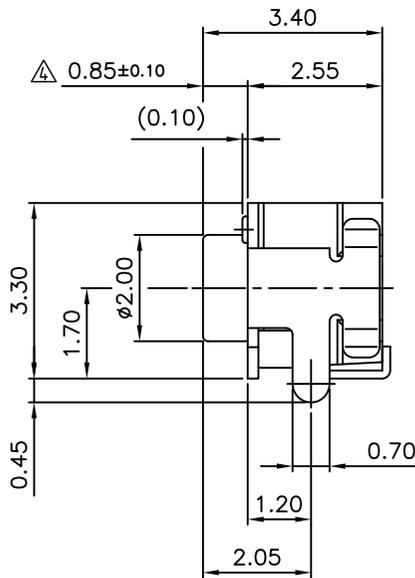
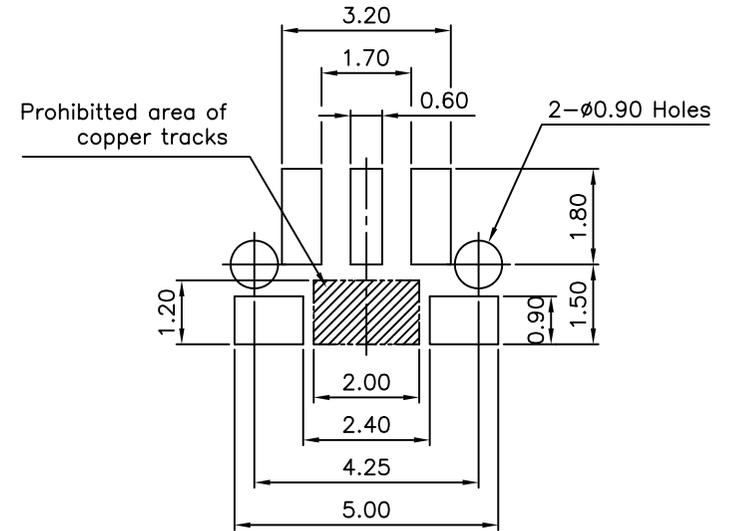
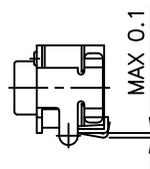


MODEL	ERP CODE	O/FORCE	STEM COLOR
JTP 1133R	110011133034	160 ± 50gf	IVORY
JTP 1133HR	110011133057	80 ± 40gf	GRAY
JTP 1133RE	110011133070	160 ± 50gf	RED

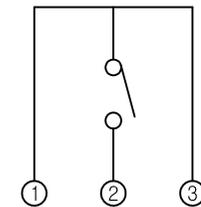


NOTE

1. RATING : 50mA , 12VDC
2. CONTACT RESISTANCE : 500mΩ Max
3. TRAVEL : 0.2 ±0.1mm
4. LIFE CYCLES : 100,000 CYCLES
5. GENERAL TOLERANCE : ±0.3
6. MANUFACTURING SPECIFICATION WOULD BE ACCORDANCE WITH JT0141-LF
7. TER' AND TER' VARIATION HAVE TO BE IN 0.1mm AFTER TER' BENDING



P.C.B MOUNTING SOLDER LAND DIMENSION



CIRCUIT DIAGRAM

RevNo	Revision note	Date	Signature	Checked
△	모델 파생	2009.07.22	L.F	
△	사양 추가	2008.12.10	U.H.KIM	
△	설계 변경	2008.07.24	U.H.KIM	
△	모델 파생	2008.07.03	U.H.KIM	
△	Ter'l 형상 혼돈에 따른 도면변경	2007.11.22		
△	T/Case Ter'l 형상 현실화 [ 도면 Redrawing ]	2007.04.16		

Item		material etc		SWITCH KOREA	
Designed by	U.H.KIM	Checked by	M.W.SHIN	Approved by	T.H.OH
Filename		Date	2008.12.10	Scale	10/1
MODEL NAME	TACT SWITCH		PART NAME	ASS'Y DIAGRAM	
MODEL NO	JTP-1133R SERIES		CODE NO.	Edition	3
				Sheet	1/1

