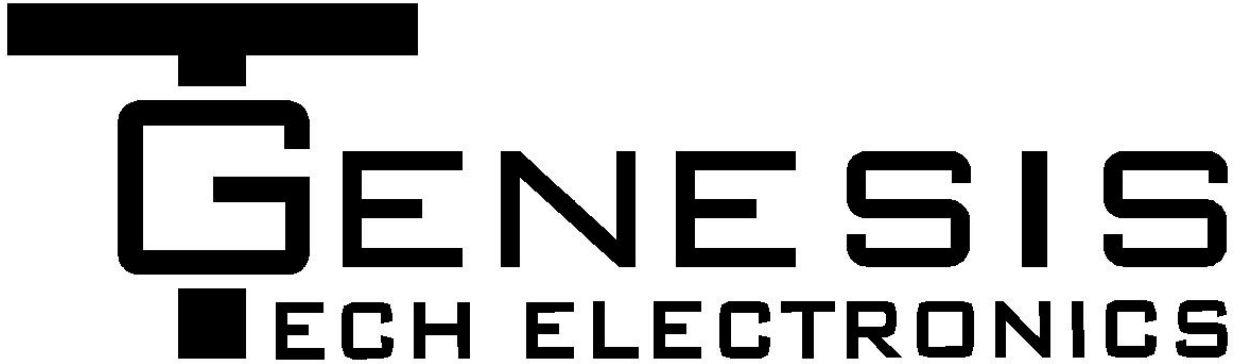


GENESIS TECH ELECTRONICS INC.

PRODUCT SPECIFICATION: GT23-250184

GENESIS PN: MSDV-2108



SPECIFICATION FOR APPROVAL

CUSTOMER:

CUSTOMER PART NO: 647-000373R60

PART NO: MSDV-2108-BK33T

REVISION: PSX3

DESCRIPTION: MICRO SD CARD CONNECTOR VERTICAL WITH PUSH TYPE

	MANUFACTURE SIGNATURE	CUSTOMER SIGNATURE
APPROVED BY:		
DATE:		

GENESIS TECH ELECTRONICS INC.

