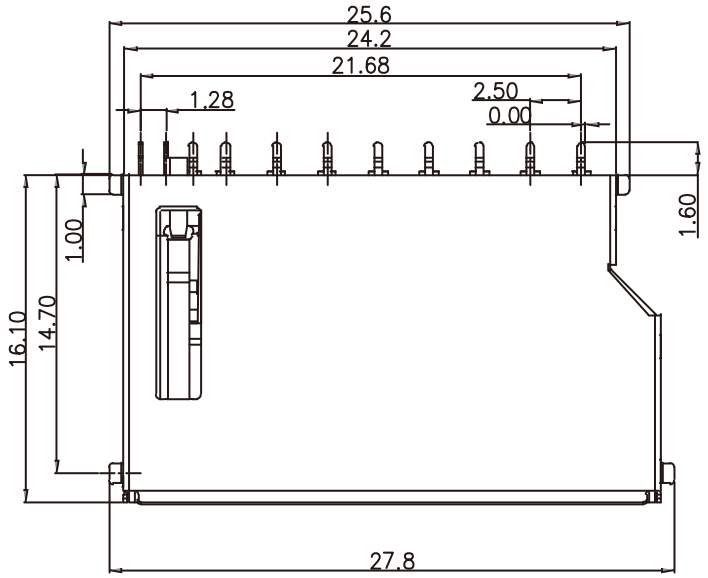
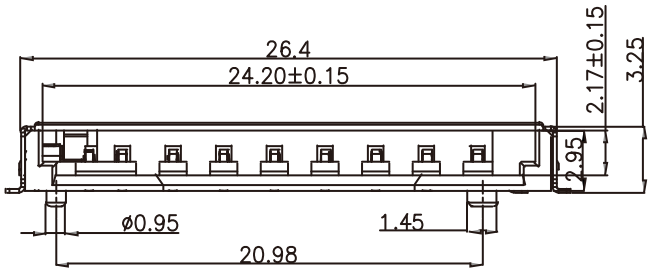
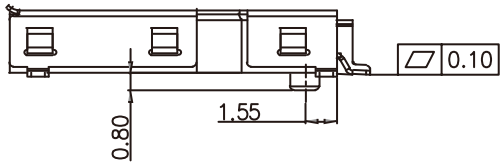






Specification

MATERIAL:

Insulator: High Temperature Thermoplastic, UL 94V-0.

Contact: Copper Alloy

PLATING:

Contact: Plated 50u" Ni Overall
Plated Au Selective Contact Area
Plated 100u" Sn Over Ni On Solder Area

Shell: Plated 80u" Ni Overall

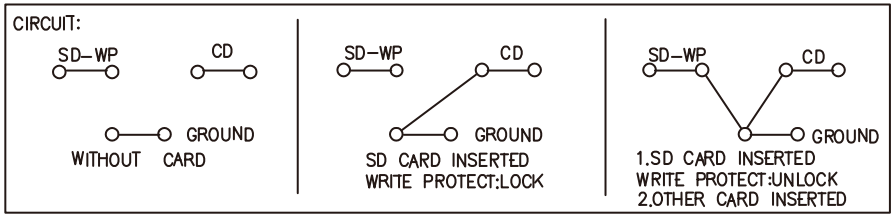
Electrical:

Current Rating :0.5A AC/DC max.
Voltage Rating :500V AC/DC
Ambient Temperature Range :-20°C~+60°C
Storage Temperature Range :-40°C~+70°C
Ambient Humidity Range :95% R.H. Max.
Contact Resistance:100mΩ max.
Insulation Resistance:1000MΩ min./500VDC
Mating Cycles:10,000 Insertions

Usable Memory Card:

SD&MMC&RS MMC Card

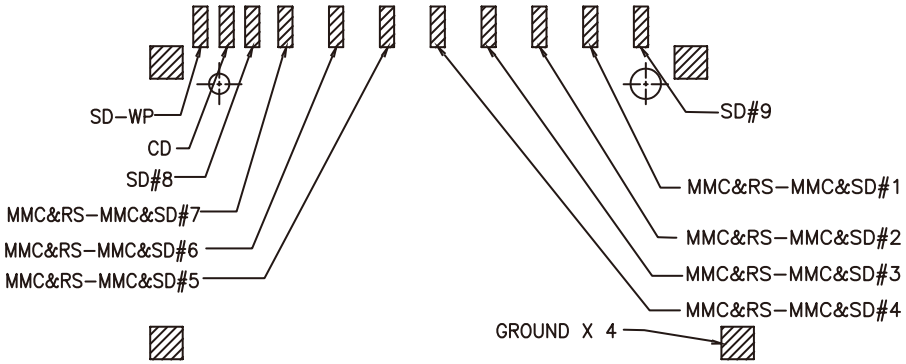
CIRCUIT:



