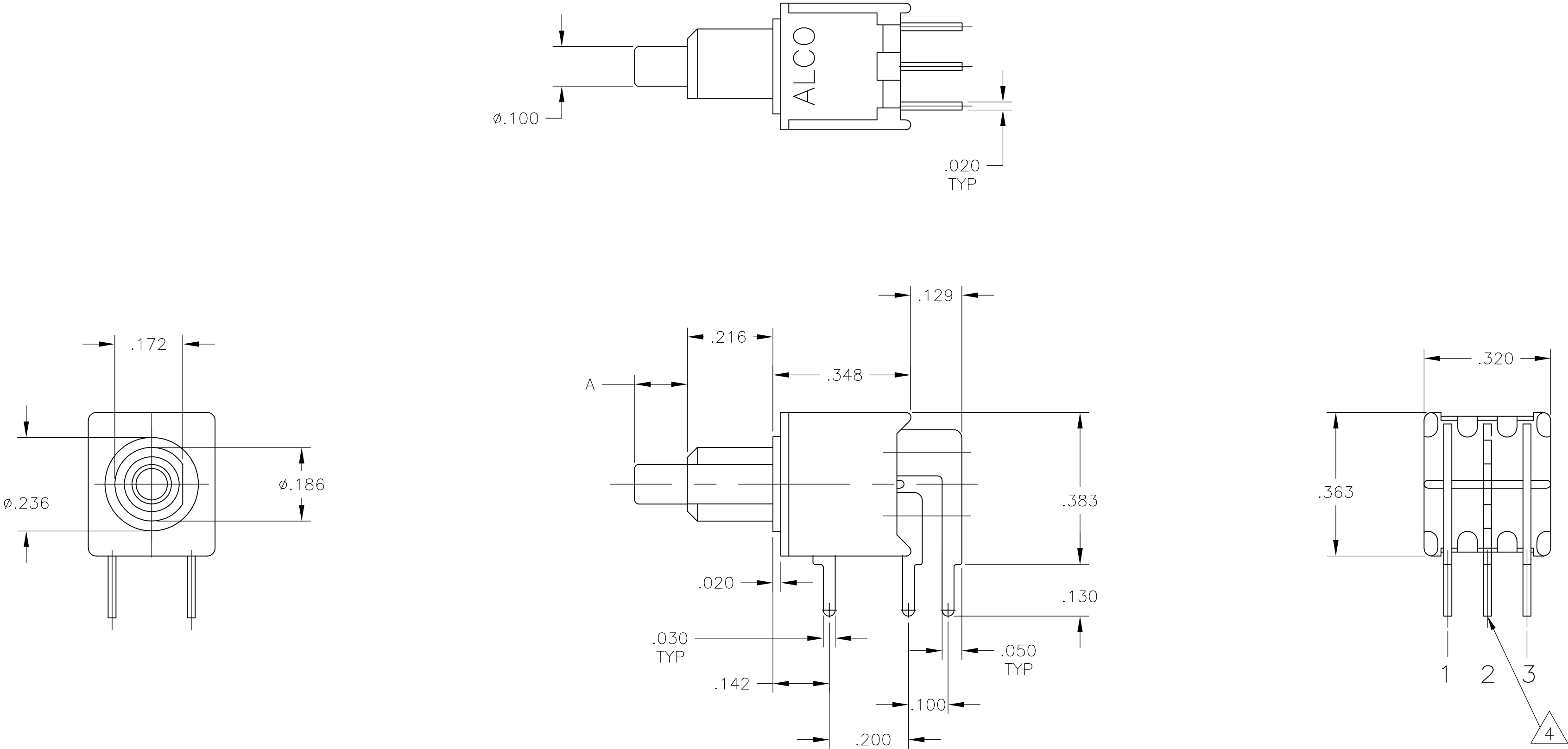
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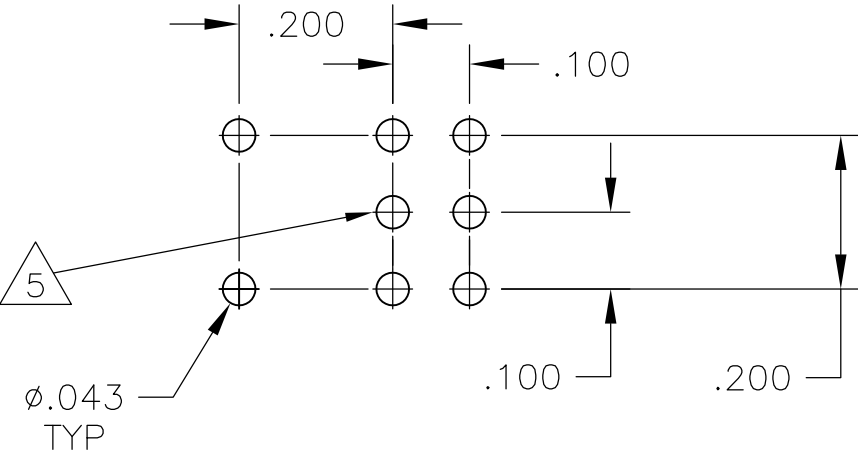
TPB11CGRA & TPB11FGRA
TPBF11CGRA & TPBF11FGRA