7F-1, No. 191, Sec. 2, Chung-Yang Rd.,

Tu-Cheng City, Taipei Hsien, Taiwan

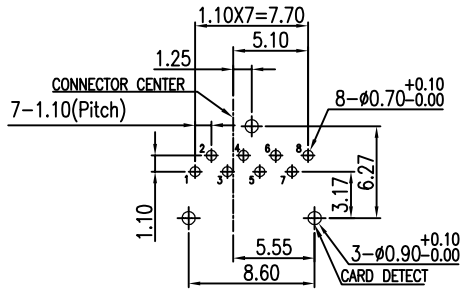
TEL: +886-2-2262-0027

FAX: +886-2-2274-7954

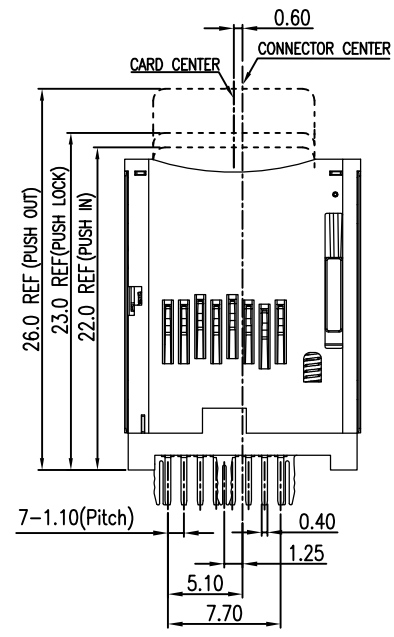
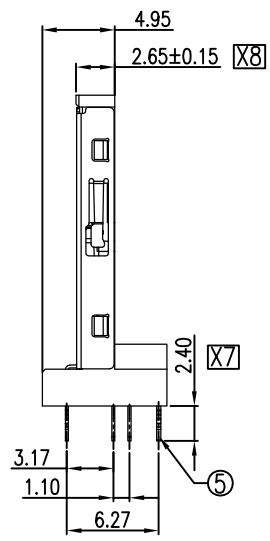
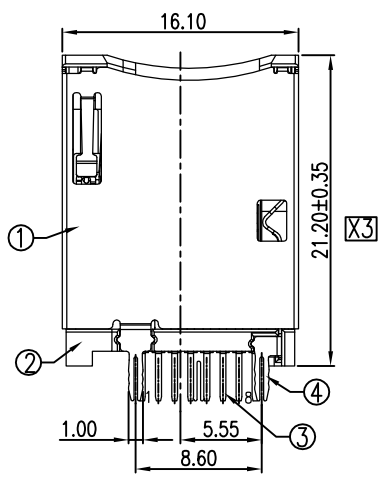
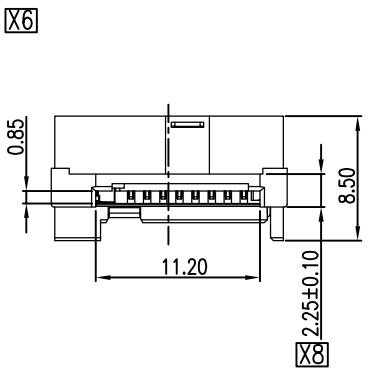
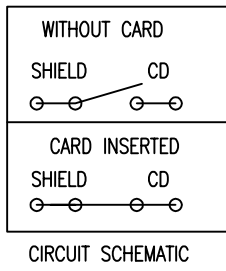
PROPRIETARY INFORMATION
COMPANY CONFIDENTIAL

REV.	ECN. NO.	DESCRIPTION	ENG	DATE
X1		INITIAL	MIKE	07/14/14'
X2		ADD THE DETECTION PIN	JANE	07/21/14'
X3		MODIFY THE PRODUCT HIGHT	JANE	07/25/14'
X4		MODIFY THE PCB LAYOUT	JANE	07/28/14'
X5		ADD PLATING SPEC	TERRY	08/26/14'
X6		MODIFY THE DRAWING	JANE	09/19/14'
X7		MODIFY PIN LENGTH	TERRY	06/12/15'
X8		ADD DIM.	DANIEL	09/22/15'

Pin#	Description
1	DAT2
2	CD/DAT3
3	CMD
4	V _{DD}
5	CLK
6	V _{SS}
7	DAT0
8	DAT1



Recommended PCB layout X4
Tolerance=±0.05



PART. NUMBER

MSDV-21 08 - B K X 3 I
① ② ③ ④ ⑤ ⑥ ⑦

- CONNECTOR:
21: MICRO SD CRAD VERTICAL WITH PUSH DIP TYPE
- POSITIONS
08: 08 POSITION
- INSULATOR MATERIAL
B: LCP
- INSULATOR COLOR
K: BLACK
- CONTACT PLATING
1: GOLD FLASH
3: 5u" GOLD
- SHIELD PLATING
3: NICKEL PLATED
- PACKING
T: TRAY

X5

ITEM	NAME	Q'TY	DESCRIPTION	NOTE
5	BOARD LOCK	1	BRASS T=0.30mm	80u" TIN PLATING ON SOLDER TAIL AREA, UNDER PLATING 30u" NICKEL ALL OVER
4	CD PIN	1	PHOSPHOR BRONZE T=0.20mm	GOLD FLASH PLATED ON CONTACT AREA; 80u" TIN PLATING ON SOLDER TAIL AREA; UNDER PLATING 30u" NICKEL ALL OVER
3	CONTACT	8	PHOSPHOR BRONZE T=0.20mm	GOLD PLATED ON CONTACT AREA; 80u" TIN PLATING ON SOLDER TAIL AREA; UNDER PLATING 30u" NICKEL ALL OVER
2	HOUSING	1	LCP	UL94V-0, Black
1	SHELL	1	SUS T=0.20mm	30u" NICKEL PLATED

