2TE DX T1 Series SPECIFICATION	Document No	QW-1002	REV：A
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1. Style：

This specification describes "Sealed Sub-Miniature Toggle Switches" mainly used as signal switch of electric devices, with the general requirements of mechanical and electrical characteristic.

Operating Temperature Range：-20℃~+85℃.

2. Contact Rating：

Gold Plating Standard：

Plating		Rating
R=Gold	Fixed Terminal：phosphor bronze gold-plated over nickel barrier. Movable contact：phosphor bronze gold-plated over nickel barrier.	Max. 48 V AC/DC, 0.4 VA / max. 50 mA.
G=Gold, pure-tin	Fixed Terminal：phosphor bronze gold-plated over nickel barrier, pure-tin. Movable contact：phosphor bronze gold-plated over nickel barrier.	

3. Type of Actuation：Sealed Sub-Miniature Toggle Switches.

4. Test Sequence：

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
ELECTRIC PERFORMANCE	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 gold plated contacts.	50mΩ Max.
	3	Insulation Resistance	Measurements shall be made following application of 500 V/ DC 100mA potential across terminals and cover for 1 minute.	1000MΩ min/500V
	4	Dielectric Withstanding Voltage	500 VAC(50Hz or 60Hz) shall be applied across terminals and cover for 1 minute.	There shall be no breakdown or flashover.

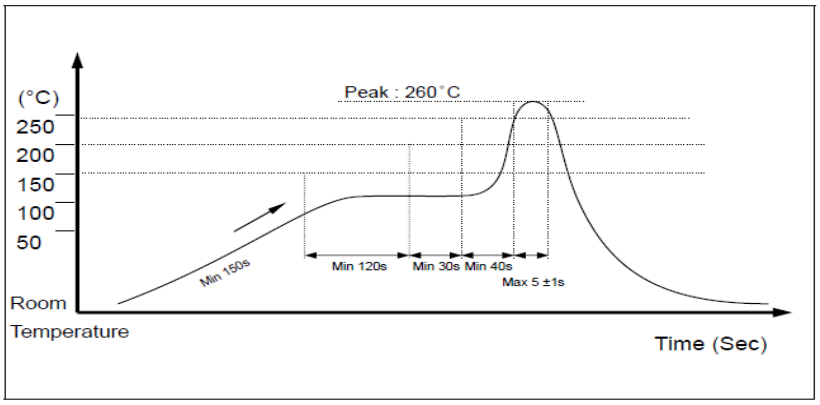
	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
MECHANICAL PERFRMANCE	5	Vibration	Shall be vibrated in accordance with Method 201A of MIL-STD-202F ①Frequency：10-55-10Hz in 1-min/cycle. ②Direction：3 vertical directions including the directions of operation. ③Test time：2 hours each direction.	As shown in item 2~4
	6	Shock	Shall be shocked in accordance with Method 213B condition A of MIL-STD-202F ①Acceleration：50g ②Action time：11±1m seconds. ③Testing Direction：6 sides. ④Test Cycle：3 times in each direction.	As shown in item 2~4
	7	Actuation Force	MODEL-1305N MECHANICAL TEST 500gram、1000gram、2000gram.	Please see the list as below.
OPERATING LIFE	8	Operating Life	Measurements shall be made following the test forth below： ① Max. 48 V AC/DC, 0,4 VA / max. 50mA resistive load—gold plated. ② Rate of Operation：6-8operation cycles per minute. ③ Electronics Life Test：40,000 cycles.	① Dielectric Strength：500 VAC (50Hz or 60Hz) for 1 Minute. ② Insulation Resistance：1000MΩ

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
HUMIDITY RESISTANCE	9	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： ①Temperature：-20±3℃. ②Time：96 hours.	As shown in item 1~4.
	10	Resistance High Temperature	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： ①Temperature：85±2℃ ②Time：96 hours.	As shown in item 1~4.
	11	Resistance Humidity	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： ①Temperature：40±2℃ ②Relative Humidity：90~95% ③Time：96 hours.	As shown in item 1~4.
	12	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： ①Temperature：35±2℃ ②The ratio of salt-water：5% ③The spray amount of salt- water：1~2 ml/h. ④ Time：48 hours.	The testing standard based on bubble, crack, and magnifying glass with gauge.

	ITEM	DESCRIPTION	TEST CONDITIONS	REQUIREMENTS
HUMIDITY RESISTANCE	13	Test of IP 67	Protected against the effects of Temporary immersion in water. (1m below the surface of the water for a duration of 30 min)	IP67 According to EN 60529：1991＋A1：2000 IEC 60529：2001
HSF	14	HSF	Refer RoHS Standard： The electronic electrical machinery product limits with six big chemical materials.	Cd：100ppm Pb：1000ppm Hg：1000ppm Cr6+：1000ppm PBB、PBDE：1000ppm
SOLDER HEAT RESISTANCE	15	WAVE SOLDERING	WAVE SOLDERING： ①Soldering Temperature：260±5℃. ②Duration of Solder Immersion： 5 seconds Max. ③Frequency of Soldering Process 2 times max.(PCB is 1.6mm in thickness)	①Shall be free from pronounced backlash and falling-off or breakage terminals ②As shown in item 2~4.

5. SOLDERING CONDITIONS：

Temperature Profile



■ 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.

6. Actuation Force List: (Actuator Type: T1)

2TE MODEL	2TE Function	POS.1 	POS.2 		POS.3 
2TED1	ON-NOME-ON	250±100gf			250±100gf
2TED2	ON-NOME-MOM	Max 600gf			
2TED3	ON-OFF-ON	Min 85gf	300±120gf		Min 85gf
2TED4	MOM-OFF-MON		Max 600gf		
2TED5	ON-OFF-MON	Min 85gf	250±100gf	Max 600gf	