JAE

NEW

UHS-II Compatible microSD™ Card Connector
ST50 Series

CONNECTOR
MB-0325-1
December 2017

RoHS Compliant
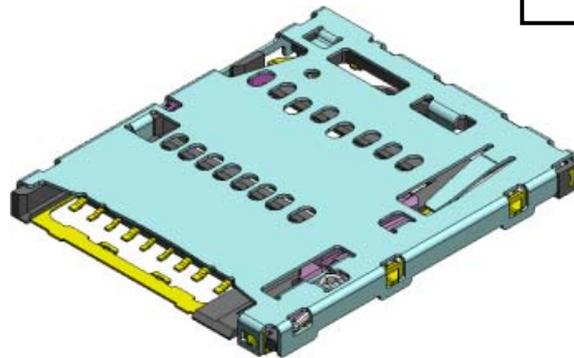
Outline

MicroSD cards are widely used as an external storage medium for compact devices such as smartphones, cameras, tablets and notebook PCs.

Recently high-speed reading and writing requirements are increasing to allow the transfer of large image and video files, and also to install and run apps (applications) on smartphones.

Due to the increasing user demand, microSD cards compatible with the memory card standard UHS-II with maximum data writing speed up to 312MB/s, are becoming widespread.

The ST50 Series is a push-push connector compatible with the UHS-II microSD cards.

* microSD™ is a trademark of SD Association.

Features

■ Compatible with microSD card Ultra High Speed data transfer standard UHS-II.
  (Backwards compatible with UHS-I microSD card and other existing microSD cards)
■ Compact slim design, 16.3mm depth, 13.7mm width, 1.35mm height
■ Push-push type card eject method.
■ Maintaining good operability with the long card eject length (3.0mm min.)
■ Includes card detection switch (normally-closed types)
■ 8-point hold downs for heat-emission.

General Specifications

■ No. of Contacts: 17 pos.
■ Contact Resistance: 100mΩ max. (initial)
■ Dielectric Withstanding Voltage:
   AC500Vr.m.s for 1 minute
■ Operating Temperature: -25° C ~ +85° C

■ Rated Current: 0.5A
■ Rated Voltage: 10V
■ Durability: 5,000 times

Materials and Finishes

Component	Material	Finish
Signal Contact	Copper alloy	Au plating over Ni (Contact area) Au plating over Ni (Board mounting area)
Housing	Heat-resistant plastic	
Cover Frame	Stainless steel	Au plating over Ni (Board mounting area)
Detection Switch	Copper alloy	Au plating over Ni (Contact area) Au plating over Ni (Board mounting area)
VDD2 Switch	Copper alloy	Au plating over Ni (Contact area) Au plating over Ni (Board mounting area)
Eject Bar	Heat-resistant plastic	
Lock	Stainless steel	
Spring	Stainless steel	
Cam Follower	Stainless steel	

Ordering Information

ST50 S 017 V C A (R1800)

Series

Connector Type
S: NON-ZIF structure

No. of Contacts

Connection Type
V: SMT mounting with hold-down

Plating Specification
C: Au/Au flash plating

Modification Code

Reeled Product (Note1)
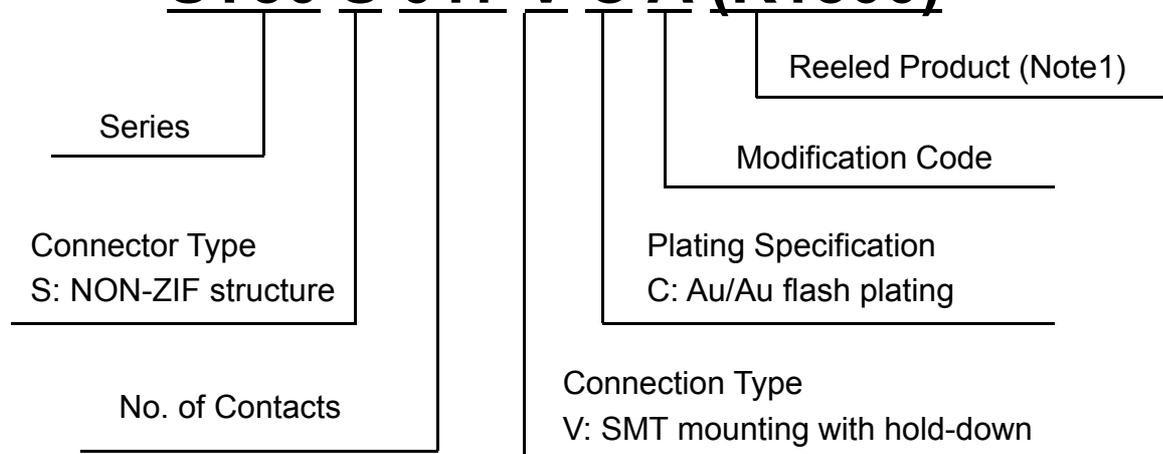
Note) An embossed tape reel contains 1,800 pcs.
Please contact us for details on embossed tape specifications.

