



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

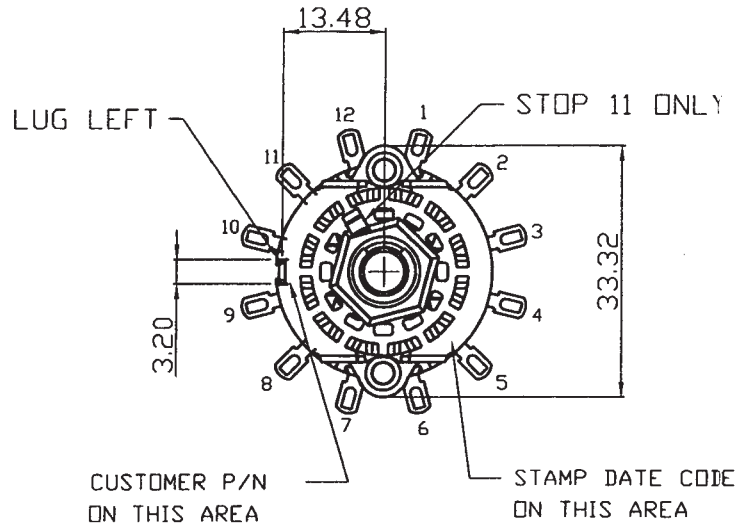
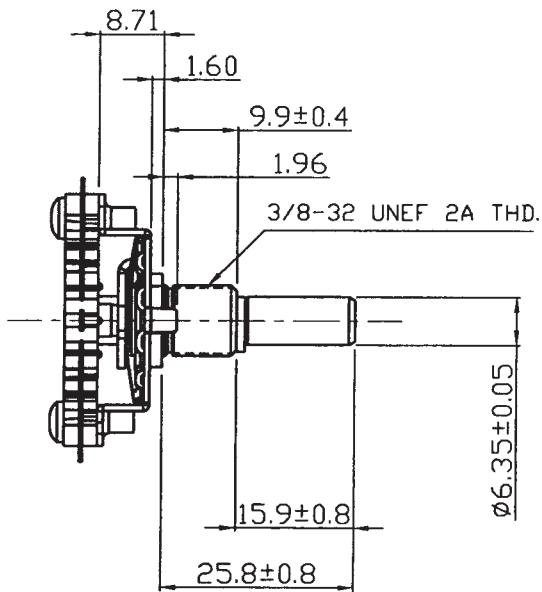
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Email & Skype: info@chipsmall.com Web: www.chipsmall.com

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



UNIT : MM



POSITION :		11					
POSITION	CHECK BETWEEN TERMINALS	OPEN	CLOSED	POSITION	CHECK BETWEEN TERMINALS	OPEN	CLOSED
11	12 - 11	X					
10	12 - 10	X					
9	12 - 9	X					
8	12 - 8	X					
7	12 - 7	X					
6	12 - 6	X					
5	12 - 5	X					
4	12 - 4	X					
3	12 - 3	X					
	12 - 1	X					
2	12 - 2	X					
	12 - AD	X					
1	12 - 1		X				
POSITION	CHECK BETWEEN TERMINALS	OPEN	CLOSED	POSITION	CHECK BETWEEN TERMINALS	OPEN	CLOSED
CIRCUIT				CONNECTIONS			

NOTES :

1. DIMENSIONS FOLLOWED BY REF. ARE FOR INFORMATION PURPOSES ONLY AND WILL NOT GOVERN INSPECTION OR PRODUCTION OPERATION
2. LOCK WASHER , MOUNTING NUT & ADJUST STOP MUST BE SHIPPED SEPARATELY (UNASSEMBLED) FROM SELECTOR SWITCH  
LOCKWASHER P/N 1220A  
MOUNTING NUT P/N 45T-3  
ADJUST STOP P/N 215-33-003-01-53
3. STOPS MUST BE LOCATED ON POSITION 11 ONLY
4. WAFER CONFORM TO 212-95-T31-00-00
5. SHORTING CONTACTS AT ALL POSITIONS
6. FOR ADDITIONAL REQUIREMENTS SEE CTS ENG. SPEC #EN-SPE-212001A

