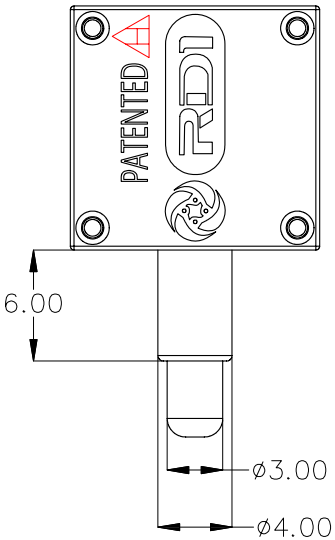
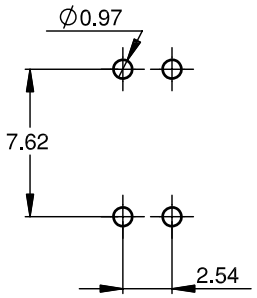
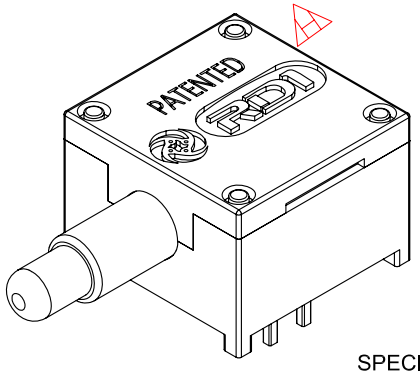
DWG. NO. SW-3501-F REV. "H"

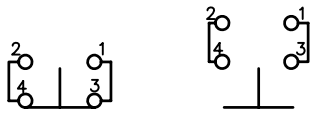
PART NO. RS332BP-NL



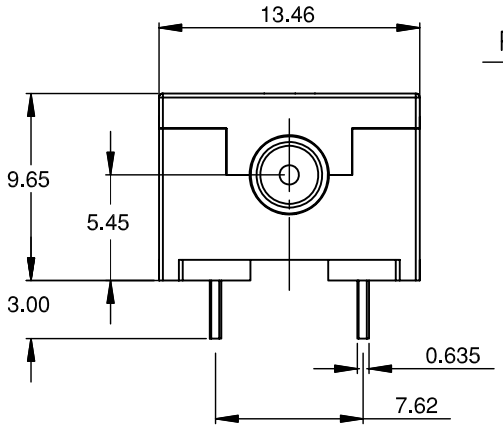
P.C.B MOUNTING

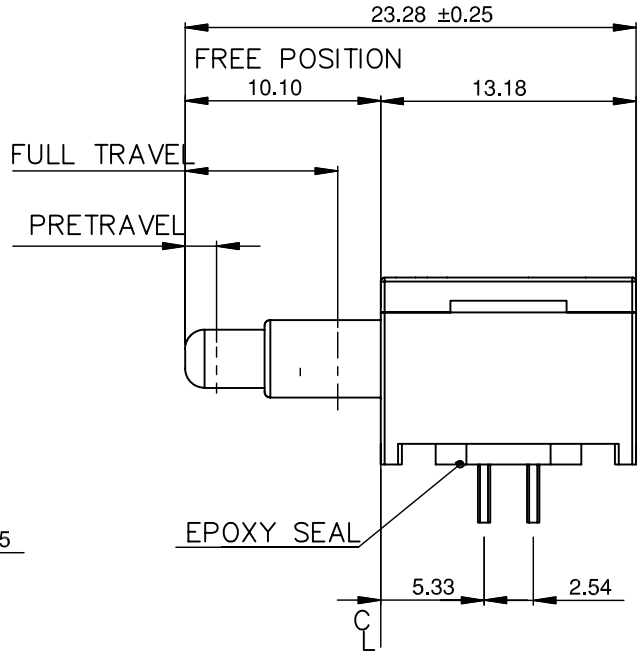






SCHEMATIC





SPECIFICATIONS :
RATING : 0.4A MAX. 20VAC OR 20DC
CONTACT RESISTANCE : 50mΩ MAX.
INSULATION RESISTANCE : 100MΩ MIN.
DIELECTRIC STRENGTH : 250VAC FOR 1 MIN
ELECTRICL LIFE : 10,000 CYCLES MIN.
OPERATION TEMPERATURE : -30 TO +85 °C

MECHANICAL(REFERENCE) :
OPERATION FORCE TO : 250±50gf
FREE POSITION : 10.10± 0.25mm
PRE TRAVEL : 1.52± 0.38mm
FULL TRAVEL : 5.84mm Min.