UNLESS OTHERWISE SPECIFIED TOLERANCE				东莞市讯普电子科技有限公司	
UNIT: mm	DECIMAL	LINEAR	ANGLES		
	X.	±0.50	±5°		
	X.X	±0.25	±3°		
	X.XX	±0.12	±1°	www.xunpudianzi.com	
DRAWN	Fros	2014/12/12		DRAWN NAME: SD CONNECTOR	
CHECKED	Ron	2014/12/12			
APPROVED	Albert	2014/12/12		PRODUCT NO.	SD-101
		SHEET 1/2	SIZE A4		

NO.	DESCRIPTION	DRAWN	DATE
	SEE SHEE 1		

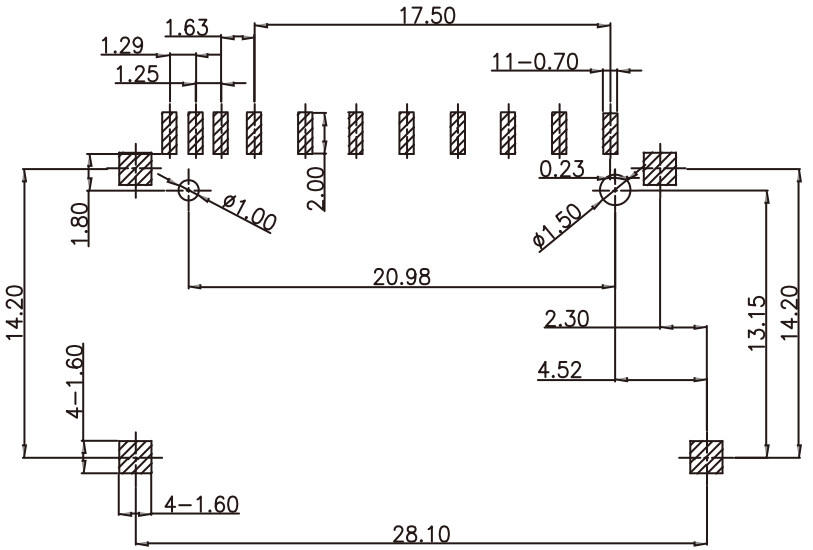
PIN ASSIGNMENT:



PIN NO.	MEMORY CARD PIN NO.
MMC&RS-MMC&SD#1	MMC&RS-MMC/SD-1 (CD/DAT3)
MMC&RS-MMC&SD#2	MMC&RS-MMC/SD-2 (CMD)
MMC&RS-MMC&SD#3	MMC&RS-MMC/SD-3 (VSS1)
MMC&RS-MMC&SD#4	MMC&RS-MMC/SD-4 (VDD)
MMC&RS-MMC&SD#5	MMC&RS-MMC/SD-5 (CLK)
MMC&RS-MMC&SD#6	MMC&RS-MMC/SD-6 (VSS2)
MMC&RS-MMC&SD#7	MMC&RS-MMC/SD-7 (DAT0)
SD#8	SD-8 (DAT1)
SD#9	SD-9 (DAT2)

RECOMMEND PCB LAYOUT:

(Unit:mm .X ± 0.15 .XX ±0.05 .XXX ± 0.02)



GENERAL TOLERANCE: ±0.05

UNLESS OTHERWISE SPECIFIED TOLERANCE				
UNIT:	DECIMAL	LINEAR	ANGLES	东莞市讯普电子科技有限公司
mm	X.	±0.50	±5°	
	X.X	±0.25	±3°	
	X.XX	±0.12	±1°	www.xunpudianzi.com
DRAWN	Fros	2014/12/12		DRAWN NAME: SD CONNECTOR
CHECKED	Ron	2014/12/12		
APPROVED	Albert	2014/12/12		PRODUCT NO. SD-101
		SHEET 2/2	SIZE A4	

1. SCOPE

This product specification contains the test method, the general performance and property for Memory Card connector (SD card socket connector).

2. General items:

2.1 Application

This specification applies to the SD/MMC memory card connector.