PCB HOLE LAYOUT

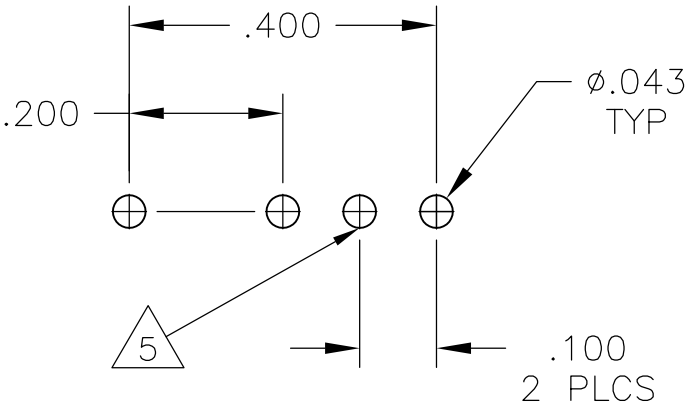
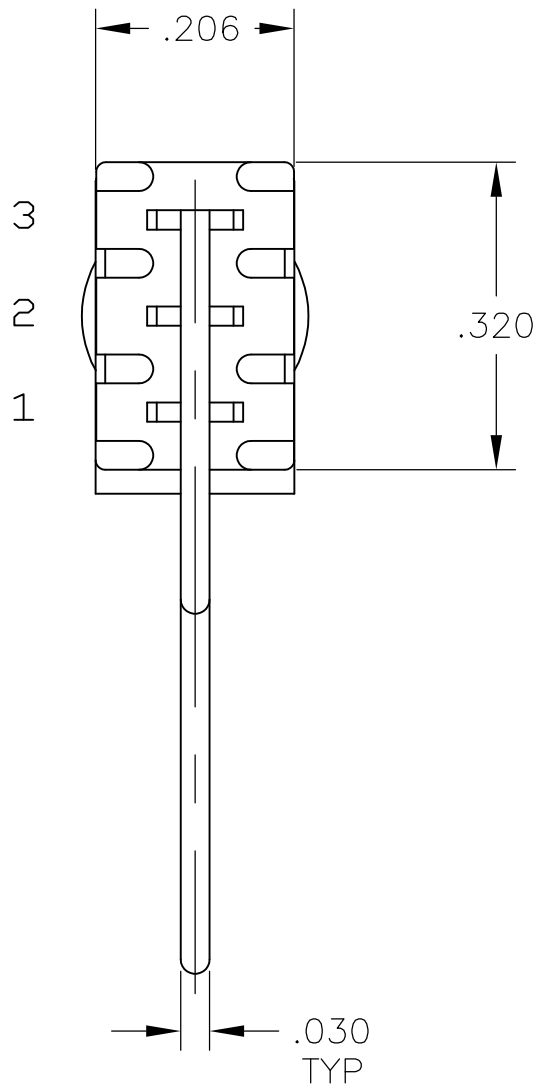