MATERIALS :
ACTUATOR : LCP , BLACK COLOR
CAP: LCP , BLACK COLOR
BASE: LCP , BLACK COLOR
INTERNAL CONTACTS: CU ALLOY WITH GOLD PLATING
INTERNAL CONTACT PLATING: 60U" MIN NI PLATING, AU FLASH PLATING OVER NI
SOLDER SIDE CONTACTS: CU ALLOY
SOLDER SIDE CONTACT PLATING: 60U" MIN NI PLATING, AU FLASH PLATING OVER Ni

NOTE:
1). PACKAGING
- 108 PIECES PER ANTI-STATIC TRAY
- EACH MASTER CARTON CONTAINS 1,620 PIECES [108 PIECES X 15 TRAYS]
- CARTON DIMENSION- 30cm x 29cm x 26cm
- N.W.- 2Kgs, G.W.- 2.5Kgs
2).ALL DIMS ARE IN mm

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY
11-078	04/29/11	H	ADD "PATENTED" MARKING ON TOP COVER	BM	AL
10-283	11/19/10	G	ADD THREE PAGES AND CHANGE THE MATERIALS	BM	AL
10-186	08/02/10	F	CHANGED THE 4 PARTS WHICH HAVE MARKED	BM	AL
09-233	09/03/09	E	ADD TO THE PACKAGING AND REVISED SOME WORDS	BM	JY
09-039	3/13/09	D	CHANGED FULL TRAVEL DIMENSION FROM 5.8mm±0.5 TO 5.84mm MIN.	BM	JY
09-009	2/10/09	C	CHANGED THE TOLERANCE OF PRE-TRAVE AND CORRECTED SPELLING ERRORS	BM	Luke
09-004	1/16/09	B	CHANGED THE DRAWING TO NEW PRINT	BM	BY
08-360	11/25/08	A	CHANGED THE DRAWING TO NEW PRINT	BM	JY

PROJECTION

SCALE N/A

TOLERANCE EXCEPT AS NOTED
DEC. MILLIMETERS
X.XX: ±0.25mm
X.X: ±0.40mm
ANG. ±2°

RDI Research Develop Innovate
RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

TITLE: INTRUSION SWITCH, N.C. PCB MOUNT-RoHS COMPLIANT

DR.	DATE	REF.	SHEET
Jin	09/17/08	P/N: RS332BP-NL	1 OF 4

CK.	PRE-	DRAWING NO.	SIZE	REV.
BM	SW	3501	F	H

THIS DOCUMENT IS OWNED BY, AND THE INFORMATION CONTAINED IN IT IS PROPRIETARY TO, RDI, BY RECEIPT HEREOF THE HOLDER AGREES NOT TO USE THE INFORMATION AND NOT TO DISCLOSE IT TO ANY THIRD PARTY, NOR REPRODUCE THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF RDI, AND AGREES TO RETURN THIS DOCUMENT FORTHWITH UPON REQUEST.

DWG. NO. SW-3501-F REV. "H"

PART NO. RS332BP-NL

1. STYLE

THIS SPECIFICATION DESCRIBES "PUSH BUTTON SWITCHES SWITCHES",MAINLY USED AS SIGNAL SWITCH OF ELECTRIC DEVICES,WITH THE GENERAL REQUIREMENTS OF MECHANICAL AND ELECTRICAL CHARACTERISTIC.

OPERATING TEMPERATURE RANGE: -30°C ~ +85°C.

2. CONTACT RATING:

2.1 GOLD PLATING STANDARD:

PLATING		RATING
GOLD	FIXED TERMINAL:COPPER ALLOY WITH GOLD PLATE.	0.4VA/20VAC OR 20VDC

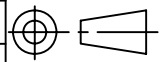
3. TYPE OF ACTUATION: PUSHBUTTON SWITCHES.

