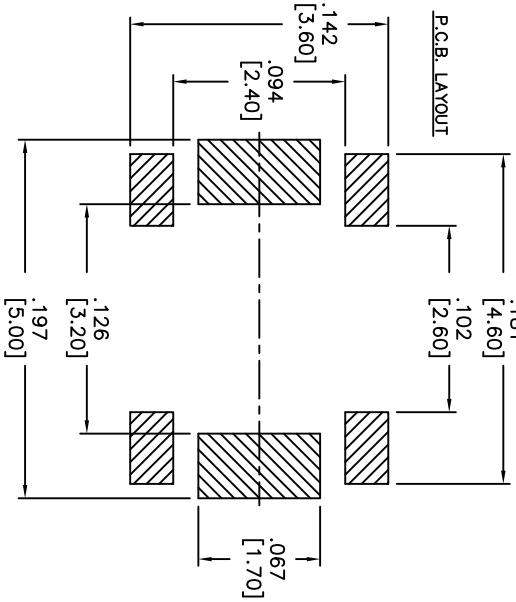
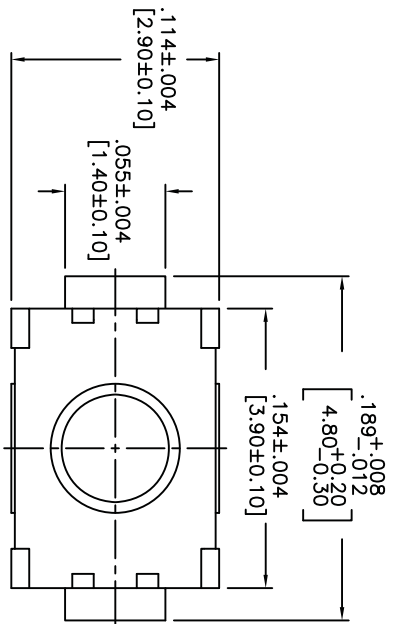
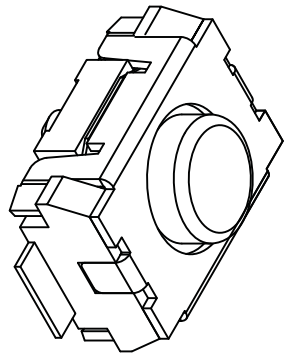
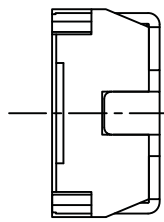
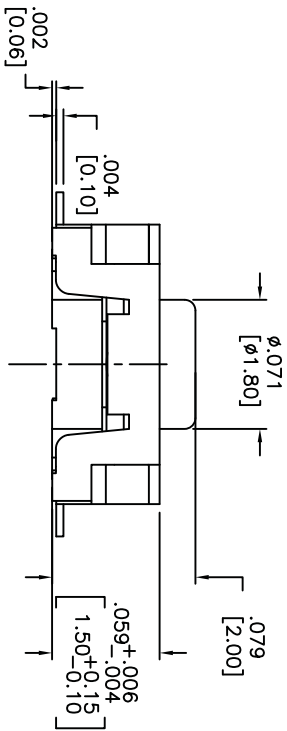


THIS DOCUMENT IS THE PROPERTY OF APM COMPONENTS AND SHALL NOT BE COPIED, REPRODUCED, DISCLOSED OR USED AS THE BASIS FOR MANUFACTURING OR SALE WITHOUT PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE OF APM COMPONENTS INC.



HATCHED AREA SHOWS SOLDERING LAND



CIRCUIT

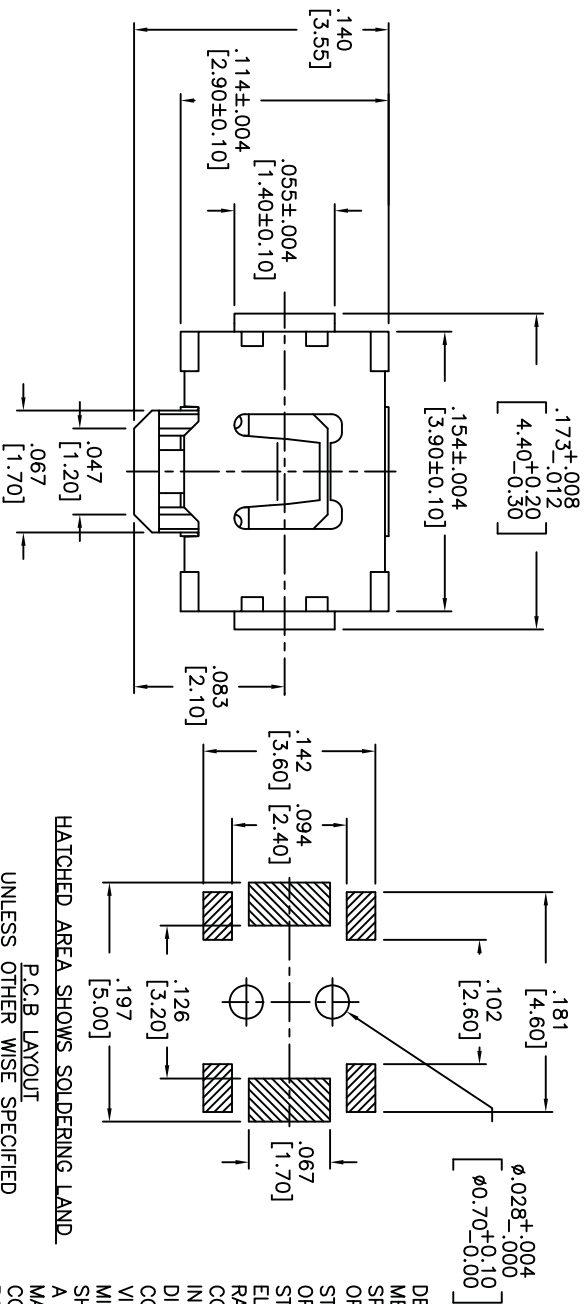
DATE	SYM	REVISION	RECORD	DWN.	CK.
5/08	B	ECO# 778		CD	PD