Part Number	Drawing No.
ST50S17VCA	SJ117915
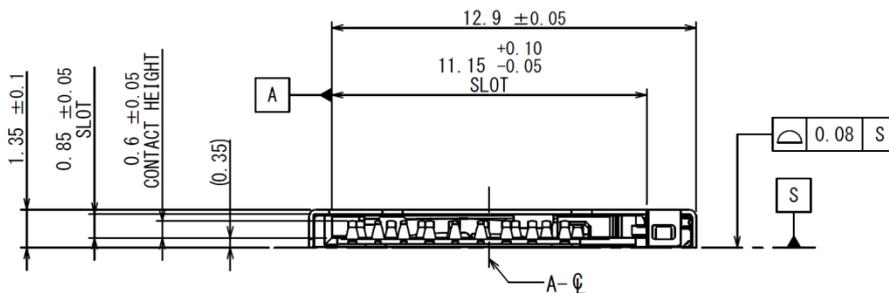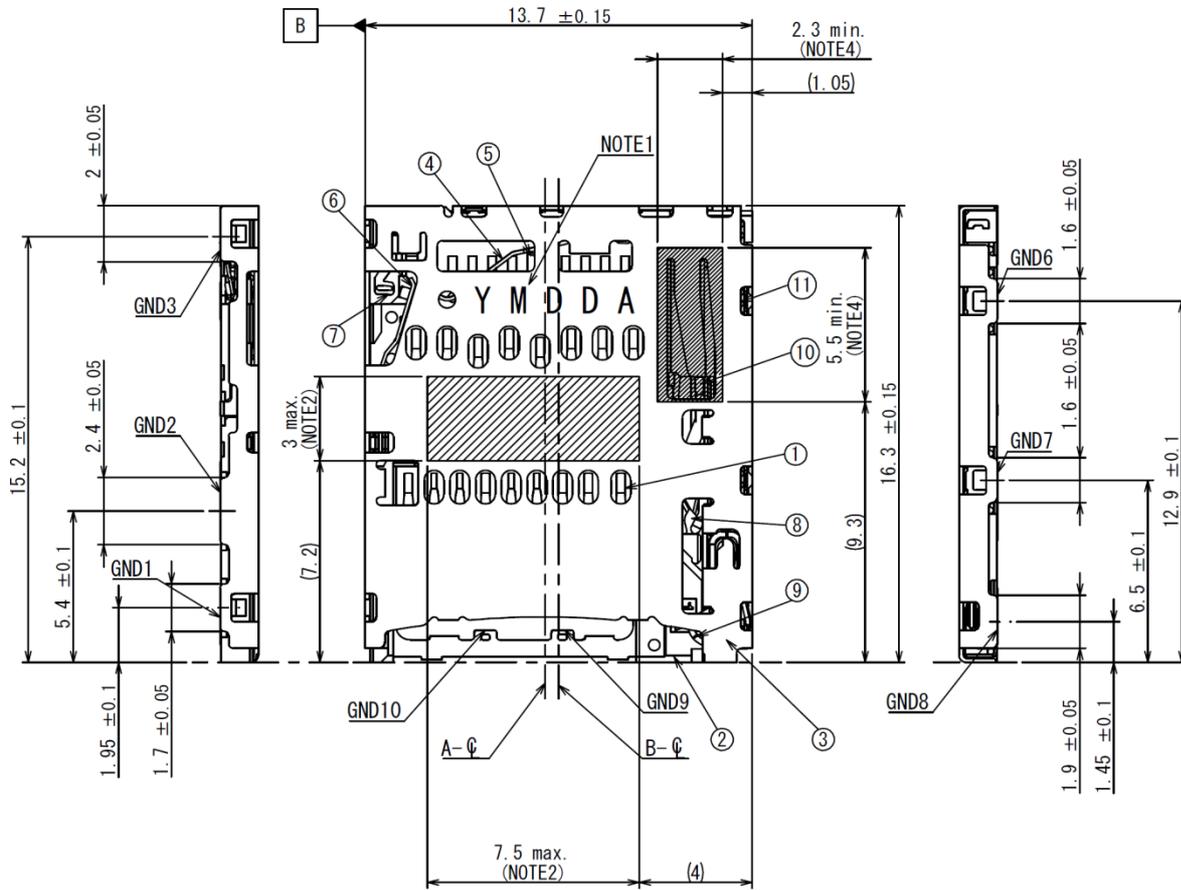
NOTE1. NO PATERN, VIA HOLE IN THIS AREA.
NOTE2. VACUUM AREA.
NOTE4. LOAD SHOULD NOT BE APPLIED ON THIS AREA.