	SPECIFICATION	Page : 1 / 4
	TACT SWITCH	

1. GENERAL

1.1 Application : This specification is applied to current circuit tactile switch for electronic equipment.

 1.2 Operating Temperature Range : -40℃ ~ 85℃, 45 ~ 85% RH

1.3 Storage temperature range : -30 ~ 80℃ However, 96 hours maximum for continuous storage  
over a range -20 ~ -30℃ and a range 70 ~ 80℃

1.4 Test Conditions : The standard test conditions shall be 5℃ ~ 35℃ in temperature,  
45 ~ 85% RH and 860~1060mbar in atmospheric pressure. Should any doubt  
arise in judgment, tests shall be conducted at 20±2℃,  
65±5% RH and 860~1060mbar.

2. RATED VOLTAGE AND CURRENT

DC 12V 50mA

3. ELECTRIC PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
3.1	Contact arrangement		*1 pole, 1 throw
3.2	Contact resistance	Measured at DC 5V 10mA or by ohmmeter allowing a small current at 1KHz with 150% of Actuating force.	*less than 500mΩ
3.3	Insulation resistance	DC 100V is applied between terminals and between terminals and cover for 1 minute ± 5 seconds.	*greater than 100MΩ
3.4	Dielectric strength	AC 250V (50~60Hz) is applied between terminals and between terminals and cover for 1 minute.	*No insulation defect shall be observed.
3.5	Bounce	Measured by lightly striking the center of the stem at a rate of 3 operations/sec..	*less than 5m sec.

						APPD	CHKD	DSGD	TITLE
작동온도 변경		08.06.26			m.j.kim				DOCUMENT
ZONE	SYMB	DATE	APPD	CHKD	DSGD				NO. JT0141-LF

	SPECIFICATION	Page : 2 / 4
	TACT SWITCH	

#### 4. MECHANICAL PERFORMANCE

	PROPERTY	TEST CONDITIONS	PERFORMANCE
4.1	Actuating force	A gradually increasing load is applied to the center of the stem.	*As per individual manufactured drawing.
4.2	Return force	After actuating, the load gradually decreased until the stem returns to its free position.	*greater than 50gf.
4.3	Stop strength	A static force of 3Kgf shall be applied to the direction of operation for 3 seconds.	*Shall be free from mechanical and electrical abnormalities.
4.4	Stem withdrawal force	A static load of 500gf is applied to the direction of pulling for 3 seconds.	*Shall be free from mechanical and electrical degradation.
4.5	Solderability	Dip in the solder bath of temperature $230 \pm 2^{\circ}\text{C}$ for $2 \pm 0.5$ (sec) after dipping in the flux of room temperature for 5 sec to 10 sec.  The solder shall be covered on 90% min of dipping area on the plating surface.	
4.6	Travel		*As per individual manufactured drawing.
4.7	Arrangement of action		*Tactile feed-back.

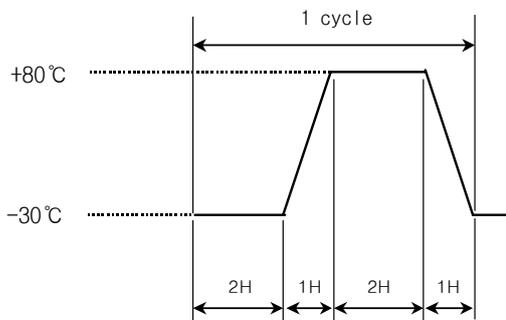
#### 5. DURABILITY

	PROPERTY	TEST CONDITIONS	PERFORMANCE
5.1	Operating life	*100,000 cycle operation with a load of 150% of Actuating force at a rate of 15 ~ 20 cycles/min. with a resistive load supplying DC 12V 50mA	*Contact resistance : 500mΩ max. *Bounce : 20m sec max. *Actuating force : Within $\pm 30\%$ of the initial value.
5.2	Shock resistance	An impact load of 30g is applied according to the method 205. MIL-STD 202.	*The requirement in item 3 and 4 shall be met.