DESCRIPTION: VERTICAL PUSH MECHANICAL CONTACT SWITCH.
SPECIFICATIONS:
OPERATION FORCE: 160±50gf
OPERATION TEMP.: -25°C TO +70°C.
STORAGE TEMP.: -30°C TO +80°C.
ELECTRICAL LIFE: 100,000 CYCLES.
RATING: 50mA, 12VDC.
VIBRATION RESISTANCE: PASSES METHOD 201A MIL-STD-202F
SHOCK RESISTANCE: 50G PER METHOD 213B MIL-STD-202F
CONTACT RESISTANCE: 100mΩ MAX.
INSULATION RESISTANCE: 100MΩ MIN. AT 100VDC.
DIELECTRIC STRENGTH: 100VAC/1 MINUTE.
CONTACT ARRANGEMENT: 1 POLE 1 THROW.
MATERIALS:
COVER: STAINLESS STEEL
BASE: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR, WHITE.
STEM: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR, BLACK
CONTACT DISK: STAINLESS STEEL WITH SILVER CLADDING
TERMINAL: BRASS WITH SILVER PLATING
TAPE: TEFLON.
TAPE & REEL PACKAGING, 2,000 PER REEL
SOLDERING: HAND SOLDERING: 30 WATT IRON AT 320°C FOR 2 SECONDS
IR REFLOW: 240°C MAX
RoHS COMPLIANT

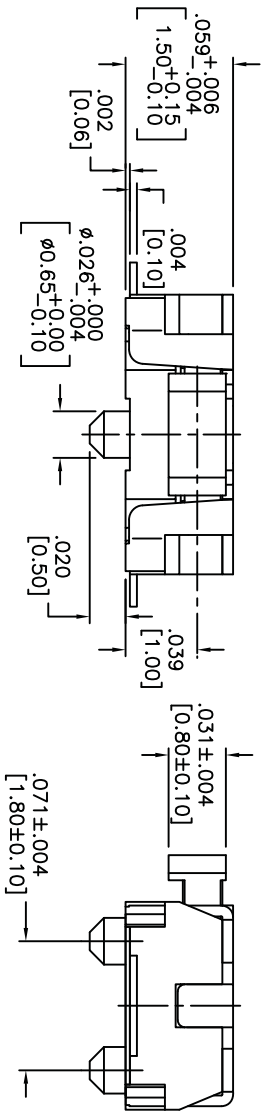
Q.A. INSPECT:		63 Neck Rd. Haverhill, MA 01830 Tel: 978-372-3534 Fax: 978-372-3534		DRN.	CJD
DESIGNATES CRITICAL DIMENSION		APM		BR.	PJD
TOLERANCES (UNLESS AS NOTED)		INCH		THIRD ANGLE PROJECTION	
.XX±.XX[0.5]		SHEET		1 OF 1	
.XX±.XX[0.20]		SIZE		15:1	
.XXX±.XX[0.02]		SCALE		15:1	
ANGLE = 30.5°		TITLE		VERTICAL PUSH TACT SWITCH	
DO NOT SCALE DRAWING		DATE		2/4/08	
		DRAWING NO.		AMPTFGP2VTR	
		REV		B	

THIS DOCUMENT IS THE PROPERTY OF APEM COMPONENTS AND SHALL NOT BE COPIED, REPRODUCED, DISCLOSED OR USED AS THE BASIS FOR MANUFACTURING OR SALE WITHOUT PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE OF APEM COMPONENTS INC.

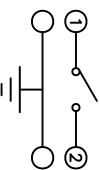
DATE	SYM	REVISION RECORD	DWN.	CK.
01/06	A	ECO # 526	CD	PD
5/08	B	ECO# 778	CD	PD



HATCHED AREA SHOWS SOLDERING LAND.
P.C.B. LAYOUT
UNLESS OTHERWISE SPECIFIED
ALL P.C. TOLERANCES ARE $\pm .002$ [0.05]