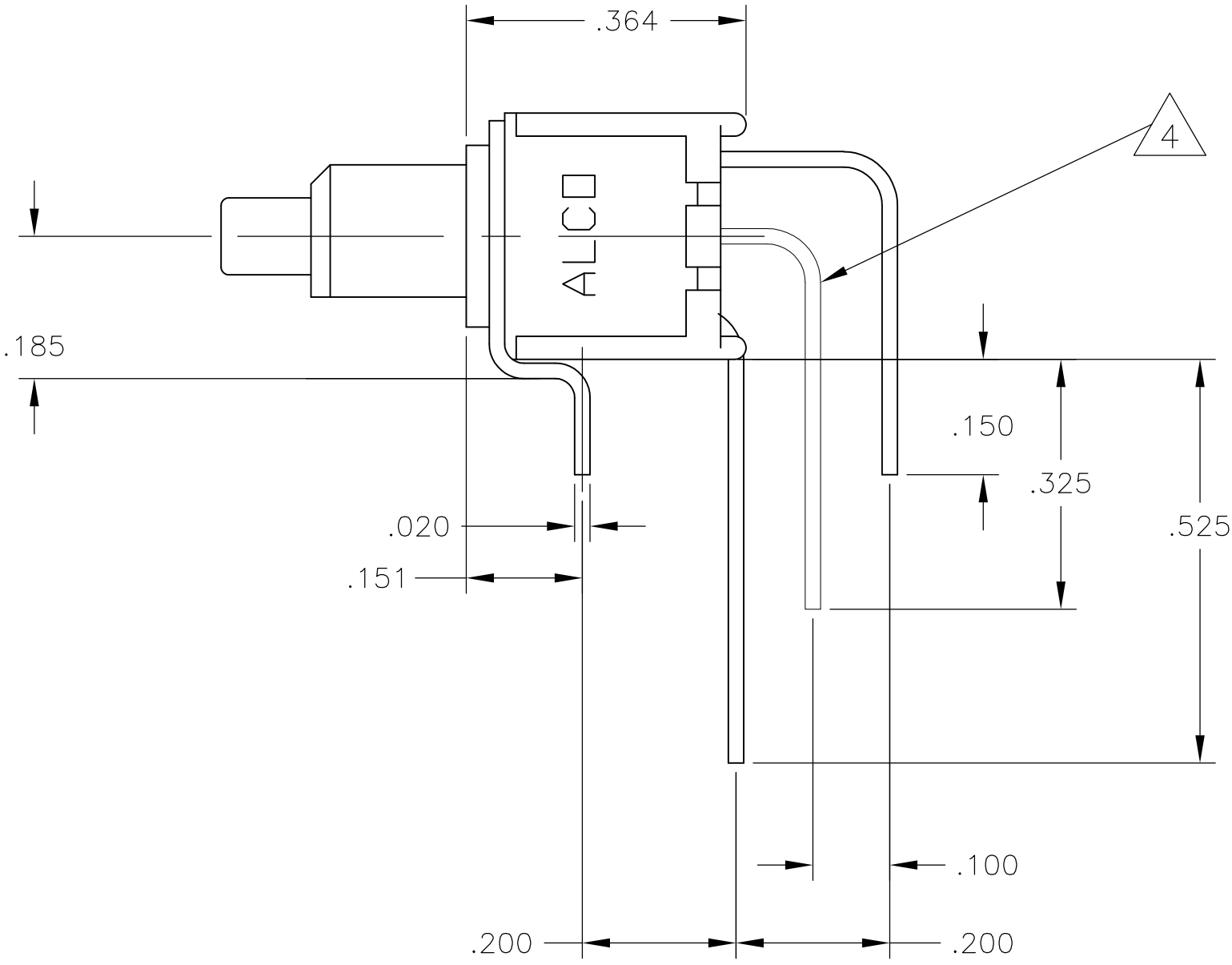
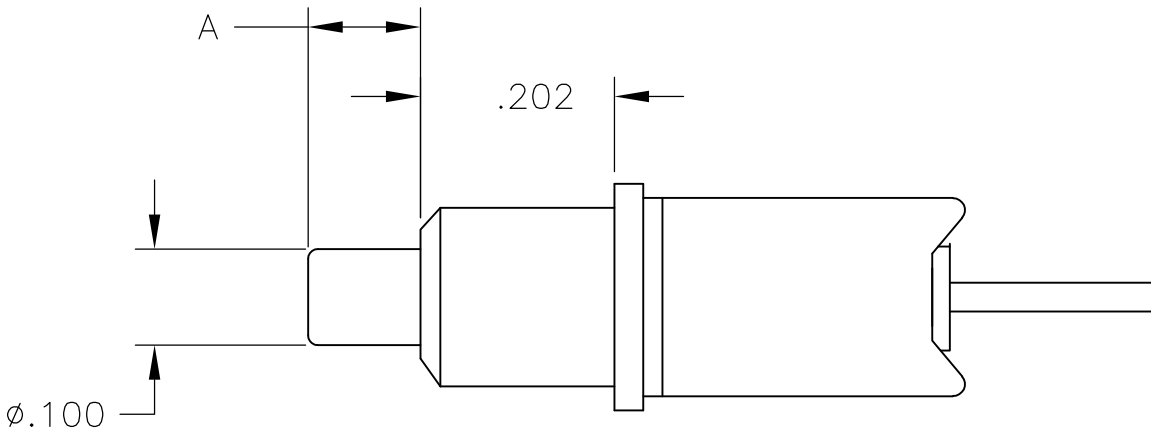
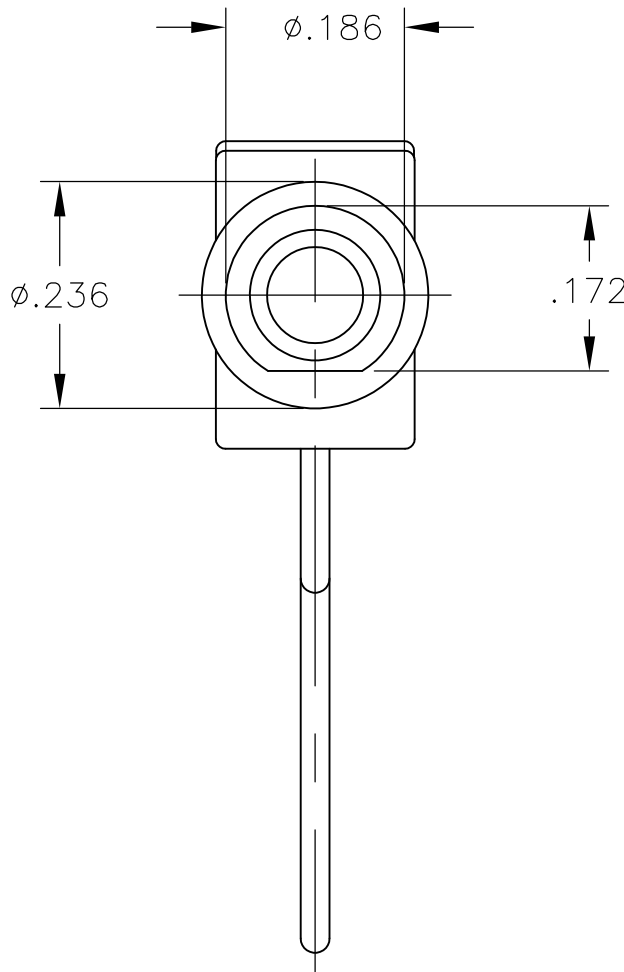