4. TEST SEQUENCE:

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
1	VISUAL EXAMINATION	BY VISUAL EXAMINATION CHECK WITHOUT AND OUT PRESSURE & TESTING.	THERE SHALL BE NO DEFECTS THAT AFFECT THE SERVICEABILITY OF THE PRODUCT.
2	CONTACT RESISTANCE	@2-4VDC 100mA.FOR BOTH SILVER AND GOLD PLATED CONTACTS.	50mΩ MAX(INITIAL)
3	INSULATION RESISTANCE	MEASUREMENTS SHALL BE MADE FOLLOWING APPLICATION OF 500V/DC 100mA POTENTIAL ACROSS TERMINALS AND COVER.	100MΩ MIN/500VDC
4	DIELECTRIC WITHSTANDING VOLTAGE	250VAC(50Hz OR 60Hz)0.5mA SHALL BE APPLIED ACROSS TERMINALS AND COVER FOR 1MINUTE.	THERE SHALL BE NO BREAKDOWN OR FLASHOVER.
5	SOLDER HEAT RESISTANCE	IR-REFLOW SOLDERING: (1). SOLDERING TEMPERATURE: 260±5°C (2). DURATION OF SOLDER IMMERSION: Max 5 SECONDS.	1. SHALL BE FREE FROM PRONOUNCED BACKLASH AND FALLING-OFF OR BREAKAGE TERMINALS 2. AS SHOWN IN ITEM 2~4
6	ACTUATION FORCE	MODEL-1305N MECHANICAL TEST 200 gram、500gram、1000gram、2000gram.	AT FOR TEST THE FORCE. FORCE:250±50gf PRETRAVELS:1.52±0.38mm FULL TRAVEL:5.84Min
7	OPERATION LIFE	MEASUREMENTS SHALL BE MADE FOLLOWING THE TEST FORTH BELOW: VOLTAGE:20VAC OR 20VDC. CURRENT:0.4VA ELECTRONICS LIFE TEST:10,000 CYCLES.	AS SHOWN IN ITEM 3~4
8	RESISTANCE LOW TEMPERATURE	FOLLOWING THE TEST SET FORTH BELOW THE SAMPLE SHALL BE LEFT IN NORMAL TEMPERATURE AND HUMIDITY CONDITIONS FOR 1 HOUR BEFORE THE MEASUREMENTS ARE MADE: 1. TEMPERATURE: -30± 3°C 2. TIME: 96 HOURS	AS SHOWN IN ITEM 2~4
9	RESISTANCE HIGH TEMPERATURE	FOLLOWING THE TEST SET FORTH BELOW THE SAMPLE SHALL BE LEFT IN NORMAL TEMPERATURE AND HUMIDITY CONDITIONS FOR 1 HOUR BEFORE THE MEASUREMENTS ARE MADE: 1. TEMPERATURE: 85± 2°C 2. TIME: 96 HOURS	AS SHOWN IN ITEM 2~4
10	RESISTANT HUMIDITY	FOLLOWING THE TEST SET FORTH BELOW THE SAMPLE SHALL BE LEFT IN NORMAL TEMPERATURE AND HUMIDITY CONDITIONS FOR 1 HOUR BEFORE THE MEASUREMENTS ARE MADE: 1. TEMPERATURE: 40± 2°C 2. RELATIVE HUMIDITY: 90~95% 3. TIME: 96 HOURS	AS SHOWN IN ITEM 2~4
11	THE SALT TESTING	FOLLOWING THE TEST SET FORTH BELOW THE SAMPLE SHALL BE LEFT IN NORMAL TEMPERATURE AND HUMIDITY CONDITIONS FOR AN HOUR BEFORE THE MEASUREMENTS ARE MADE: 1. TEMPERATURE: 35± 2°C 2. THE RATIO OF SALT-WATER: 5% 3. THE SPRAY AMOUT OF SALT-WATER: 1~2ml/h 4. TIME: 48 HOURS	THE TESTING STANDARD BASED ON BUBBLE, CRACK,AND MAGNIFYING GLASS WITH GAUGE.

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY
11-078	04/29/11	H	ADD "PATENTED" MARKING ON TOP COVER	BM	AL
10-283	11/19/10	G	ADD THREE PAGES AND CHANGE THE MATERIALS	BM	AL
10-186	08/02/10	F	CHANGED THE 4 PARTS WHICH HAVE MARKED	BM	AL
09-233	09/03/09	E	ADD TO THE PACKAGING AND REVISED SOME WORDS	BM	JY
09-039	3/13/09	D	CHANGED FULL TRAVEL DIMENSION FROM 5.8mm±0.5 TO 5.84mm MIN.	BM	JY
09-009	2/10/09	C	CHANGED THE TOLERANCE OF PRE-TRAVE AND CORRECTED SPELLING ERRORS	BM	Luke
09-004	1/16/09	B	CHANGED THE DRAWING TO NEW PRINT	BM	BY
08-360	11/25/08	A	CHANGED THE DRAWING TO NEW PRINT	BM	JY