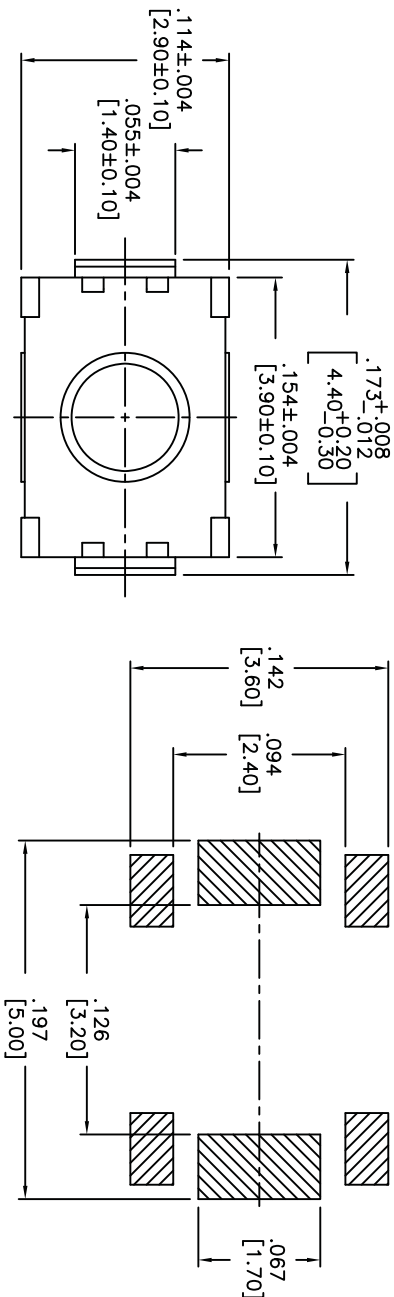
CIRCUIT



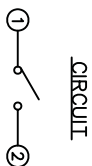
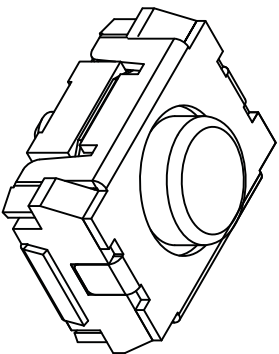
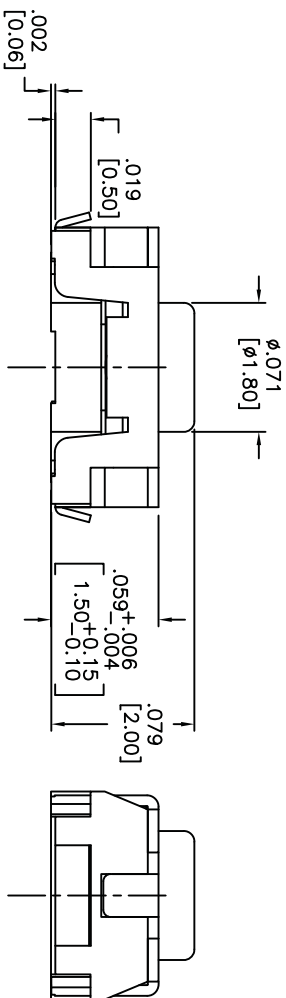
DESCRIPTION: SIDE PUSH
MECHANICAL CONTACT SWITCH.
SPECIFICATIONS:
OPERATION FORCE: 220 $\pm$ 65gf
STROKE: 0.2 $\pm$ 0.09mm
OPERATION TEMP.: -25 $^{\circ}$ C TO +70 $^{\circ}$ C.
STORAGE TEMP.: -30 $^{\circ}$ TO +80 $^{\circ}$.
ELECTRICAL LIFE: 100,000 CYCLES.
RATING: 50mA, 12VDC.
CONTACT RESISTANCE: 100m Ω MAX.
INSULATION RESISTANCE: 100M Ω MIN. AT 100VDC.
DIELECTRIC STRENGTH: 100VAC/1 MINUTE.
CONTACT ARRANGEMENT: 1 POLE 1 THROW.
VIBRATION TEST: PASSED METHOD 201A
MIL-STD-202F.
SHOCK TEST: 50G PER METHOD 213B CONDITION
A OF MIL-STD-202F
MATERIALS:
COVER: STAINLESS STEEL
BASE: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR: WHITE.
STEM: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR: BLACK.
CONTACT DISK: STAINLESS STEEL
WITH SILVER CLADDING
TERMINAL: BRASS WITH SILVER PLATING
PACKAGING: TAPE AND REEL
(3,500 PEICES PER REEL)
ROHS COMPLIANT
HAND SOLDERING: 320 $^{\circ}$ C MAX WITH 30 WATT IRON
FOR 2 SECONDS
IR REFLOW: 240 $^{\circ}$ C MAX

Q.A. INSPECT.	DESIGNATES CRITICAL	TOLERANCES (UNLESS AS NOTED) XX= $\pm$ 0.02[0.5] XXX= $\pm$ 0.008[0.20] XXXX= $\pm$ 0.0008[0.02] ANGLE = 30.5 $^{\circ}$	DATE	DRAWING NO.	REV.
06/30/05	AMPTCFGVTR	B			

THIS DOCUMENT IS THE PROPERTY OF APDM COMPONENTS AND SHALL NOT BE COPIED, REPRODUCED, DISCLOSED OR USED AS THE BASIS FOR MANUFACTURING OR SALE WITHOUT PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE OF APDM COMPONENTS INC.



HATCHED AREA SHOWS SOLDERING LAND

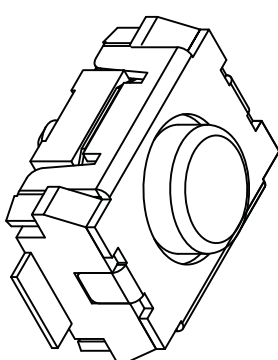
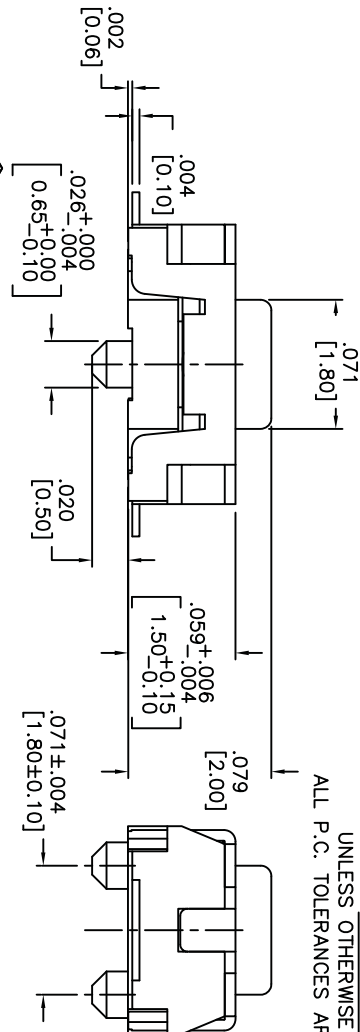
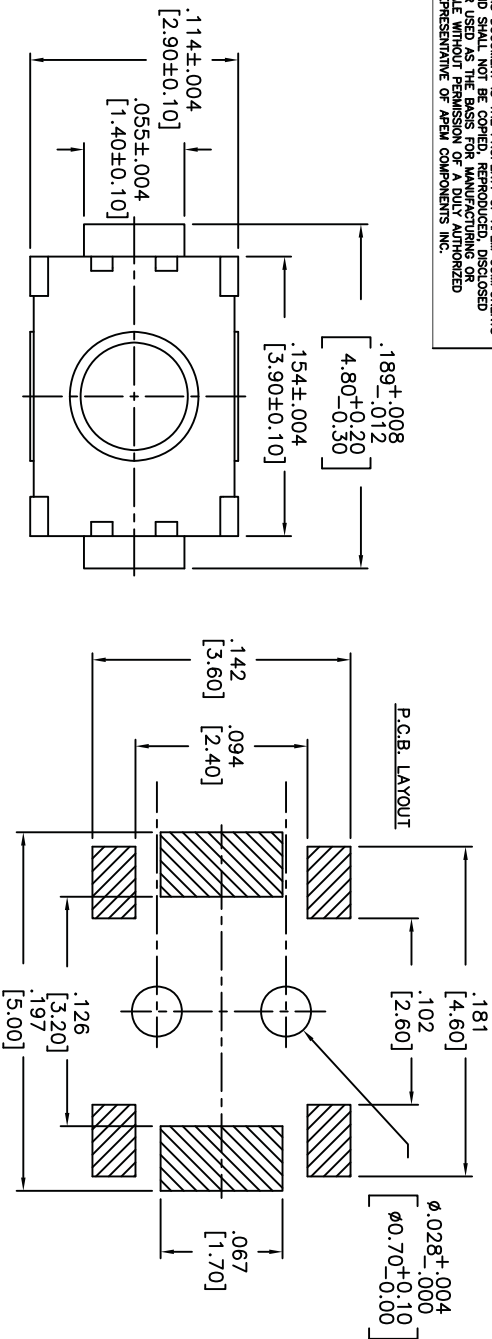