TPB21MGRA & TPB21RGRA



PCB HOLE LAYOUT

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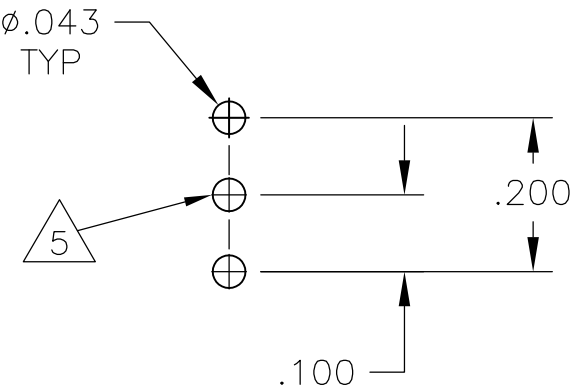


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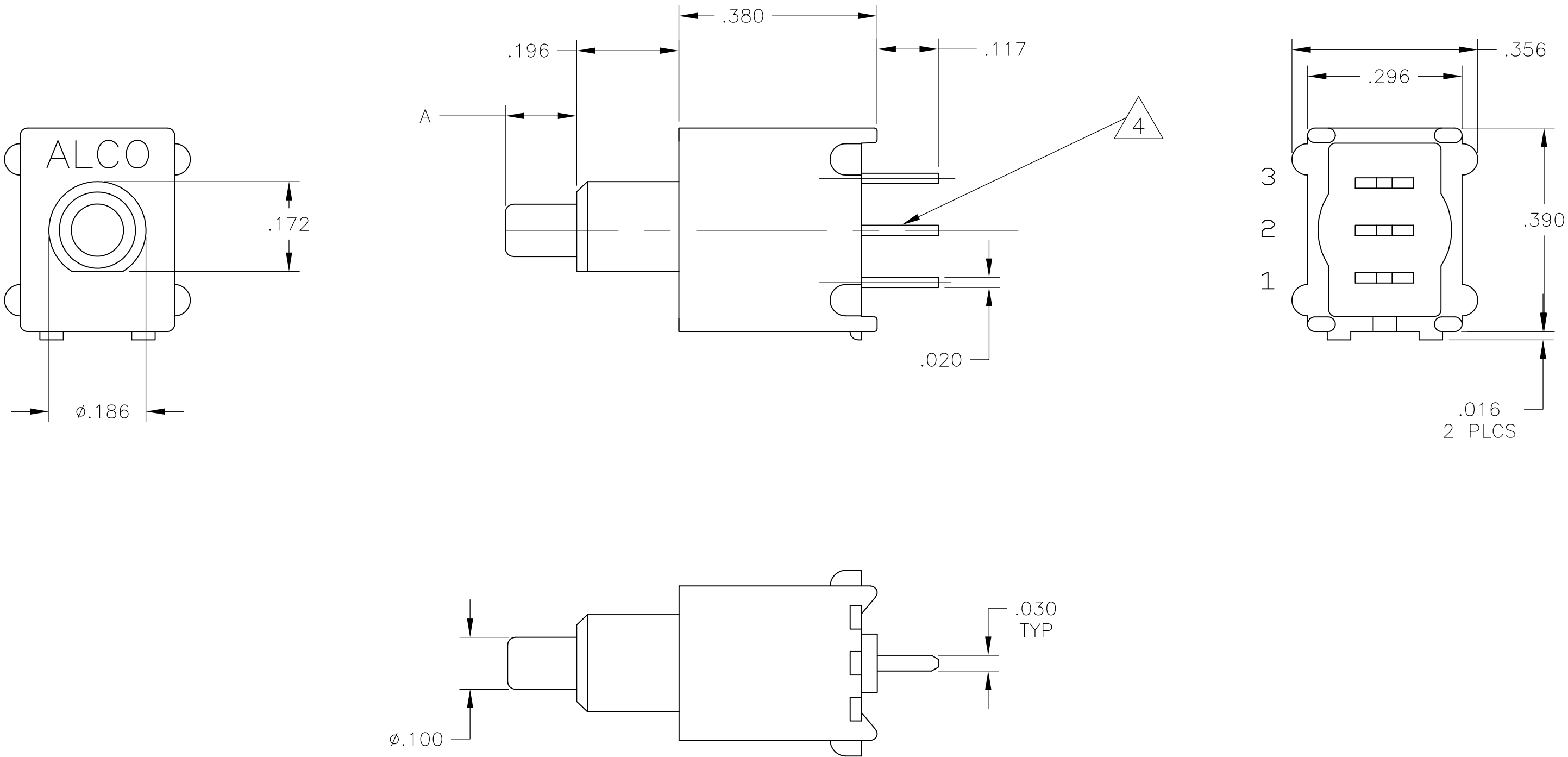
TPB11CVRA & TPB11FGVRA

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN M. BINNER	20JUL05	TE Connectivity	
		CHK M. ZITTO	21JUL05		
DIMENSIONS: INCHES	TOLERANCES UNLESS OTHERWISE SPECIFIED:	AP'D M. ZITTO	21JUL05	NAME PUSHBUTTON SWITCH, TPB SERIES	
		PRODUCT SPEC		—	
	0. PLC ± — 1. PLC ± — 2. PLC ± — 3. PLC ± .010 4. PLC ± — ANGLES	APPLICATION SPEC		—	
		—		—	
MATERIAL	FINISH	WEIGHT	—	RESTRICTED TO	
—	—	A1 00779		—	
CUSTOMER DRAWING		SCALE	4:1	SHEET	4 OF 6
		REV		A1	