PROJECTION



SCALE N/A

TOLERANCE EXCEPT AS NOTED

DEC. MILLIMETERS N/A

ANG. N/A

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

TITLE: INTRUSION SWITCH, N.C. PCB MOUNT-RoHS COMPLIANT

DR.	DATE	REF.	SHEET
Jin	09/17/08	P/N: RS332BP-NL	2 OF 4

CK.	PRE-	DRAWING NO.	SIZE	REV.
BM	SW	3501	F	H

THIS DOCUMENT IS OWNED BY, AND THE INFORMATION CONTAINED IN IT IS PROPRIETARY TO, RDI, BY RECEIPT HEREOF THE HOLDER AGREES NOT TO USE THE INFORMATION AND NOT TO DISCLOSE IT TO ANY THIRD PARTY, NOR REPRODUCE THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF RDI, AND AGREES TO RETURN THIS DOCUMENT FORTHWITH UPON REQUEST.

DWG. NO. SW-3501-F REV. "H"

PART NO. RS332BP-NL

ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
12	HSF	REFER RoHS STANDARD: THE ELECTRONIC ELECTRICAL MACHINERY PRODUCT LIMITS WIHT SIX BIG CHEMICAL MATERIALS.	Cd:100ppm Pb:1000ppm Cr6+:1000ppm PBB、PBDE:1000ppm

5. WAVE SOLDERING CONDITIONS:

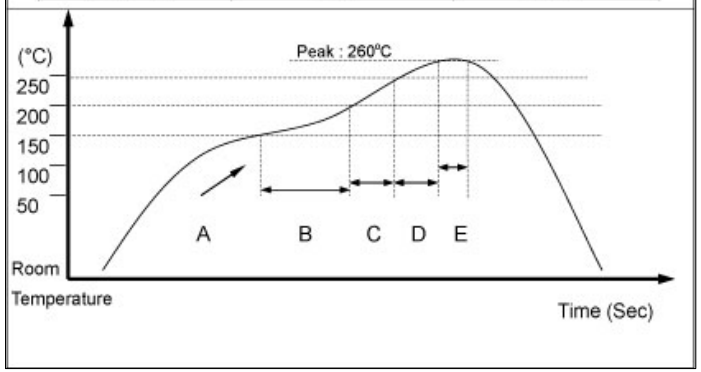
5.1 MANUAL SOLDERING

SOLDERING TEMPERATURE	MAX. 350°C
CONTINUOUS SOLDERING TIME	MAX. 3 SECONDS

5.2 REFLOW SOLDERING:

Temperature Profile

Zone	Room Temperature	Time (Sec)
Pre-heat (A)	150°C	Min 120s
Soak (B)	180°C ~ 200°C	Min 150s
Peak (C)	200°C ~ 235°C	Min 30s
Peak (D)	235°C ~ 260°C	Min 40s
Peak (E)	260°C	Max 5s