DATE	SYM	REVISION RECORD	DWN.	CK.
5/08	B	ECO# 778	CD	PD

DESCRIPTION: VERTICAL PUSH MECHANICAL CONTACT SWITCH.
SPECIFICATIONS:
OPERATION FORCE: 160± 50gf
OPERATION TEMP.: -25°C TO +70°C.
STORAGE TEMP.: -30°C TO +80°C.
ELECTRICAL LIFE: 100,000 CYCLES.
RATING: 50mA, 12VDC.
VIBRATION RESISTANCE: PASSES METHOD 201A
MIL-STD-202F
SHOCK RESISTANCE: 50G PER METHOD 213B
MIL-STD-202F
CONTACT RESISTANCE: 100mΩ MAX.
INSULATION RESISTANCE: 100MΩ MIN. AT 100VDC.
DIELECTRIC STRENGTH: 100VAC/1 MINUTE.
CONTACT ARRANGEMENT: 1 POLE 1 THROW.
MATERIALS:
COVER: STAINLESS STEEL
BASE: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR: WHITE.
STEM: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR: BLACK.
CONTACT DISK: STAINLESS STEEL
WITH SILVER CLADDING
TERMINAL: BRASS WITH SILVER PLATING
TAPE: TEFLON.
TAPE & REEL PACKAGING, 2,000 PER REEL
SOLDERING:
HAND SOLDERING: 30 WATT IRON AT 320°C FOR 2 SECONDS
IR REFLOW: 240°C MAX
RoHS COMPLIANT

Q.A. INSPECT.	DESIGNATES CRITICAL DIMENSION	TOLERANCES (UNLESS AS NOTED)	ANGLE = 30.5°
△		.XX=±.02[0.5] .XXX=±.008[0.20] .XXXX=±.0008[0.02]	
DO NOT SCALE DRAWING	DATE	DRAWING NO.	REV.
	2/4/08	AMPTLGP2VTR	B

THIS DOCUMENT IS THE PROPERTY OF APEM COMPONENTS AND SHALL NOT BE COPIED, REPRODUCED, DISCLOSED OR USED AS THE BASIS FOR MANUFACTURING OR SALE WITHOUT PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE OF APEM COMPONENTS INC.



DATE	SYM	REVISION RECORD	DWN.	CK.
5/08	B	ECO# 778	CD	PD

DESCRIPTION: VERTICAL PUSH MECHANICAL CONTACT SWITCH.

SPECIFICATIONS:

OPERATION FORCE: 160 ± 50 gf

OPERATION TEMP.: -25°C TO $+70^{\circ}\text{C}$.

STORAGE TEMP.: -30°C TO $+80^{\circ}\text{C}$.

ELECTRICAL LIFE: 200,000 CYCLES.

RATING: 50ma, 12VDC.

VIBRATION RESISTANCE: PASSES METHOD 201A

MIL-STD-202F

SHOCK RESISTANCE: 50G PER METHOD 213B

MIL-STD-202F

CONTACT RESISTANCE: 100m Ω MAX.

INSULATION RESISTANCE: 100M Ω MIN. AT 100VDC.

DIELECTRIC STRENGTH: 100VAC/1 MINUTE.

CONTACT ARRANGEMENT: 1 POLE 1 THROW.

TRAVEL: $.005 \pm .002$ [0.13 $\pm$ 0.05]

MATERIALS:

COVER: STAINLESS STEEL

BASE: LCP HIGH-TEMP. THERMOPLASTIC.

COLOR, WHITE.

STEM: LCP HIGH-TEMP. THERMOPLASTIC.

COLOR, BLACK.

CONTACT DISK: STAINLESS STEEL

WITH SILVER CLADDING

TERMINAL: BRASS WITH SILVER PLATING

TAPE: TEFLON.

TAPE & REEL PACKAGING, 2,000 PER REEL

SOLDERING:

HAND SOLDERING: 30 WATT IRON AT 320°C FOR 2 SECONDS

IR REFLOW: 240°C MAX

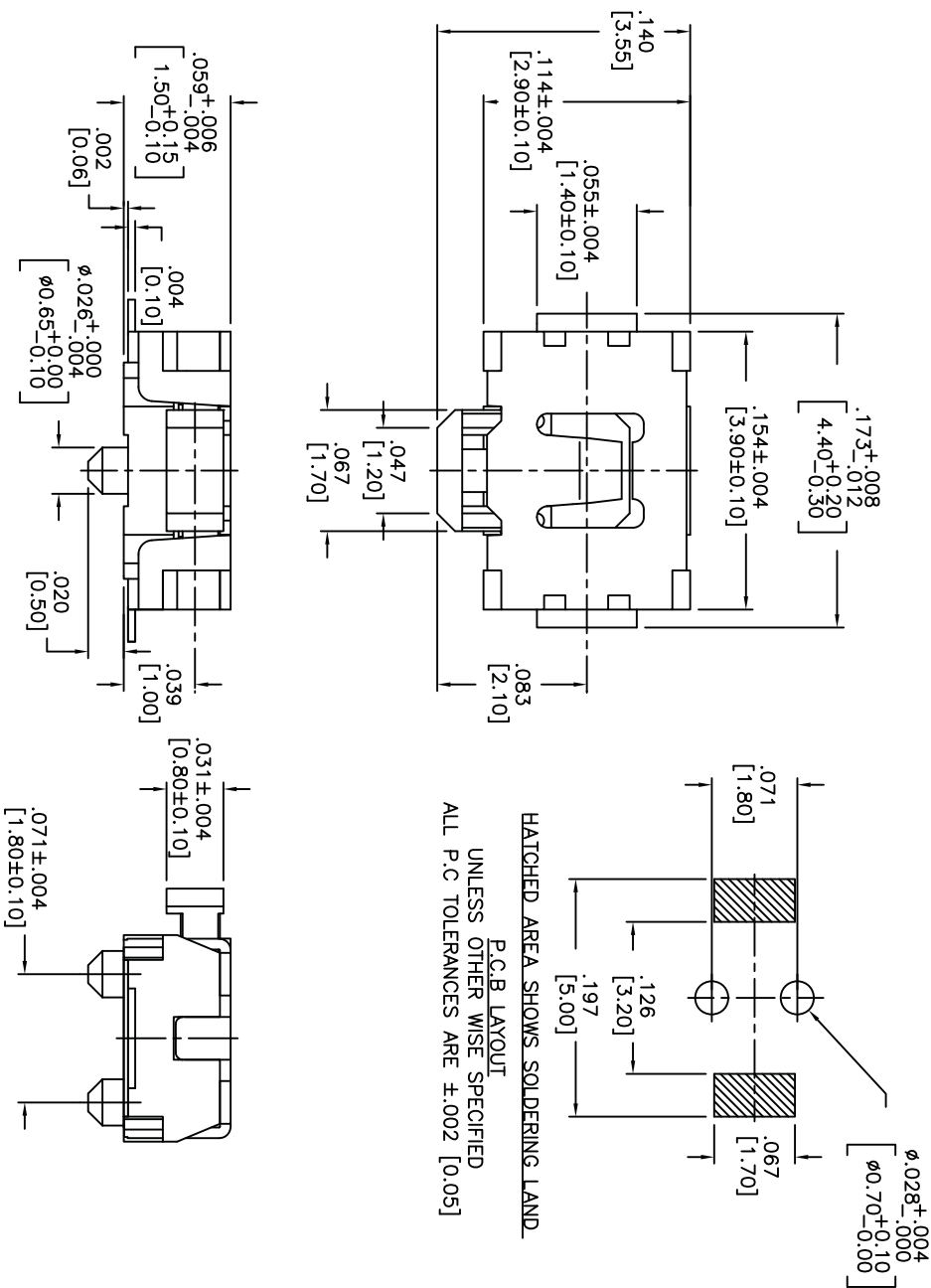
ROHS COMPLIANT

Q.A. INSPECT:	DESIGNATES CRITICAL DIMENSION	TOLERANCES (UNLESS AS NOTED)	ANGLE = 40.5°
	63 Neck Rd. Torrington, CT 06801	$.XX = \pm .02$ [0.5]	
	APM COMPONENTS INC.	$.XXX = \pm .004$ [0.20]	
	FORM 378-372-3534	$.XXXX = \pm .0008$ [0.02]	
DO NOT SCALE DRAWING	DATE: 6/30/05	DRAWING NO. AMPTCFG2VTR	REV. B

THIS DOCUMENT IS THE PROPERTY OF APEM COMPONENTS AND SHALL NOT BE COPIED, REPRODUCED, DISCLOSED OR USED AS THE BASIS FOR MANUFACTURING OR SALE WITHOUT PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE OF APEM COMPONENTS INC.

DATE	SYM	REVISION RECORD	DWN.	CK.
5/08	B	ECO# 778	CD	PD

HATCHED AREA SHOWS SOLDERING LAND
P.C.B LAYOUT
UNLESS OTHER WISE SPECIFIED
ALL P.C TOLERANCES ARE ±.002 [0.05]



DESCRIPTION: SIDE PUSH MECHANICAL CONTACT SWITCH.
SPECIFICATIONS:
OPERATION FORCE: 220± 65gf
STROKE: 0.2±0.08mm
OPERATION TEMP.: -25°C TO +70°C.
STORAGE TEMP.: -30°C TO +80°C.
ELECTRICAL LIFE: 100,000 CYCLES.
RATING: 50mA, 12VDC.
CONTACT RESISTANCE: 100mΩ MAX.
INSULATION RESISTANCE: 100MΩ MIN. AT 100VDC.
DIELECTRIC STRENGTH: 100VAC/1 MINUTE.
CONTACT ARRANGEMENT: 1 POLE 1 THROW.
VIBRATION TEST: PASSED METHOD 201A
MIL-STD-202F.
SHOCK TEST: 50G PER METHOD 213B CONDITION A OF MIL-STD-202F
MATERIALS:
COVER: STAINLESS STEEL
BASE: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR, WHITE.
STEM: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR, BLACK.
CONTACT DISK: STAINLESS STEEL
WITH SILVER CLADDING
TERMINAL: BRASS WITH SILVER PLATING
PACKAGING: TAPE AND REEL
(3,500 PEICES PER REEL)
ROHS COMPLIANT
LEAD FREE SOLDERING COMPATIBLE
HAND SOLDERING: 320°C MAX WITH 30 WATT IRON
FOR 2 SECONDS
IR REFLOW: 260°C MAX

Q.A. INSPECT.	DESIGNATES CRITICAL DIMENSION	TOLERANCES (UNLESS AS NOTED) XX±.XX[0.5] XXX±.XXX[0.20] XXXX±.XXXX[0.02] ANGLE = 30.5°	INCH SHEET 1 OF 1	SIZE B	SCALE 15:1	THIRD ANGLE PROJECTION	DATE 5/2/06	DRAWING NO. AMPTCFVTR	REV B
APEM		63 Neck Rd. Haverhill, MA 01830 Tel: 978-372-3534 Fax: 978-372-3534	P.N. CJD		P.D.				

DATE	SYM	REVISION RECORD	DWN.	CK.
1/06	B	ECO# 526	CD	PD
5/08	C	ECO# 778	CD	PD



SPECIFICATIONS:

STORAGE TEMP.: -30°C TO +80°C.

ELECTRICAL LIFE: 100,000 CYCLES.

RATING: 50mA, 12VDC.

VIBRATION RESISTANCE: PASSES METHOD 201A

MIL-STD-202F

SHOCK RESISTA

MIL-STD-202F

CONTACT RESISTANCE: 100mΩ MAX.

INSULATION RESISTANCE: 100M Ω MIN. AT 1

DIELECTRIC STRENGTH: 100VAC/1 MINUTE.

CONTACT ARRANGEMENT: 1 POLE 1 THROW

STROKE: .008 ^{+0.004}_{-.002} [0.2 ^{+0.10}_{-0.05}]

MATERIALS:

COVER: STAINLESS STEEL

BASE: LCP HIGH-TEMP. THERMOPLASTIC.

COLOR, WHITE.

STEM: LCP HIGH-TEMP. THERMOPLASTIC.

COLOR, BLACK.

CONIACI DISK: STAINLESS STEEL

WITH SILVER CLADDING
TERMINAL DRAG WITH SILV

TERMINAL: BRASS WITH SILVER PLATING

TAPE: 1EFLON.

IAPE & REEL PACKAGING, 3500 PER REEL
COILS PER BOX.

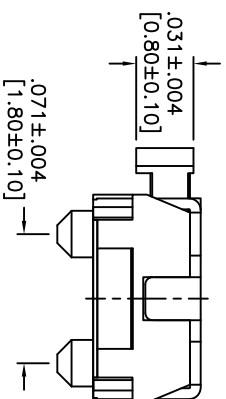
SOLDERING: 30 WATT IRON AT 320°C FOR HAND SOLDERING.