LOC	DIST	REVISIONS				
AD	—	P	LTR	DESCRIPTION	DATE	DWN
		—	—	SEE SHEET 1	—	—



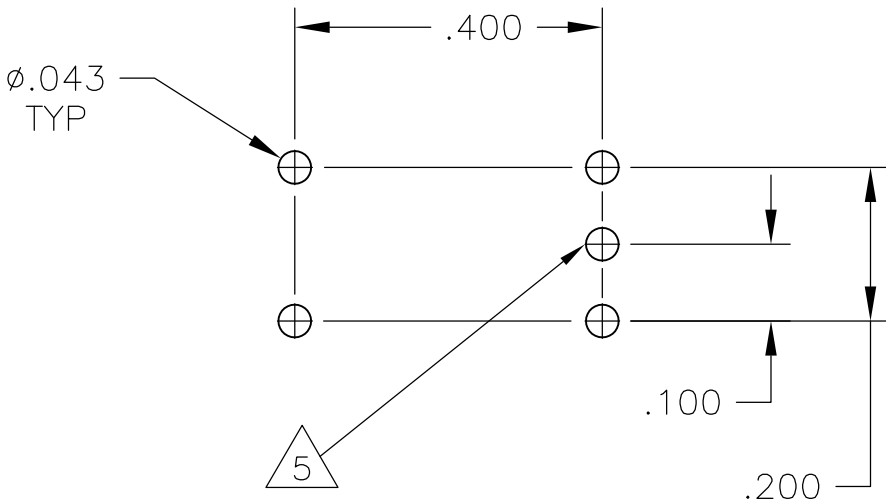
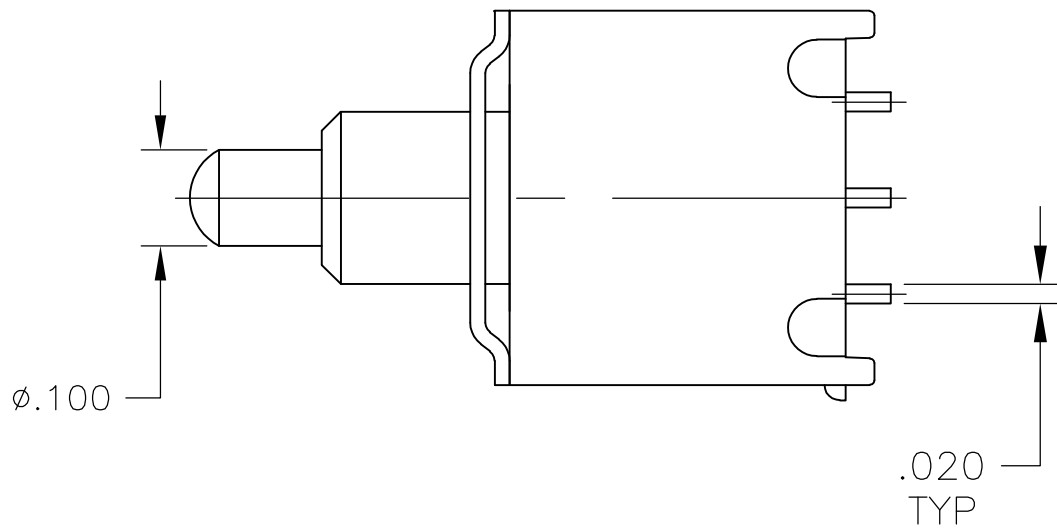
PCB HOLE LAYOUT