CTS COMPONENTS TAIWAN LTD.  
KAOHSIUNG, TAIWAN, ROC

CAD LIST : ACAD(A)-RDC-227  
FILE NAME : 111S332R

PART NO. 212T0111S332RA	REV	CUSTOMER : DIGI-KEY
SCALE : N/A	TOLERANCE UNLESS OTHERWISE SPECIFIED	DRAWN BY : C.E.Chen
CTS TYPE : 212-T212-1	.X (1 PLACE) : ± 0.3 .XX (2 PLACE) : ± 0.13 ANGLE : ± 1°	APPROVED BY : <i>Be Chen</i>
		CHECKED BY : <i>[Signature]</i>
		ISSUED DATE : 08/15/06

# CTS COMPONENTS TAIWAN, LTD.

<b>ENGINEERING SPECIFICATION</b>		SPEC NO. EN-SPE-212001A
SPECIFICATION : 212 SERIES SELECTOR SWITCH	DATE 03-19-02'	PAGE OF 1 OF 2

**1.0 GENERAL :**

- 1.0 THIS SPECIFICATION APPLIES TO THE SELECTOR SWITCH 212 SERIES  
( ROTARY TYPE ) STANDARD AND CUSTOMER CONFIGURATION
- 1.1 OPERATING TEMPERATURE RANGE : -20 °C TO +110 °C
- 1.2 STORAGE TEMPERATURE RANGE : -20 °C TO +110 °C

**2.0 MECHANICAL CHARACTERISTICS :**

- 2.1 INDEXING : DOUBLE BUMP SPRING HILL AND VALLEY DETENT WITH 30°  
INDEXING FOR 2 THROUGH 12 POSITIONS OR CONTINUOUS ROTATION
- 2.2 DETENT ROTATIONAL LIFE : 25,000 CYCLES THRU 12 POSITIONS AND RETURN  
AT 10 CYCLES PER MINUTE

TORQUE : AS REQUIRED UP TO 48 inch. oz ( 3.4 kg-cm )

- 2.3 STOP STRENGTH :  
STANDARD : 15 inch-lbs ( 17 kg-cm )

- 2.4 MATERIAL :  
SHAFT :  
 ALUM     BRASS     BRASS WITH NI-PLATED  
 BRASS WITH ZINC PLATED     \_\_\_\_\_

- BUSHING :  
 BRASS WITH NI-PLATED     BRASS WITH ZINC PLATED  
 BRASS \_\_\_\_\_

DETENT SPRING : STAINLESS STEELS ,OR SPRING BRASS DEPENDING ON TORQUE REQUIREMENT.

DETENT PLATE : STEEL

CONTACT : SILVER PLATED PHOSOPHER BRONZE

TERMINAL : SILVER PLATED BRASS STANDARD

STATOR : GLASS REINFORCED PPA UL FLAME CLASS 94V-0

ROTOR AND ROTOR COVER : NYLON 66 UL FLAME CLASS 94V-2

A	ITEM 4.0 ADDED	08-02-05	SM				
0	RELEASED	03-19-02	ML				
SYM	REVISION	DATE	BY	SYM	REVISION	DATE	BY

WRITTEN BY : S.M.TSAI  REVIEWED BY : H.Y.LIN  APPROVED BY : T.J.LEE	CUSTOMER : GENERAL  DISTRIBUTION :
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# CTS COMPONENTS TAIWAN, LTD.

<b>ENGINEERING SPECIFICATION</b>		SPEC NO. EN-SPE-212001A
SPECIFICATION : 212 SERIES SELECTOR SWITCH	DATE 03-19-02'	PAGE OF 2 OF 2