HAND SOLDERING: 30
2 SECONDS

2 SECONDS
IP BEEL OW. 340°C MAY

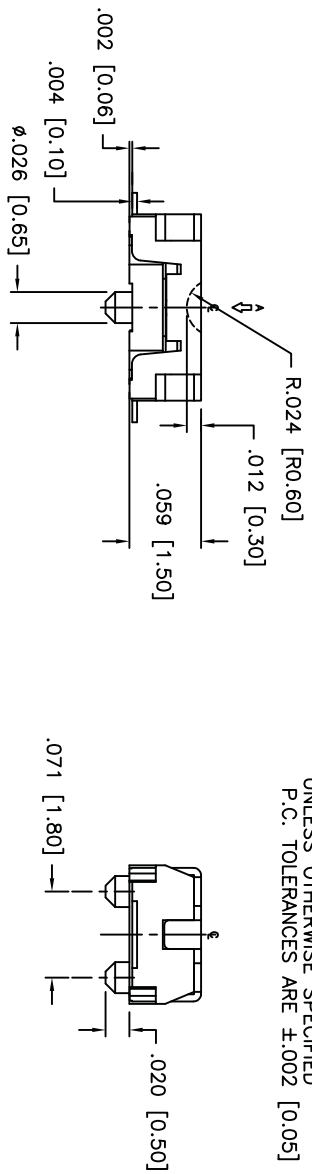
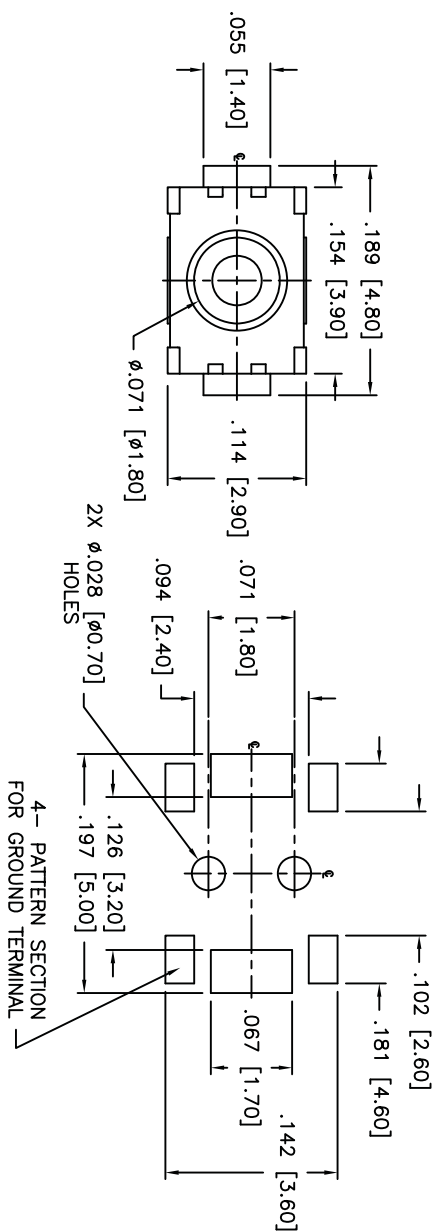
IN REFLOW. 240
POHS COMPLIANT

RoHS COMPLIANT

CIRCUIT

Q.A. INSPECT.			Q3. NICK RD. 01835 Tel: 978-372-1602 Fax: 978-372-5534		PPN B7:	CJD
DIMENSION DEGRADATE CRITICAL TO FINANCES (EXCEPT AS NOTED) $XX \pm [0.2] (5)$ $XXX \pm [0.008] (0.20)$ $XXXX \pm [0.0008] (0.02)$ ANGLE = $\pm 0.5^\circ$	INCH (MM)	SHEET 1 OF 1	SIZE B	SCALE 15:1	THIRD ANGLE PROJECTION 	REV C
DO NOT SCALE DRAWING	DATE	DRAWING NO.		REV		
06/30/05	AMPTCLGVTR					

THIS DOCUMENT IS THE PROPERTY OF APEM COMPONENTS AND SHALL NOT BE COPIED, REPRODUCED, DISCLOSED OR USED AS THE BASIS FOR MANUFACTURING OR SALE WITHOUT PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE OF APEM COMPONENTS INC.



DATE	SYM	REVISION RECORD	DMN.	CK.
1/06	A	ECO # 526	CD	PD
5/06	B	ECO# 778	CD	PD

DESCRIPTION: SPST, NORMALLY OPEN, MOMENTARY, SURFACE MOUNT TACT SWITCH WITH LOCATING PINS

SPECIFICATIONS:

CONTACT RATING: 50mA @ 12VDC

INITIAL CONTACT RESISTANCE: 100MOHMS MAX.

INSULATION RESISTANCE: 100MOHMS MIN. @ 500VDC

DIELECTRIC STRENGTH: 100VAC FOR 1 MINUTE

ELECTRICAL LIFE: 200,000 CYCLES MIN.

OPERATING TEMPERATURE RANGE: -25°C to +70°C

STOP STRENGTH: MAX 3kgf VERTICAL STATIC LOAD

CONT. FOR 15 SEC.

ACTUATION FORCE: 160± 50gf

STORAGE TEMPERATURE RANGE: -30°C TO +80°C

SHOCK RESISTANCE: 50G PER METHOD 213B, MIL-STD-202F

VIBRATION RESISTANCE: PASSES METHOD 201A, MIL-STD-202F

SOLDERING:

IR REFLOW: 240°C MAX.

HAND SOLDERING: 350°C MAX. FOR 3 SECONDS MAX. (30 WATT IRON MAX.)

MATERIALS:

BASE: LCP HIGH-TEMP THERMOPLASTIC UL94V-0

ACTUATOR: LCP HIGH-TEMP THERMOPLASTIC UL94V-0

COVER: STAINLESS STEEL

TERMINALS: SILVER PLATED BRASS

SHORTING CONTACT: STAINLESS STEEL WITH SILVER CLADDING

TAPE: TEFLON

RoHS COMPLIANT

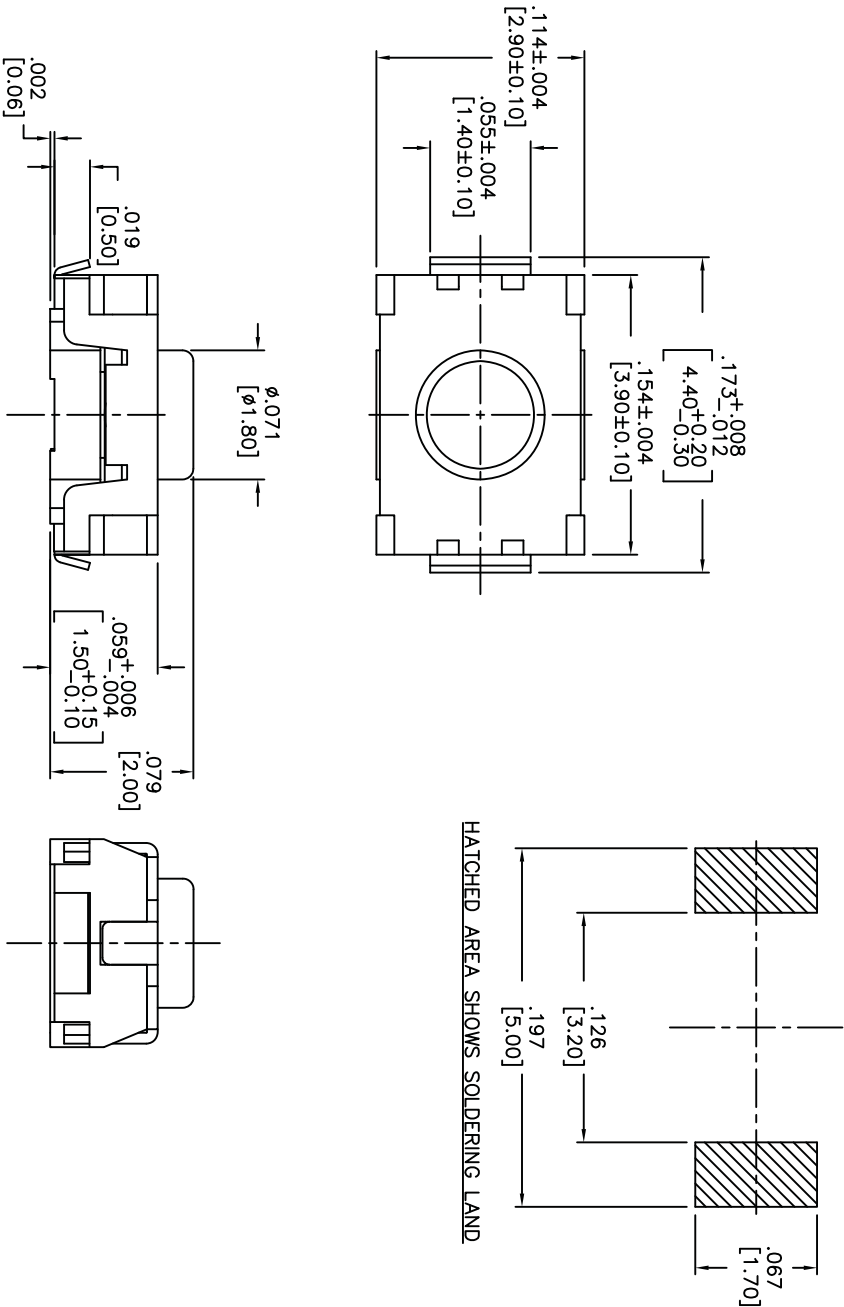
NOTE:

1. AFTER SOLDERING, RETURN SWITCHES TO NORMAL TEMPERATURE BEFORE WASHING.

Q.A. INSPECT.	DESIGNER'S INITIALS	DATE	DRAWING NO.	REV.
APPEM	63 Neck Rd. 01855 Haverhill, MA 01855 Tel: 978-372-3534 Fax: 978-372-3534	07/20/05	AMPTCFG1VTR	B
TITLE	SHEET	SIZE	SCALE	THIRD ANGLE PROJECTION
TACT SWITCH WITH LOCATING PINS	1 OF 1	B	10:1	
TOLERANCES (UNLESS OTHERWISE SPECIFIED)				
.XX±.XX[0.5]				
.XXX±.XXX[0.20]				
.XXXX±.XXXX[0.02]				
ANGLE = 30.5°				

THIS DOCUMENT IS THE PROPERTY OF APDM COMPONENTS AND SHALL NOT BE COPIED, REPRODUCED, DISCLOSED OR USED AS THE BASIS FOR MANUFACTURING OR SALE WITHOUT PERMISSION OF A DULY AUTHORIZED REPRESENTATIVE OF APDM COMPONENTS INC.

P.C.B. LAYOUT



DATE	SYM	REVISION RECORD	DWN.	CK.
1/06	A	ECO# 526	CD	PD
5/06	B	ECO# 778	CD	PD

DESCRIPTION: VERTICAL PUSH MECHANICAL CONTACT SWITCH.

SPECIFICATIONS:

OPERATION FORCE: 220 $\pm$ 65gf

OPERATION TEMP.: -25°C TO +70°C.

STORAGE TEMP.: -30°C TO +80°C.

ELECTRICAL LIFE: 200,000 CYCLES.

RATING: 50mA, 12VDC.

VIBRATION RESISTANCE: PASSES METHOD 201A

MIL-STD-202F

SHOCK RESISTANCE: 50G PER METHOD 213B

MIL-STD-202F

CONTACT RESISTANCE: 100m Ω MAX.

INSULATION RESISTANCE: 100M Ω MIN. AT 100VDC.

DIELECTRIC STRENGTH: 100VAC/1 MINUTE.

CONTACT ARRANGEMENT: 1 POLE 1 THROW.

MATERIALS:

COVER: STAINLESS STEEL

BASE: LCP HIGH-TEMP. THERMOPLASTIC.

COLOR, WHITE.

STEM: LCP HIGH-TEMP. THERMOPLASTIC.

COLOR, BLACK.

CONTACT DISK: STAINLESS STEEL

WITH SILVER CLADDING

TERMINAL: BRASS WITH SILVER PLATING

TAPE: TEFLON.