GENERAL TOLERANCE	ANGLE TOLERANCE	DRAWN	DATE	
X.± 0.50 .X± 0.38 .XX± 0.25 .XXX± 0.15	X°± 5.0° .X°± 3.0° .XX°± 2.0° .XXX°± 1.0°	JANE	09/22/15	
MATL	SEE BOM	CHECKED	DATE	PART NUMBER.
FINISH	SEE NOTES	TERRY	09/22/15	MSDV-2108-BKX3T
SCALE	N/A	APPROVED	DATE	DRAWING NO.
SHEET	1 OF 1	DANIEL	09/22/15	GT23-250184
				SIZE A4 REV. X8

GENESIS TECH ELECTRONICS INC.

PRODUCT SPECIFICATION: GT23-250184

GENESIS PN: MSDV-2108

1 SCOPE

This specification covers the performance requirements of the Micro SD card connector.

2 APPLICATION DOCUMENT

This following documents form a part of this specification to this extent specified herein. In the event of conflict between the requirements of the specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

EIA-364
UL 94V-0

3 REQUIREMENTS

3.1 DESIGN AND CONSTRUCTION

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing GT23-250184.

3.2 MATERIAL

- A. Housing: LCP with Glass Filled, UL94V-0, Black.
- B. Contact : Phosphor bronze, gold plated on contact area, Nickel under plated all over, Tin plated on solder tail
- C. Detect contact: Phosphor bronze, gold plated on contact area, Nickel under plated all over, Tin plated on solder tail
- D. Shield: SUS, Nickel plated all over.
- E. Board Lock Brass, Tin plated, Nickel under plated all over.

3.3 RATINGS

- A. Voltage Rating : 100V DC Maximum
- B Current Rating : 0.5 Amperes Maximum
- C. Operating Temperature : -35°C to 85°C.
- D. Humidity : 20% - 80%

3.4 STORAGE CONDITIONS

Temperature : 25±5°C;; Humidity : 50% - 70%
Storage Time : Should not exceed 90 days.

3.5 Solder Process

Waver Soldering : 260±5°C, 5~10 sec (pre-heat=120±10°C, 120 sec)
By hand: 350±10°C, 3±1 sec

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3.6 TEST CONDITIONS

The product is designed to meet the electrical, mechanical and environmental performance requirements specified in table below.

3.7 ELECTRICAL PERFORMANCE

Test Description	Specified Requirements	Requirement
Contact Resistance	Measurement shall be made from Micro SD card reader signal contacts and switch contacts to Micro SD test card per EIA-364-23	Initial Contact Resistance: 100m ohms max.
Detect PIN Contact Resistance	Measurement shall be made from Micro SD card reader signal contacts and switch contacts to Micro SD test card per EIA-364-23	Initial Contact Resistance: 150m ohms max.
Dielectric Withstanding Voltage	Test between adjacent contacts at 500V AC and 1 minute hold time per EIA-364-20.	No Breakdown
Insulation Resistance	Test between adjacent contacts at 100V DC for 1 minute per EIA-364-21.	100MΩ minimum
Temperature Rise	Mate card and measure the temperature rise of contact, when rated current is passed. Per EIA-364-70	30°C Max.

3.8 MECHANICAL PERFORMANCE

Test Description	Specified Requirements	Requirement
Vibration	Mate card and subjected to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes, with passing DC 1mA during the test. Amplitude : 1.52mm P-P or 19.6m/s ² {2G} Frequency : 10-55-10Hz shall be traversed in 1 minute. Per EIA-364-28	Appearance: no damage Discontinuity:<1 ms discontinuity Contact Resistance: Change from initial value:40ohms max
Mechanical Shock	Subject mated connector to 30g's/11 m sec half sine in each X.Y.Z axes per EIA-364-27B,	Appearance: no damage Contact Resistance: Change from initial value:40ohms max
Durability	Insertion and withdrawal are repeated 5,000 cycles with card at the speed rate of 400~600 cycles/hour. Per EIA-364-09	Appearance: no damage Contact Resistance: Change from initial value:40ohms max
Insertion /Withdrawal Force	Push/Pull out card at the speed rate of 25±3 mm/min.	1. Withdrawal force: 1 N Min 2. Insertion force: 15N Max

3.9 ENVIRONMENTAL PERFORMANCE

GENESIS TECH ELECTRONICS INC.

