	connectors														
SPEC.NO: SPEC.NO: PS-92242-XXXXX-XXX															
PRODUCT NAME: 040 2.5mm Sealed Conn. Female type PRODUCT NO: 92242 \square 92243															
PREPARED: Hsuyangyang	PREPARED: CHECKED: APPROVED: Hsuyangyang Liuwei Liuwei														
2018/05/28	2018/05/28	2018/05/28													

Acces		Aces P/N: 92242&92243 series	
TITLE: 040 2.5MM S	EALED CONN.F	EMALE TYPE	
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2 SCOPE

This specification covers performance, tests and quality requirements for 040 2.5mm Sealed Conn. Female type

3 APPLICABLE DOCUMENTS

JACS-1594-1_MX19

4 REQUIREMENTS

- 4.1 Design and Construction
 - 4.1.1 Product shall be of design, construction and physical dimensions specified on applicable product drawing.
- 4.1.2 All materials conform to R.O.H.S. and the standard depends on JACS-1594-1_MX19.
- 4.2 Materials and Finish
 - 4.2.1 Contact: C7025-TM02
 - 4.2.2 Housing: PBT GF0%
 - 4.2.3 Rubber: Silicone

4.3 Ratings

- 4.3.1 Operating Temperature: -40 to +85
- 4.3.2 Test Current: 2A Max.

5 PERFORMANCE

Item	Requirement	Standard												
Appearance	No detriment, crack, flaw, deformation, or etc.	Visual check,touch.												
Insertion & Separation feeling	No detrimental catch is allowed.	Check the feeling during inserting and separating connectors.												
	ELECTRICAL													
ltem	Requirement	Standard												
Voltage drop	Initial:10mV/A Max	Applied $1 \pm 0.05A$ on connection with $12 \pm 1V$ on open-circuit. Measure the voltage drop between crimps, the extra wire resistance shall be measured and subtracted.												
Low-voltage low-current resistance	Initial:10mΩ Max After test:20mΩ Max	Applied 10 ± 5 mA on connection with 20 ± 5 mV on open-circuit. Measure the Low-voltage low-current resistance between crimps, the extra wire resistance shall be measured and subtracted.												
Insulation Resistance	100 M Ω Min.	Measure the isolation resistance of "A: between adjacent terminals of engaging connector" and "B: between terminal of engaging connector and ground" when applying D.C.500V during 30 seconds.												



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No deformation or deposition damage on housings and/or terminals	Applied AC1000V with a sinusoidal waveform(or parallel waveform) of 50-60Hz frequency to connector having terminal in all cavity during 1min.								
100 µ A Max	Measure the leak current be applying 14 VDS.	etween terminals during							
25℃ Max	Applied 5A to all terminal, measured a temperature on the crimping area when the temperature rising is reach to steady state. This test is proceded in a dram free enclosure.								
No deformation and flash on connector.	Applied following current patter free enclosure.Term NO.Current condition11213.5A3420A	tion Applied Time 60min 10S 5S 1S							
No Instantaneous break with 1ms ove	r. Applied a current to all terminals Check the instantaneous break	s of series connection. while testing.							
	No deformation or deposition damage on housings and/or terminals 100 µ A Max 25 °C Max No deformation and flash on connector.	No deformation or deposition damage on housings and/or terminals Applied AC1000V with a sinusc waveform) of 50-60Hz frequer terminal in all cavity during 1min 100 µ A Max Measure the leak current be applying 14 VDS. 25 °C Max Applied 5A to all terminal, mease the crimping area when the term reach to steady state. This test is proceeded in a dram Applied following current patter free enclosure. No deformation and flash on connector. 100 µ A Max Applied following current patter free enclosure. Term NO. Current condition and flash on connector. Applied following current patter free enclosure. No Instantaneous break with 1ms over. Applied a current to all terminal Check the instantaneous break							

	MECHANIC	CAL
ltem	Requirement	Standard
Inserting forces of connector	68.6N Max	Fixed a side of the connector, inserting at a constancy speed of 50~150mm/min on the axis.
Separating forces of connector	68.6N Max	Fixed a side of the connector, separating at a constancy speed of 50~150mm/min on the axis, without the locking mechanism.
Holding force of terminal	28N Min	Assembled a crimped (or soldered after crimped) wire with 60mm. Fixed a side of the connector, inserting at a constancy speed of 100mm/min on the axis. Measure the load at the time of the terminal came out.
Crimpling strength	58.8N Min	Fixed the crimped wire on test device. Pulling the wire at a constancy speed of 50~150mm/min on axis. Measure the load at the time of the terminal broke or came out from a crimpling wire. "Insulator barrel" is not worked in this measurement.
Holding force of housing unit	58.8N Min	Fixed the coupled connector of a side, the locking parts is worked. Pulling other side at a constancy speed of 50~150mm/min in axis. Measure the load at the time of locking parts is broken or housings are separating.
Compression permanent set	30% Max	Measure the permanent compression of a rubber of connector using, per JIS K 6301, after exposures at 150 $^{\circ}$ C for 22 hours with compressed 25% condition.