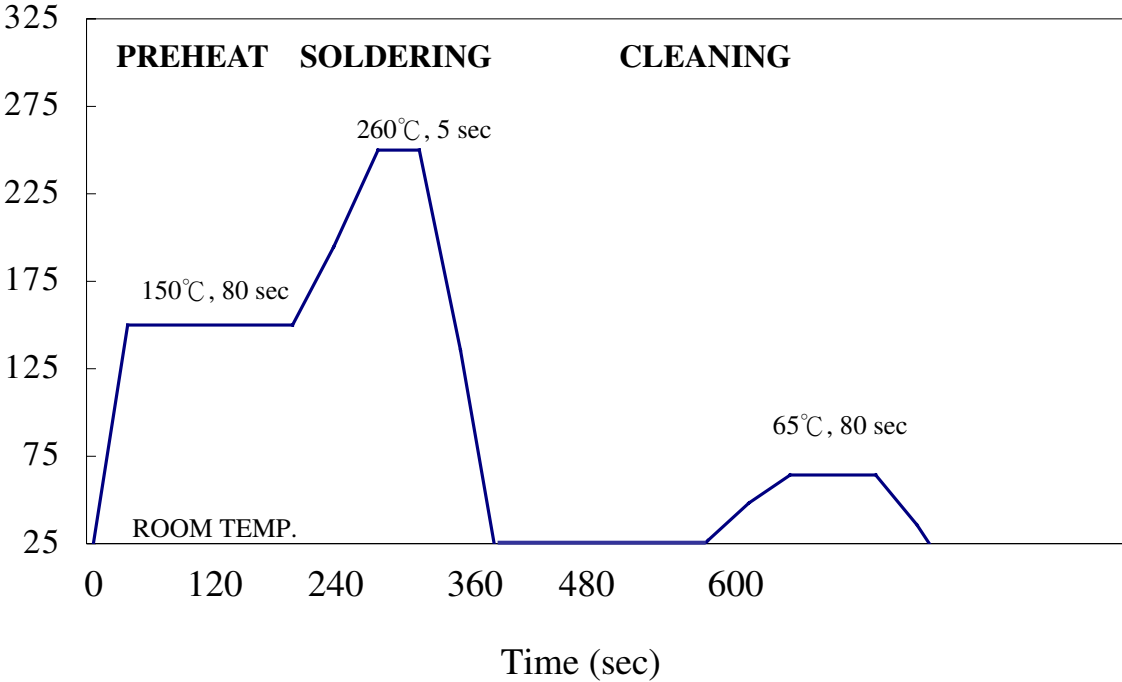
**3.0 ELECTRICAL CHARACTERISTICS :**

- 3.1 CONTACT RESISTANCE : 0.015 OHMS MAX MEASURED FROM ONE TERMINAL TO AN ADJACENT TERMINAL. ( WHEN IS NOT ADJACENT, UP TO 180° APART, WILL MEASURE MUCH HIGHER DUE TO THE EXTRA METAL IN THE CIRCUIT ) . THE CIRCUIT RESISTANCE CHECK MEASURE ALL THE METAL IN THE CIRCUIT.
- 3.2 CONTACT LIFE : ROTATION THROUGH 12 POSITIONS AND RETURN WITHOUT APPRECIABLE RISE IN CONTACT RESISTANCE  
UNLOADED : 50,000 CYCLES  
LOADED ( RESISTIVE ) : 10,000 CYCLES
- 3.3 RATING :  
¾ AMP @ 125 VAC  
¼ AMP @ 250 VDC ( SHORTING TYPE ONLY )  
½ AMP @ 125 VDC ( SHORTING TYPE ONLY )  
¼ AMP @ 28 VDC ( SPECIAL RATING)
- 3.4 HI POT TEST :  
BETWEEN ADJACENT 15 DEG. CIRCUITS : 750 VAC RMS FOR 1 MINUTE  
BETWEEN GROUND AND NEAREST TERMINAL : 1500 VAC FOR 1 MINUTE  
THE TEST VOLTAGE SHALL BE APPLIED BETWEEN ALL EVEN-NUMBERED CONTACTS TIED TOGETHER AND ALL ODD-NUMBERED CONTACTS TIED TOGETHER AND BETWEEN EACH OF THIS GROUP AND THE SWITCH FRAME FOR EACH SWITCH.

**4.0 RoHS COMPLIANCE :** THIS PART IS COMPLIANT WITH EU RoHS DIRECTIVE.

SYM	REVISION	DATE	BY	SYM	REVISION	DATE	BY
WRITTEN BY : S.M.TSAI				CUSTOMER : GENERAL			
REVIEWED BY : H.Y.LIN				DISTRIBUTION :			
APPROVED BY : T.J.LEE							

# 212 SOLDERING PROCESS



1. The temperature is referring to PC board, soldering or cleaning water temperature.