Unit : mm

| 符号 NO.	名 称 DESCRIPTION	個 数 QTY.	材 料 MATERIAL	仕 上 FINISH	備 考 REMARKS
11	COIL SPRING	1	STAINLESS(Φ0.2)	–	
10	CAM FOLLOWER	1	STAINLESS(Φ0.3)	–	
9	LOCK	1	STAINLESS(t0.2)	–	
8	EJECT BAR	1	LCP	–	COLOR:BLACK
7	VDD2-SW2	1	COPPER ALLOY(t0.1)	Contact:Au(0.3μm UP) over Ni(1μm UP) Terminal:Au(0.03μm UP) over Ni(1μm UP)	
6	VDD2-SW1	1	COPPER ALLOY(t0.12)	Contact:Au(0.3μm UP) over Ni(1μm UP) Terminal:Au(0.03μm UP) over Ni(1μm UP)	
5	DETECTION SW2	1	COPPER ALLOY(t0.1)	Contact:Au(0.3μm UP) over Ni(1μm UP) Terminal:Au(0.03μm UP) over Ni(1μm UP)	
4	DETECTION SW1(GND)	1	COPPER ALLOY(t0.12)	Contact:Au(0.3μm UP) over Ni(1μm UP) Terminal:Au(0.03μm UP) over Ni(1μm UP)	
3	COVER FRAME	1	STAINLESS(t0.15)	Terminal:Au(0.03μm UP) over Ni(1μm UP)	
2	HOUSING	1	LCP	–	COLOR:BLACK
1	CONTACT	1	COPPER ALLOY(t0.1)	Contact:Au(0.5μm UP) over Ni(2μm UP) Terminal:Au(0.03μm UP) over Ni(1μm UP)	