2.2 Operating Temperature Range: -25~60 ºC

2.3 Storage Temperature Range: -25~85 ºC

2.4 Test Conditions:

Unless otherwise specified, the tests and measurements are to be carried out in the following standard conditions.

Temperature:5~35 ºC

Relative Humidity:25~85%

Air pressure:86~106 Kpa

However, if doubts arise concerning judgments, perform under the following standard conditions.

Temperature:20±2 ºC

Relative Humidity:60~70%

Air Pressure:86~106 Kpa

3. PROPERTY

3.1 MATERIALS

Item	Standard
Housing	High Temperature Thermoplastic , UL 94V-0
Contact	Copper Alloy, Gold plating
Shell	Copper Alloy, Nickel plating

3.2 RATINGS

Item	Standard
Current Rating	0.5 A AC/DC Max.
Voltage Rating	250V AC/DC
Ambient Temperature Range	-20℃ ~ +60℃
Storage Temperature Range	-40℃ ~ +70℃
Ambient Humidity Range	95% R.H. Max.

Approved By :	lmg.Li	Checked By :		Written By :	
DATE :	08/05/15	DATE :		DATE :	

4. Test Methods and Requirements:

4.1 Electrical Performance:

Item	Test Description	Test Methods	Requirement
4.1.1	Contact Resistance	With regard to measurement, conductor resistance down to the soldered parts of the terminals are Included. Voltage: 20mV max. Current: 1mA With dummy card(PCB) attached. Apply 1mA,20mV MAX	Connector contacts 70 mΩ max.(Initail) 100mΩ max.(After test) Detection switch contact 100 mΩ max.(Initail) 140 mΩ max.(After test)
4.1.2	Insulation Resistance	Apply a voltage of DC 500V for 60±5 s to between adjacent terminals and measure.	1000MΩ min(Initail) 500 MΩ min(After test)
4.1.3	Dielectric Withstanding Voltage	Apply a voltage of AC 500V for 60±5 s to between adjacent terminals.	There must be no breakdown.
4.2 Mechanical Performance:			
4.2.1	Total Insertion Force/Total Pulling Force	Using a push-pull gage, perform insertion and removal at a speed of approximately 25+/-3mm/min.	Insertion Force: SD/MMC:4.0Kgf max Pulling Force: SD/MMC:0.1Kgf min
4.2.2	Contact Retention Force	Pull connectors at maximum rate of 25mm/minute	0.2Kgf mini per Contact
4.2.3	Durability	Mate / Unmate cycles at speed of 600 Cycles / Hour	One Connector repeated mating & unmating SD, MMC Card Total10,000 cycles. Contact Resistance: Shall meet 4.1.1

4.2.4	Shock test	Connecter shall be measured after following test. 1.Mounting method: normal mounting method 2.acceleration :490 m/S^2 3.duration:11 ms 4.test direction:6 directions 5.number of shocks:3 times per direction (18 times in total)	There must be no current distcontinuity of more than 0.1μs During the test.
4.2.5	Vibration test	Perform according to MIL-STD-202 test method 201A.(vibration frequency :10~55 Hz) Connect the terminals to make a circuit in series with the card inserted and conduct the test while conducting DC 1 mA 1.Vibration frequency range: 10~55 Hz 2.Total amplitude: 1.5mm 3.Sweep ratio: 10-55-10 Hz approx 1 min 4.Method of changing the sweep vibration frequency: logarithmic or linear 5.Direction of vibration: three perpendicular directions including. 6.Duration: 2 hour each.	There must be no current distcontinuity of more than 0.1μs During the test.
4.2.6	Themal shock test	In accordance with JIS C 0025, put the connector through 10 cycles of temperature change,10cycle consisiting of -40 ºC and 85 ºC for each 1 hour. perform measurements before the first cycle and after completion of the final cycle, outside the test chamber for between one and two hours.	Contact resistance: see 4.1.1 Insulation resistance: See 4.1.2 No physical damage must occur during the testing.
4.2.7	Insertion and removal test	In accordance with EIA-364-C class 1.1.Perform insertion and removal with memory stick for 12000 times and measure at a rate of between 400 and 600 times per hour. In accordance with EIA-364-C class 1.1.Perform insertion and removal with SD card for 10000 times and measure at a rate of between 400 and 600 times per hour.	Contact resistance: see 4.1.1 Insulation resistance: See 4.1.2 Change the card every 1000 times.