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Test Description	Specified Requirements	Requirement
Thermal Shock	5 cycles of exposure at -55°C and +85°C.	Appearance: no damage Contact Resistance: Change from initial value:40ohms max
Humidity	Subject mated connector to 40°C and 95% relative humidity for 96 hours per EIA-364-31B.	Appearance: no damage Contact Resistance: Change from initial value:40ohms max
Thermal Aging	Subject connector to ambient temperature of +85°C for 96 hours.	Appearance: no damage Contact Resistance: Change from initial value:40ohms max
Cold Resistance	Subject connector -25°C for 96 hours per EIA-364-59A.	Appearance: no damage Contact Resistance: Change from initial value:40ohms max
Salt Spray	Subject connector to salt solution concentration shall be 5% and air supply 35°C for 4 hours per EIA-364-26B.	1. No obvious cosmetic difference. Contact Resistance: Change from initial value:40ohms max
	Subject connector to salt solution concentration shall be 5% and air supply 35°C for 48 hours per EIA-364-26B.	1. Probably obvious cosmetic difference. Contact Resistance: Change from initial value:40ohms max

3.10 OTHERS

Test Description	Specified Requirements	Requirement
Solderability	EIA 364-52 At a temperature of 245±5°C for 5±0.5 seconds. Dip tails into flux for 5 second, drain, and then dip into the solder pot and keep for 5 seconds.	Coverage 95% Min

GENESIS TECH ELECTRONICS INC.

PRODUCT SPECIFICATION: GT23-250184

GENESIS PN: MSDV-2108

4.0 PRODUCT QUALIFICATION AND TEST SEQUENCE

Test or Examination	Test Group(a)								
	1	2	3	4	5	6	7		
	Test Sequence(b)								
Examination of Product	1,7	1,14	1,8	1,5	1,6	1,6	1,6		
Contact Resistance	3*,6*	3*,9*,11*,13*		2*,4*	3*,5*	3*,5*	3*,5*		
Insulation Resistance			3,6						
Dielectric Withstanding Voltage			2,7						
Thermal Aging						4			
Humidity		12	5						
Thermal Shock	4	10	4						
Solder-ability	2***	2***			2***	2***	2***		
Cold Resistance							4		
Durability		6*							
Mating Force		4,7							
Un-mating Force		5,8							
Vibration	5**								
Salt Spray				3					
Mechanical Shock					4**				

Figure 2

5.0 PRODUCT PACKAGE DRAWINGS

- 5.1 Product to be supplied in tray as shown in product drawing unless otherwise specified.
- 5.2 Test packaging according to standard ISTA shipping specifications.

GENESIS TECH ELECTRONICS INC.

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6.0 QUALITY ASSURANCE PROVISIONS

6.1 Test Conditions:

A. Sample Selection

Connector housings and contact shall be prepared in accordance with applicable instruction sheets and shall be selected from current production. All test groups shall each consist of a minimum of 5 connectors.

B. Test Sequence

Qualification inspection shall be verified by testing samples as specified in Figure 2.

6.2 Requalification Testing:

If changes significantly affecting form, fit or function are made to product or manufacturing process, product assurance shall coordinate qualification testing, consisting of all or original testing sequence as determined by development/product, quality and reliability engineering.

6.3 Acceptance:

Acceptance is based on verification that product meets requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify. When a product failure occurs, corrective action shall be taken and samples resubmitted for qualification. Testing to confirm corrective action is required before submittal.