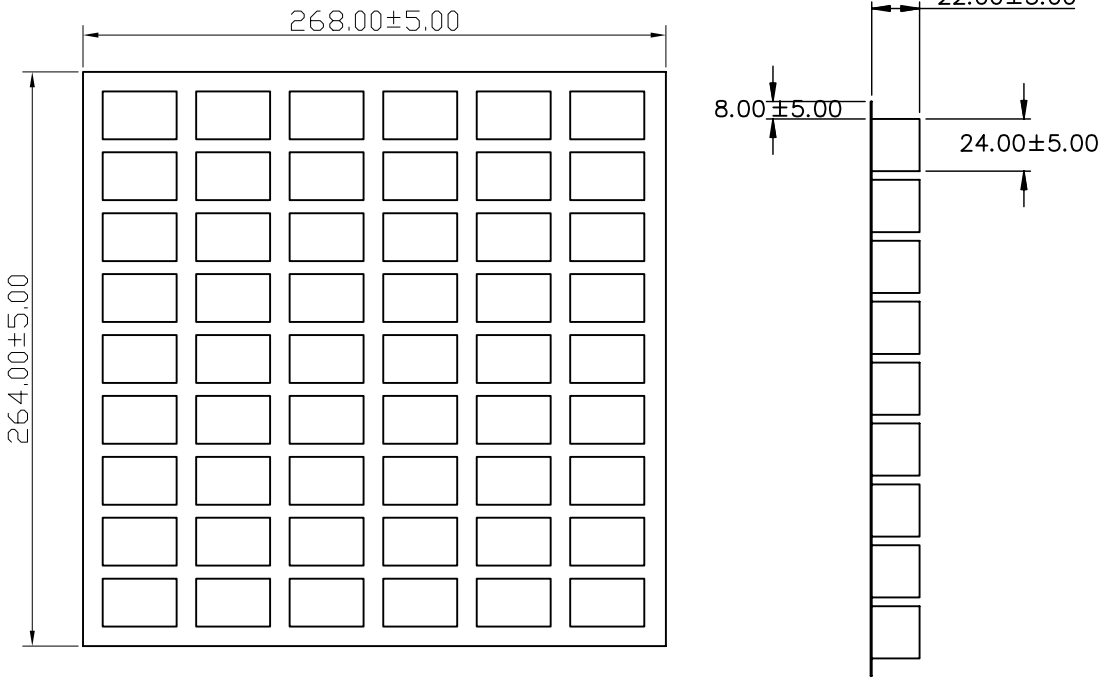


5.3 SOLDERABILITY

DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
SOLDERABILITY	1) THROUGH HOLE SOLDERING TEMPERATURE 245±3℃ LEAD-FREE SOLDER M705E JIS Z3282 A (TIN 96.5% SILVER 3% COPPER 0.5%) 2) FLUX 5~10 SEC 3) DURATION OF SOLDER IMMERSION 5±1 SEC	COVERAGE OF SOLDER AFTER DIP MUST BE 95% OF CONTACT SURFACE.

■ PRECAUTIONS IN HANDLING

CARE SHOULD BE EXERCISED SO THAT FLUX FROM THE UPPER PART OF THE PRINTED CIRCUIT BOARD DOES NOT ADHERE TO THE SWITCH.



ECN#	DATE	SYM	REVISION RECORD	AUTH	BY
11-078	04/29/11	H	ADD "PATENTED" MARKING ON TOP COVER	BM	AL
10-283	11/19/10	G	ADD THREE PAGES AND CHANGE THE MATERIALS	BM	AL
10-186	08/02/10	F	CHANGED THE 4 PARTS WHICH HAVE MARKED	BM	AL
09-233	09/03/09	E	ADD TO THE PACKAGING AND REVISED SOME WORDS	BM	JY
09-039	3/13/09	D	CHANGED FULL TRAVEL DIMENSION FROM 5.8mm±0.5 TO 5.84mm MIN.	BM	JY
09-009	2/10/09	C	CHANGED THE TOLERANCE OF PRE-TRAVE AND CORRECTED SPELLING ERRORS	BM	Luke
09-004	1/16/09	B	CHANGED THE DRAWING TO NEW PRINT	BM	BY
08-360	11/25/08	A	CHANGED THE DRAWING TO NEW PRINT	BM	JY

PROJECTION

SCALE N/A

TOLERANCE EXCEPT AS NOTED
DEC. MILLIMETERS
0.00: ±0.05mm
0.0: ±0.10mm
ANG. ±1°

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

TITLE: INTRUSION SWITCH, N.C. PCB MOUNT-RoHS COMPLIANT

DR.	DATE	REF.	SHEET
Jin	09/17/08	P/N: RS332BP-NL	3 OF 4
CK.	PRE-	DRAWING NO.	SIZE
BM	SW	3501	F

REV. H

THIS DOCUMENT IS OWNED BY, AND THE INFORMATION CONTAINED IN IT IS PROPRIETARY TO, RDI, BY RECEIPT HEREOF THE HOLDER AGREES NOT TO USE THE INFORMATION AND NOT TO DISCLOSE IT TO ANY THIRD PARTY, NOR REPRODUCE THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF RDI, AND AGREES TO RETURN THIS DOCUMENT FORTHWITH UPON REQUEST.

DWG. NO. SW-3501-F REV. "H"

PART NO. RS332BP-NL

THE SUMMARY OF QUALIFICATION TEST RESULTS

TEST DESCRIPTION	REQUIREMENTS	RESULTS			RATE
TEST VIBRATION	SHALL BE VIBRATED IN ACCORDANCE WITH METHOD 201 A OF MIL-STD-202F 1).FREQUENCY:10-55-10HZ IN 1-MIN/CYCLE. 2).DIRECTION:3 VERTICAL DIERCTIONS INCLUDING THE DIERCTIONS OF OPERATION 3). TEST TIME:2 HOURS EACH DIRECTION.	PASSED THE SPECIFIED REQUIREMENTS			PASS
A) LOW LEVER CONTACT RESISTANCE	INITIAL RESISTANCE 50 MILLI-OHM MAXIMUM	sample 1	sample 2	sample 3	PASS
		6.38	8.12	8.42	
	TESTING FINISHED 50 MILLI-OHM MAXIMUM	7.42	8.49	9.22	
		UNIT:mΩ			
B) INSULATION RESISTANCE	100 MEGOHMS MINIMUM	EXCEEDED THE SPECIFIED REQUIREMENT			PASS
C) DIELECTRIC WITHSTANDING VOLTAGE	A 250VAC IS APPLIED FOR 1 MINUTE. THERE SHALL BE NO EVIDENCE OF ARCING OR BREAKDOWN	PASSED THE SPECIFIED REQUIREMENT			PASS
D) ACTUATION FORCE	FORCE:250±50GRAMS	sample 1	sample 2	sample 3	PASS
	INITIAL FORCE	252	235	223	
	TESTING FINISHED	249	226	234	
		UNIT:GRAMS			