4.2.8	Drop Test	76cm Height one carton 6-sydes random dropping.	[Appearance] No abnormality [Function] OK
4.3 Environmental Performance:			
4.3.1	High temperature storage test	In accordance with MIL-STD-202 test method 108A.condition B. Leave the connector in a test chamber at 85 ºC for 96 hours. measure the sample before the start of the test and after completion, outside the Chamber for between one and two hours.	Contact resistance: see 4.1.1 Insulation resistance: See 4.1.2 No physical damage must occur during the testing.
4.3.2	Low temperature storage test	In accordance with JIS C 0020. Leave the connector in a test chamber at -40 ºC for 96 hours. Measure the sample before the start of the test and after completion, outside the chamber for between one and two hours water drops shall be removed.	Contact resistance: see 4.1.1 Insulation resistance: See 4.1.2 No physical damage must occur during the testing.
4.3.3	Humidity test	In accordance with MIL-STD-202 test method 103B,condition B. Leave the connector in a test chamber at 40 ºC and 90~95%(RH) for 96 hours. Measure the sample before the start of the test and after completion. Outside the chamber for between one and two hours. Water drops shall be removed.	Contact resistance: see 4.1.1 Insulation resistance: See 4.1.2 No physical damage must occur during the testing.
4.3.4	Salt Spray	Mate dummy card and expose them to the following environment in accordance MIL-STD-202F with, Method 101D, Condition B. Temperature : 35°C±2°C Relative Humidity : 95~98%RH Gas :5±1%(by weight) Duration : 8 hours	Connect Point Appearance No abnormality Contact Resistance see 4.1.1

4.4 Others

3.4.1	Solderability	Contact shall be immersed in solder photo with the condition as below. Solder temperature:245±5°C. Immersing time:3±1sec.	More then 95% of the dipped surface shall be wet and less than 5% of the pinhole that shall not gather at a point.
3.4.2	Resistance to Soldering Heat	1). Reflow part 250±10°C. Peak Above 217°C time about 60sec. 2). Pre-heat part 150 °C , 90~120sec. * Refer to reflow temperature profile. * The number of reflow is within 2 times. **Soldering iron method:** **Soldering time:3±0.5s Max.** **Soldering temperature:380±5°C**	No bnormality adversely affecting the performance shall not occur.

NOTE：Shall meet visual requirements , show no physical damages.

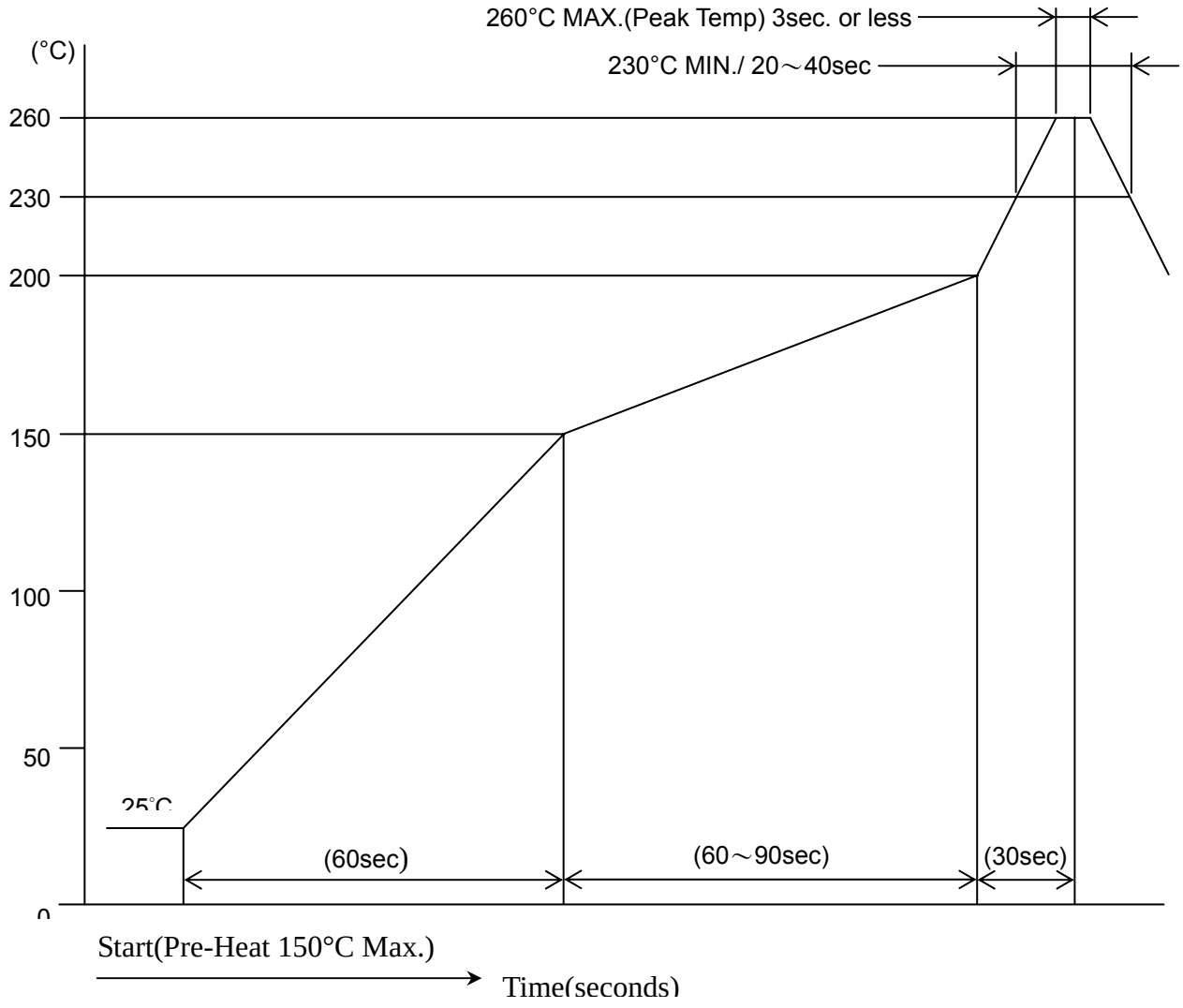
5. Reflow Profile for soldering heat resistance testing