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	ENVIRONME	NTAL
ltem	Requirement	Standard
Prying endurance	Shall conform to appearance. Shall conform to low-voltage low- current resistance.	Applied force in fore-aft and right-left directions perpendicular to axis in the inserting and separating connectors. Repeat 10 cycles.
High-temperature exposure	Shall conform to appearance. Shall conform to holding force of terminal. Shall conform to holding force of housing unit Shall conform to low-voltage low- current resistance.	Exposed $100\pm3^{\circ}$ for 120 hours in a chamber. After the exposure, wait the sample condition to reach the room temperature.
Low-temperature exposure	Shall conform to appearance. Shall conform to holding force of terminal. Shall conform to holding force of housing unit	Exposed -40 \pm 3°C for 120 hours in a chamber. After the exposure, wait the sample condition to reach the room temperature.
Thermal shock	Shall conform to appearance. Shall conform to low-voltage low- current resistance.	Exposed the following thermal shock cycle (Fig) by 500 times in a chamber. After the exposure, wait the sample condition to reach the room temperature. 80°
Spray	Shall conform to appearance. Shall conform to insulation resistance. Shall conform to voltage proof. Shall conform to leak current	Hung the connector in test chamber. And applied 14V to connector (between terminals) while testing. Applied $80 \pm 3^{\circ}$ C heating for 40 minute. After the heating process, sprayed water on connector at room temperature for 20 minute. The showering conditions is S1 per "JIS D 0203".
Moisture resistance	Shall conform to appearance. Shall conform to holding force of terminal. Shall conform to holding force of housing unit Shall conform to low-voltage low- current resistance. Shall conform to insulation resistance. Shall conform to voltage proof. Shall conform to leak current	Hung the connecter on in test chamber. Applied $60\pm5^{\circ}$ temperature and $90\sim95\%$ Rh for 96 hours. While testing, applied 14V to connector (between terminals.)
Dust resistance	Shall conform to appearance. Shall conform to low-voltage low- current resistance.	Hung the connector on in a sealing tank (length, wide and height is approximately 1000mm). And the sealing tank has a Portland cement of 1.5kg. Sprayed a Portland cement to each side of connector uniformly by a compressed air or a fan by 10sec at every 15 min. The spray process is applied 8 times.

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		And connector separation and a fter every 2 cycles.	engagement is taken at
Sulfur dioxide resistance	Shall conform to appearance. Shall conform to low-voltage low- current resistance.	Exposed a sulfur dioxide of 25 = 75%Rh for 96 hours. The Exposed sample is NOT en The sample is engaged and me	±5ppm and humidity ngaged. asured after exposed.
Vibration resistance	Shall conform to appearance. Shall conform to low-voltage low- current resistance. Shall conform to instantaneous disconnection.	Assembled a coupled connector setup. Applied vibration as follo And monitor and check electric: (confirmation of disconnection) Item condition Acceleration 44m/s ² Applied Time 3h Vibrating frequency 20-200Hz Electric 10mA	or on a vibration test wing. al condition for all terminals. Note - Every axis, total 9 hours applied - Maximum 20mV by open circuit
Oil resistance	Shall conform to appearance. Shall conform to low-voltage low- current resistance.	A:Immersed a coupled connect kept $50 \pm 2^{\circ}$ for 20 hours. The mixture oil is equal volume oil (per SAE 10W or equivalent JIS K 2203 (kerosene) " After the immersed, wait sampl room temperature. B: Immersed a coupled connect and the coolant of kept $50\pm 2^{\circ}$ C After immersed, wait sample contect temperature.	or into a mixture oil with that mixed an engine t) and kerosene "K2 per e condition to reach a tor into a washer liquid c for 1 hours each. ondition to reach a room
Salty spray	Shall conform to appearance. Shall conform to separating forces of connector. Shall conform to crimping strength. Shall conform to low-voltage low- current resistance. Shall conform to leak current.	Sprayed a salty water to coupl 2371. The salty spray is 10 cycles hav 1 hour off. While testing, applied DC14V to	ed connectors per JIS Z ving 23 hours spray and o all terminals.
Light resistance	Shall conform to appearance. Shall conform to insertion & separation feeling. Shall conform to inserting forces of connector. Shall conform to separating forces of	Exposed connector (not engag carbon weather meter, per JIS	ed) on a sunshine D 0205, for 100 hours.

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6 PRODUCT QUALIFICATION AND TEST SEQUENCE																						
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