						APPD	CHKD	DSGD	TITLE
									DOCUMENT
ZONE	SYMB	DATE	APPD	CHKD	DSGD				NO. JT0141-LF

	SPECIFICATION	Page : 3 / 4
	TACT SWITCH	

6. WEATHER PROOF

	PROPERTY	TEST CONDITIONS	PERFORMANCE
6.1	Cold Heat Proof	After testing at $-30^{\circ}\text{C}$ for 96hrs. The sample is allowed to stand under normal temperature and humidity conditions for 1 hour and measurement is performed within 1hour after that. Water drops should be wiped off.	*The requirement in item 3 and 4 shall be satisfied.
6.2	Dry Heat Proof	After testing at $85^{\circ}\text{C}$ for 96hrs. The sample is allowed to stand under normal temperature and for 1 hour and measurement is performed within 1hour after that.	*The requirement in item 3 and 4 shall be satisfied.
6.3	Damp Heat Proof	After testing at $60\pm 2^{\circ}\text{C}$ and 90~95% in relative humidity for 96hrs, the sample is allowed to stand under normal temperature and humidity conditions for 1 hour and measurement is performed within 1 hour after that. Water drops should be wiped off.	*Insulation resistance : 10M $\Omega$ min. *Dielectrid strength : same as item 3.4 *Contact resistance : same as item 3.2
6.4	Thermal cycling	 <p>After the test contacted under 5cycles, the sample is allowed to stand under normal temperature and humidity conditions for 1 hour, and the measurement is performed within 1 hour.</p>	*The requirement in item 3 and 4 shall be met.

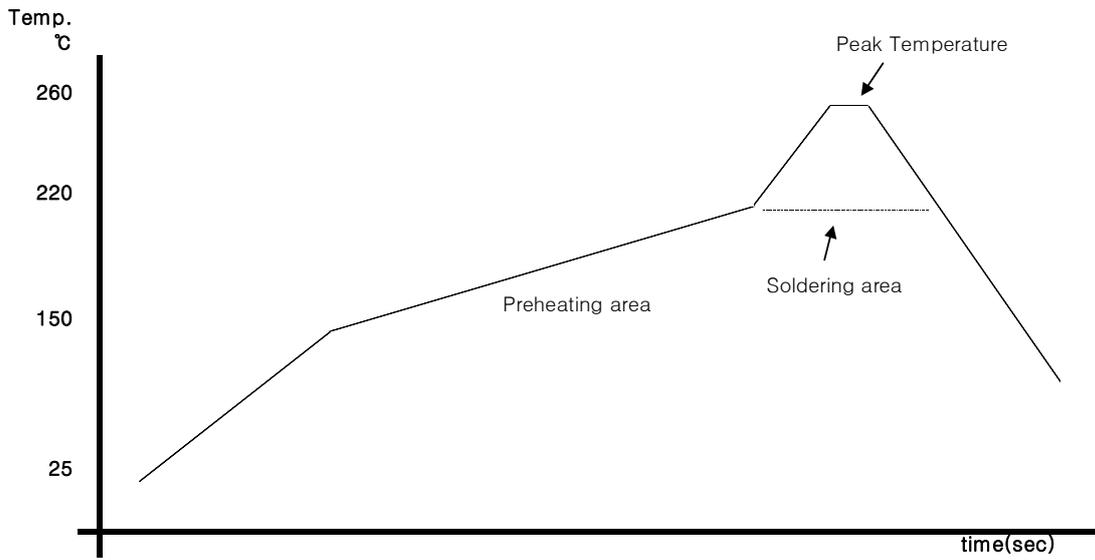
						APPD	CHKD	DSGD	TITLE
									DOCUMENT
ZONE	SYMB	DATE	APPD	CHKD	DSGD				NO. JT0141-LF