Reflow Profile for soldering heat resistance testing		
Parameter	Mark	Major parts
Speed of temperature-raising		Not raise over 3℃ for each second
Temperature Min (Ts min) Temperature Max (Ts max) Time (ts min to ts max)	Ts min Ts max Ts	150℃ 200℃ 2~3minutes
Time of temperature over 217℃	t 1	60~150seconds
At the reflow area	t 3 T3	20~40 seconds (t 3) (T3)
At the highest temperature	T peak	See Table 3.3-1
Speed of temperature-decreasing		Not decrease over 6℃ for each second
Time from 25 ℃ to highest temperature		Not over 8 minutes

Table 4.0-1 Pb-free-Package Classification Reflow Temperatures

Package Thickness	Volume mm^3 ＜350	Volume mm^3 350-2000	Volume mm^3 ＞2000
＜1.6mm	260 + 0 ℃ *	260 + 0 ℃ *	260 + 0 ℃ *
1.6mm - 2.5mm	260 + 0 ℃ *	250 + 0 ℃ *	245 + 0 ℃ *
≧2.5mm	250 + 0 ℃ *	245 + 0 ℃ *	245 + 0 ℃ *

*Tolerance:The device manufacturer/supplier shall assure process compatibility up to and including the
stated classification temperature (this means Peak reflow temperature +0℃. For example 260℃+0℃)
at the rated MSL level.



TEMPERATURE CONDITION GRAPH
(TEMPERATURE ON BOARD PATTERN SIDE)

Test Item	Test Group														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
Appearance	1	1	1.6	1	1	1	1	1	1	1	1	1	1.3	1.3	
Contact Resistance		2.4	2.7	2.6	2.4	2.5	2.6	2.4	2.4	2.6	2.6	2.4			
Insulation Resistance			3.8	3.7		3.6	3.7			3.7	3.7				
Dielectric Withstanding Voltage			4.9	4.8			4.8			4.8	4.8				
Total Insert Force	2														
Total Pulling Force	3														
Contact Retention Force	4														
Durability		4													
Shock				5											
Vibration			5												
Thermal Shock					3										
Insertion Removal						4									
Drop							5								
High Temperature Life								3							
Cold Temperature Life									3						
Humidity (Steady State)										5					
Humidity (Cycling)											5				
Salt Spart												3			
Solderability													2		
Resistance to Soldering Heat														2	
Sample QTY	5	5	5	5	5	5	5	5	5	5	5	5	5	5	