TEST DESCRIPTION	REQUIREMENTS	RESULTS			RATE
TEST SHOCK	SHALL BE SHOCKED IN ACCORDANCE WITH METHOD 213B CONDITION A OF MIL-STD-202F 1).ACCELERATION:50g 2).ACTION TIME:11±1m/seconds 3).TEST DIRECTION:6 SIDES 4). TEST CYCLE:3 TIMES IN EACH DIRECTION.	PASSED THE SPECIFIED REQUIREMENTS			PASS
A) LOW LEVER CONTACT RESISTANCE	INITIAL RESISTANCE 50 MILLI-OHM MAXIMUM	sample 1	sample 2	sample 3	PASS
		7.25	8.10	7.33	
	TESTING FINISHED 50 MILLI-OHM MAXIMUM	8.12	8.23	7.95	
		UNIT:mΩ			
B) INSULATION RESISTANCE	100 MEGOHMS MINIMUM	EXCEEDED THE SPECIFIED REQUIREMENT			PASS
C) DIELECTRIC WITHSTANDING VOLTAGE	A 250VAC IS APPLIED FOR 1 MINUTE. THERE SHALL BE NO EVIDENCE OF ARCING OR BREAKDOWN	PASSED THE SPECIFIED REQUIREMENT			PASS
D) ACTUATION FORCE	FORCE:250±50GRAMS	sample 1	sample 2	sample 3	PASS
	INITIAL FORCE	244	238	241	
	TESTING FINISHED	240	229	245	
		UNIT:GRAMS			

ECN#	DATE	SYM	REVISION RECORD	AUTH	BY
11-078	04/29/11	H	ADD "PATENTED" MARKING ON TOP COVER	BM	AL
10-283	11/19/10	G	ADD THREE PAGES AND CHANGE THE MATERIALS	BM	AL
10-186	08/02/10	F	CHANGED THE 4 PARTS WHICH HAVE MARKED	BM	AL
09-233	09/03/09	E	ADD TO THE PACKAGING AND REVISED SOME WORDS	BM	JY
09-039	3/13/09	D	CHANGED FULL TRAVEL DIMENSION FROM 5.8mm±0.5 TO 5.84mm MIN.	BM	JY
09-009	2/10/09	C	CHANGED THE TOLERANCE OF PRE-TRAVE AND CORRECTED SPELLING ERRORS	BM	Luke
09-004	1/16/09	B	CHANGED THE DRAWING TO NEW PRINT	BM	BY
08-360	11/25/08	A	CHANGED THE DRAWING TO NEW PRINT	BM	JY

PROJECTION

SCALE N/A

TOLERANCE EXCEPT AS NOTED
DEC. MILLIMETERS
0.00: ±0.05mm
0.0: ±0.10mm
ANG. ±1°

RDI Research Develop Innovate

RDI, Inc. 333 North Bedford Road, Suite 135, Mount Kisco, NY 10549

TITLE: INTRUSION SWITCH, N.C. PCB MOUNT-RoHS COMPLIANT

DR.	DATE	REF.	SHEET
Jin	09/17/08	P/N: RS332BP-NL	4 OF 4

CK.	PRE-	DRAWING NO.	SIZE	REV.
BM	SW	3501	F	H

THIS DOCUMENT IS OWNED BY, AND THE INFORMATION CONTAINED IN IT IS PROPRIETARY TO, RDI, BY RECEIPT HEREOF THE HOLDER AGREES NOT TO USE THE INFORMATION AND NOT TO DISCLOSE IT TO ANY THIRD PARTY, NOR REPRODUCE THIS DOCUMENT WITHOUT THE WRITTEN CONSENT OF RDI, AND AGREES TO RETURN THIS DOCUMENT FORTHWITH UPON REQUEST.