TAPE & REEL PACKAGING, 2,000 PER REEL

SOLDERING:

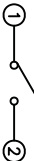
HAND SOLDERING: 30 WATT IRON AT 320°C FOR

2 SECONDS

IR REFLOW: 240°C MAX

RoHS COMPLIANT

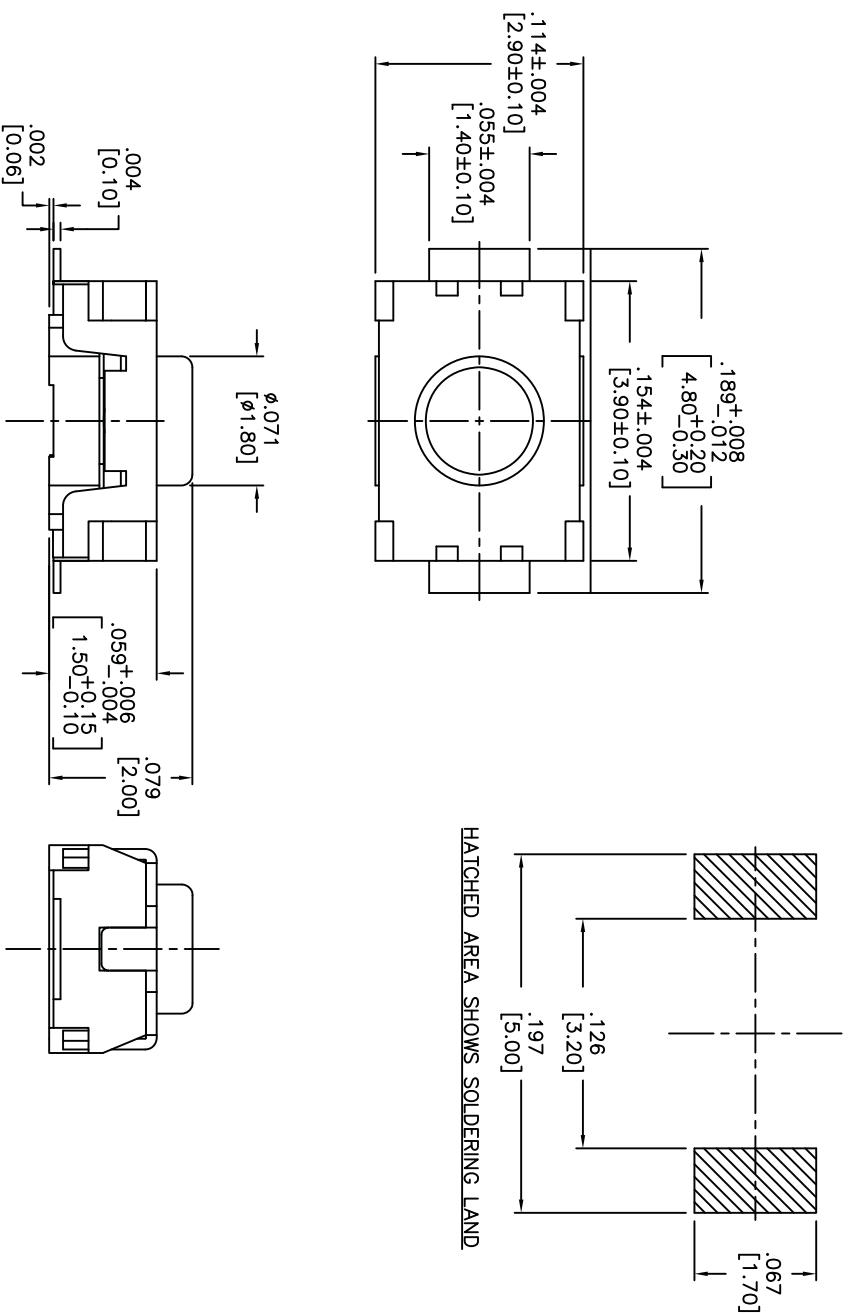
LEAD FREE PROCESS COMPATIBLE



CIRCUIT

Q.A. INSPECT.		DESIGNATES CRITICAL DIMENSION		TOLERANCES (UNLESS AS NOTED)		TITLE		DO NOT SCALE DRAWING	
APDM		63 Neck Rd. Haverhill, MA 01830		100X=±0.004[0.20]		TACT		DATE	
100X=±0.008[0.02]		100X=±0.008[0.02]		100X=±0.008[0.02]		SWITCH		01/23/06	
ANGLE = 40.5°		ANGLE = 40.5°		ANGLE = 40.5°		DRAWING NO.		AMPTLP2VTR	
1		2		3		4		5	
6		7		8		9		10	

P.C.B. LAYOUT



DESCRIPTION: VERTICAL PUSH MECHANICAL CONTACT SWITCH.

SPECIFICATIONS:

OPERATION FORCE: 160± 50gf

OPERATION TEMP.: -25°C TO +70°C.

STORAGE TEMP.: -30°C TO +80°C.

ELECTRICAL LIFE: 200,000 CYCLES.

RAILING: 50mA, 12VDC;
VIBRATION RESISTANCE

VIBRATION RESISTANCE: PASSES METHOD 201A
MIL-STD-202FMILE-31D-2021
SHOCK RESISTANCE: 50G PER METHOD 213B

MIL-STD-202F

CONTACT RESISTANCE: 100mΩ MAX.

INSULATION RESISTANCE: 100MΩ MIN. AT 100VDC.

DIELECTRIC STRENGTH: 100VAC/1 MINUTE.

CONTACT ARRANGEMENT: 1 POLE 1 THROW.

MATERIALS:

COVER: STAINLESS STEEL

BASE: LCP HIGH-TEMP. THERMOPLASTIC.
COLOR: WHITE

COLOR, WHITE. THERMOPLASTIC

SIEMENS HIGH-TEMP
COLOR BLACK

CONTACT DISK: STAINLESS STEEL

CONVINO DI DIGNO: C'IMPIEDICO C'ELLE
WITH SILVER CLADDING

TERMINAL: BRASS WITH SILVER PLATING

TAPE: TEFLON.

TAPE & REEL PACKAGING, 2,000 PER REEL

SOLDERING: _____

HAND SOLDERING: 30 WATT IRON AT 320°C FOR 5 SECONDS

2 SECONDS
IB REEL OW. 260°C MAX

IR REFLOW: 260
POHS COMPLIANT

LEAD FREE PROCESS COMPATIBLE



DATE	SYM	REVISION RECORD	DWN.	CK.
5/08	B	ECO# 778	CD	PD

2A. INSPECT: 		PRN: CJD BRN:	
DIMENSION DEPARTS CRITICAL		GSK: PJD BY:	
TO FINANCES (except as noted) JXX-4-02(0.5) JXX-4-008(0.20) JXX-4-0008(0.02) ANGLE = ±0.5°		63 NASH RD HOUSTON, TX 77058 714-978-3772-1602 714-978-3772-3534	
TITLE TACT SWITCH		INCH (MM)	
SHEET 1 OF 1		SIZE B	
SCALE 15:1		THIRD ANGLE PROJECTION 	
DATE 01/23/06		DRAWING NO. AMPDFP2VTR	
DO NOT SCALE DRAWING		REV B	