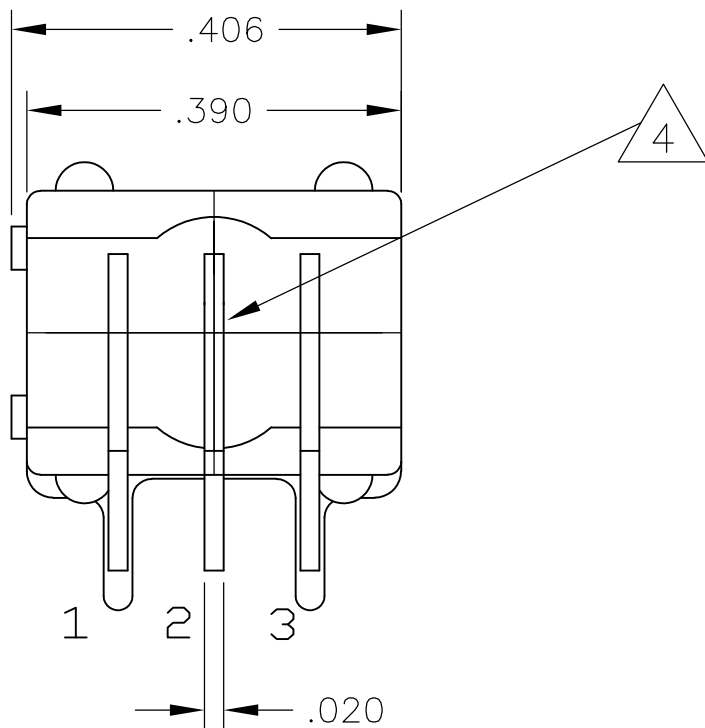
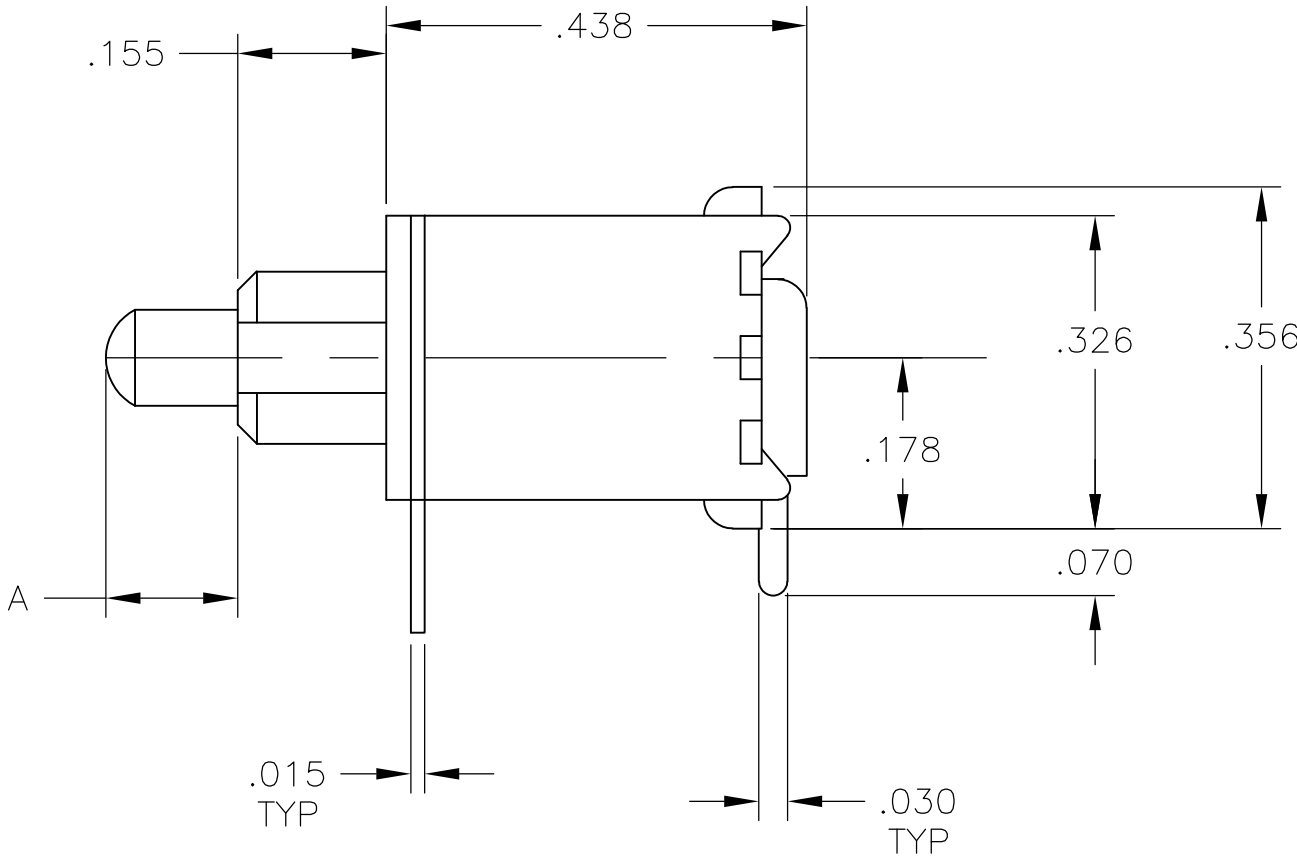