Note: Above drawing is for reference only.
Please refer to the most updated drawing when considering use of this product.
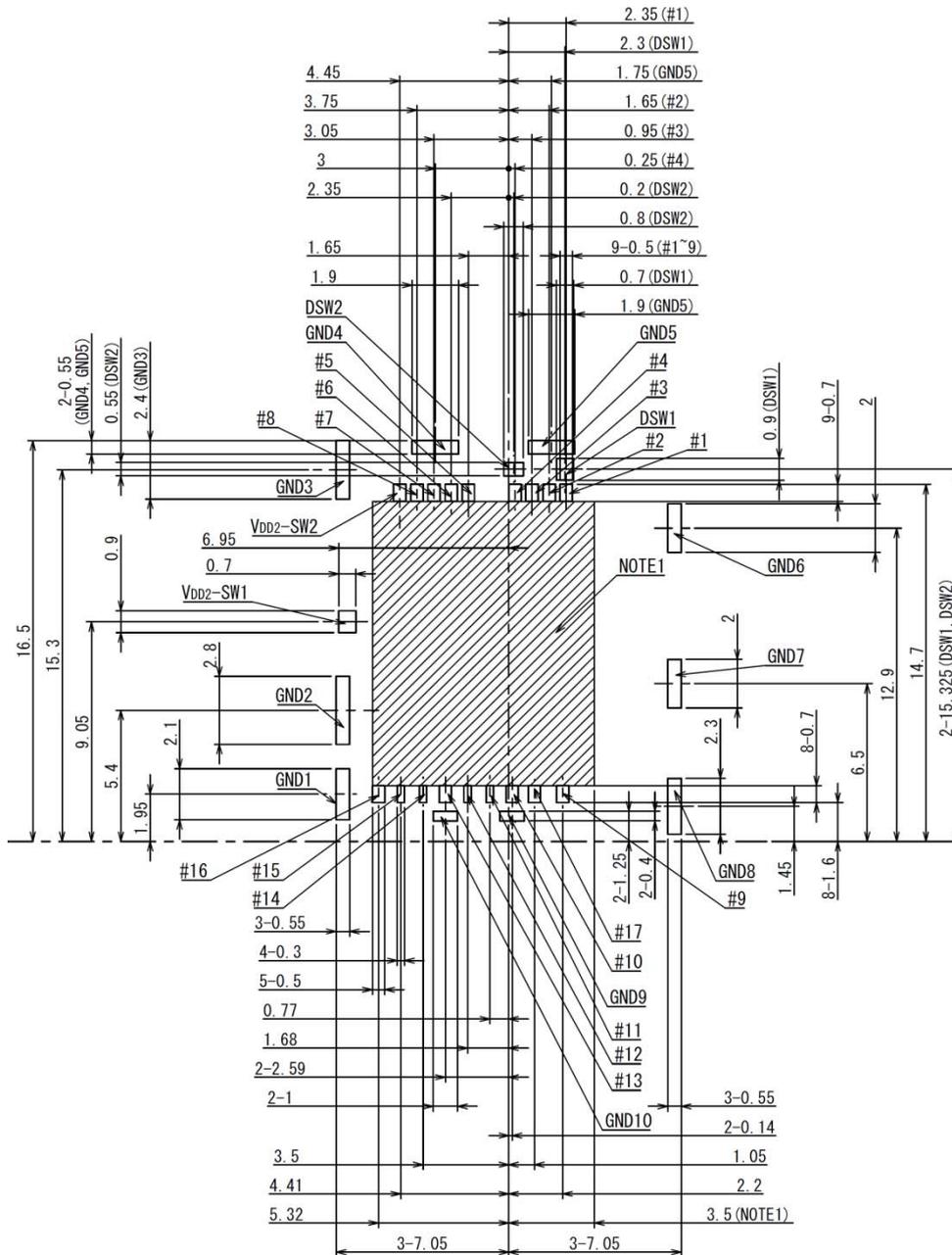
Applicable Board Dimensions

Unit : mm

NOTE1. NO PATERN, VIA HOLE IN THIS AREA.

PIN ASSIGNENMENT

Pin#	Name
1	DAT2
2	CD/DAT3
3	CMD
4	V_{DD1}
5	CLK
6	Vss
7	DAT0RCLK+
8	DAT1RCLK−
9	V_{DD2}
10	Vss
11	D0+
12	D0−
13	Vss
14	D1−
15	D1+
16	Vss
17	SWIO

TABLE. 2 DETECTION SW CIRCUIT
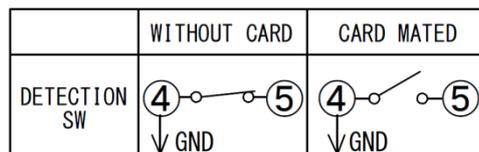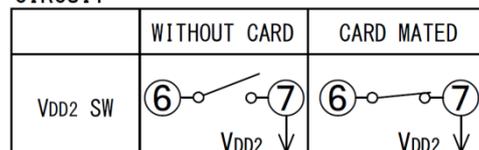
	WITHOUT CARD	CARD MATED
DETECTION SW	④—o o—⑤ ↓GND	④—o o—⑤ ↓GND

TABLE. 3 V_{DD2} SW CIRCUIT

	WITHOUT CARD	CARD MATED
V_{DD2} SW	⑥—o o—⑦ ↓V_{DD2}	⑥—o o—⑦ ↓V_{DD2}

Note: Above drawing is for reference only.
Please refer to the most updated drawing when considering use of this product.

Technical Documents

Part Number	ST50S017VCAR1800
Drawing No.	Individual Product: SJ117915 Reeled Product: SJ117916
Specifications	JACS-11173
Handling Instructions	JAHL-11173

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* The specifications in this brochure are subject to change without notice. Please contact JAE for information.