	SPECIFICATION	Page : 4 / 4
	TACT SWITCH	

7. SOLDERING CONDITIONS

7.1 Reflow soldering conditions

- 1) Preheat ----- 150°C ~ 200°C, 120 ±20 (sec)
- 2) Peak temperature --- 260°C max. 10 (sec)
- 3) Soldering area temperature ----- 217°C, 90 ~ 120 (sec), 2 times (MAX)



< Temperature profile >



7.2 Manual soldering conditions

- 1) Soldering temperature : less than 350°C.
- 2) Soldering time : Within 3 seconds

						APPD	CHKD	DSGD	TITLE
Soldering 사항추가	⚠	07.05.09							DOCUMENT
ZONE	SYMB	DATE	APPD	CHKD	DSGD				NO. JT0141-LF

# 재 질 증 명 서

## (CERTIFICATION OF MATERIAL)

결 재	작 성	검 토	승 인
			

일 자                    2009년 05월 08일  
DATE

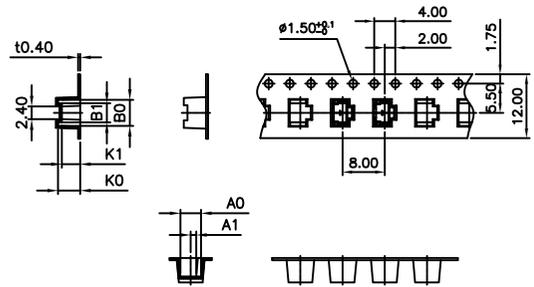
제품명                 TACT SWITCH  
ITEM

제품 번호             JTP-1133R  
MODEL No.

상기 제품은 하기재료를 사용하고 있음을 증명합니다.  
(The above item is certified to use with following materials.)

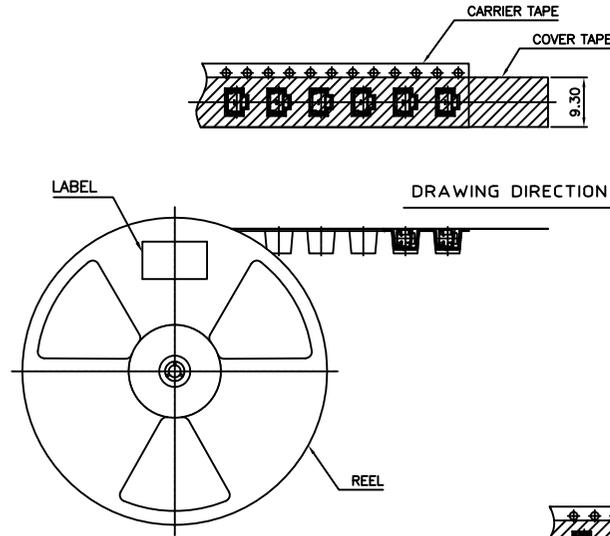
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		Material name	Treatment	Manufacturer	Nationality			
1	CASE	PPA		SOLVAY	USA	UL 94V0	E95746	BLACK
2	BRACKET	TIN PLATE	Sn Plating	DONG BU	KOREA			
3	STEM	PPA		SOLVAY	USA	UL 94HB	E95746	NATURAL (IVORY)
4	TERMINAL	BRASS	Ag Plating	POONG SAN	KOREA			
5	CONTACT	STAINLESS STEEL	Ag Clad	TOYO SEIHAKU	JAPAN			
6								
7								
8								
9								
10								
11								
12								
13								
14								