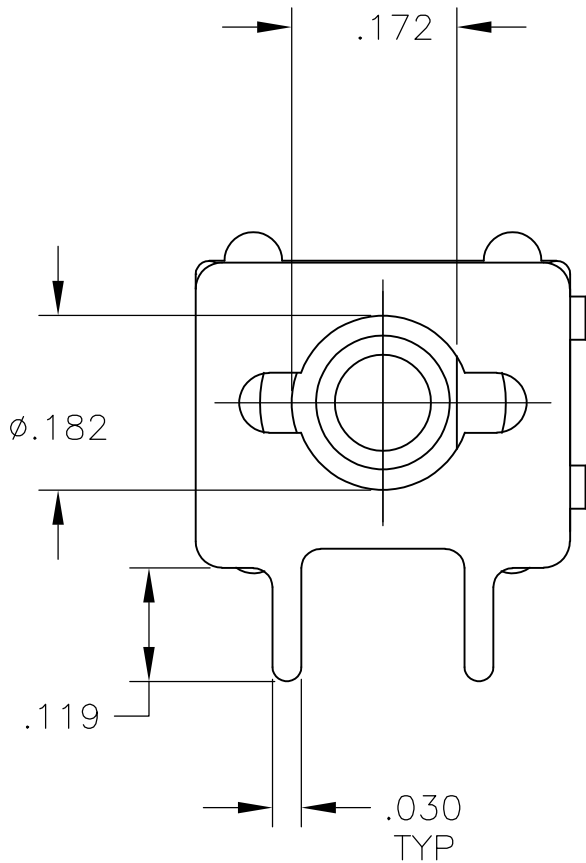
TPB11CGPCES & TPB11FGPCES
TPBF11CGPCES & TPBF11FGPCES

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		CHK M. ZITTO	21JUL05		
DIMENSIONS: INCHES	TOLERANCES UNLESS OTHERWISE SPECIFIED:	AP'D M. ZITTO	21JUL05	NAME PUSHBUTTON SWITCH, TPB SERIES	
		PRODUCT SPEC		—	
	0. PLC ± .010 1. PLC ± .010 2. PLC ± .010 3. PLC ± .010 4. PLC ± .010 ANGLES ± .010	APPLICATION SPEC		—	
		—		—	
MATERIAL —	FINISH —	WEIGHT —	A1 00779 1825097		RESTRICTED TO —
CUSTOMER DRAWING			SCALE 4:1	SHEET 5	OF 6
			REV A1		

LOC	DIST	REVISIONS					
		P	LTR	DESCRIPTION	DATE	DWN	APVD
AD	—	—	—	SEE SHEET 1	—	—	—



PCB HOLE LAYOUT



TPB11CGRAES & TPB11FGRAES
TPBF11CGRAES & TPBF11FGRAES

THIS DRAWING IS A CONTROLLED DOCUMENT.		DWN M. BINNER	20JUL05	TE Connectivity	
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DIMENSIONS: INCHES	TOLERANCES UNLESS OTHERWISE SPECIFIED:	AP'D M. ZITTO	21JUL05	NAME PUSHBUTTON SWITCH, TPB SERIES	
		PRODUCT SPEC		—	
	0. PLC ± .010 1. PLC ± .010 2. PLC ± .010 3. PLC ± .010 4. PLC ± .010 ANGLES ± .010	APPLICATION SPEC		—	
		—		—	
MATERIAL —	FINISH —	WEIGHT —	A1 00779 1825097		RESTRICTED TO —
CUSTOMER DRAWING			SCALE 4:1	SHEET 6 OF 6	REV A1