× THE DIMENSION OF CARRIER TAPE, COVER TAPE AND REEL ×

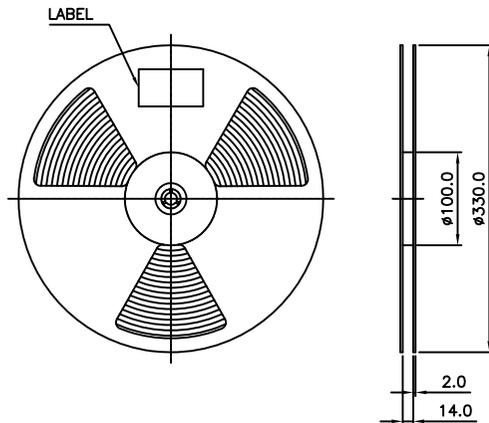


$\pm$	$\phi D$	$\bar{A}_i$	$\frac{1}{2}\phi$
	A0	3.9±0.1 mm	
	A1	1.05±0.1 mm	
	B0	4.9±0.1 mm	
	B1	3.6±0.1 mm	
	K0	4.2±0.1 mm	
	K1	3.5±0.1 mm	

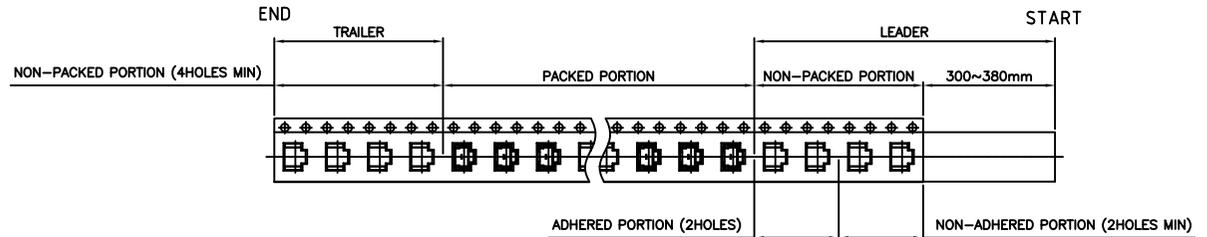
× THE DIRECTION OF PILOT HOLES ×



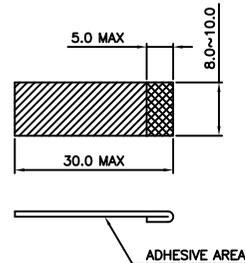
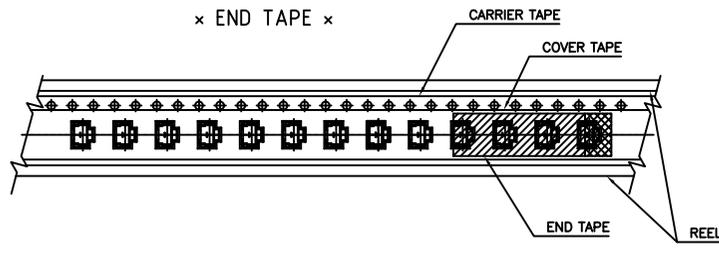
MODEL	CODE NO.	REMARKS
JTP 1133REM	110011133035	
JTP 1133RNEM	110011133037	
JTP 1133HREM	110011133058	
JTP 1133HRNEM	110011133060	
JTP 1133REEM	110011133071	



× THE SPECIFICATION FOR PACKAGING ×



× END TAPE ×



NOTE  $\Delta$  2,000

- 3,000 PCS SWITCHES PER 1 REEL
- GENERAL TOLERANCE :  $\pm 0.1$
- MATERIAL : CARRIER TAPE-POLYPROPYLENE,PC OR POLYSTYRENE  
COVER TAPE-POLYESTER  
REEL-ABS  
END TAPE COLOR-GREEN OR IVORY

RevNo	Revision note	Date	Signature	Checked
$\Delta$	Pocket 형상변경 및 포장수량 현실화 [ 도면 Redrawing ]	2007.04.16		

Item		material etc		SWITCH K O R E A	
Designed by	G.S.KIM	Checked by	T.H.OH	Approved by	Filename
MODEL NAME	TACT SWITCH		PART NAME EMBOSSED TAPE ASS'Y		
MODEL NO	JTP-1133R SERIES		CODE NO.	Edition	Sheet
				1	1/1