

Aces Electronic Co., Ltd.

Product Specification

Title : 1.25 mm pitch wire to board connector

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1. Scope

This specification covers Aces's 1.25 mm pitch wire to board connector

Aces's P/N : 85206-T(Terminal,AWG#28-AWG#32)

2. Rating

2.1 Working voltage less than 36 volts (per pin)

2.2 Rated Voltage (Max) : 125 V [AC(rms)/DC]

2.3 Rated Current (Max) :
and Applicable wire :
AWG#28 1 A [AC(rms)/DC]
AWG#30 1 A [AC(rms)/DC]
AWG#32 0.8 A [AC(rms)/DC]

2.4 Ambient Temperature Range : $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

3. Performance

3.1 Electrical Performance

Contact Resistance	Mate connectors and measure by dry circuit, 20mV max. 10mA. (Base on JIS C5402 5.4)	20 mohms max.
Insulation Resistance	Mate connectors and apply 500V DC between adjacent Terminal or ground. (Base on JIS C5402 5.2 / MIL-STD-202 method 302 Cond.B)	100 Mohms min.
Dielectric Strength	Mate connector and apply 500V AC/rms for 1 minute between adjacent Terminal or ground. (Base on JIS C5402 5.2/MIL-STD-202, method 301)	No Breakdown.
Contact Resistance	Crimp the applicable wire on to the on crimped portion terminal,measure by dry circuit, 20 mV MAX, 10mA	5 mohms max.

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3.2 Mechanical Performance

Insertion / Extraction Force	Insert and withdraw connector at the speed of 25 ± 3 mm/min.	See item 4
Crimping pull out l	Fix the crimped terminal, apply axial pull out force on the wire at speed rate of 25 ± 3 mm/min. on the housing	AWG#28: 1.0 Kgf min. AWG#30: 0.5 Kgf min. AWG#32: 0.3 Kgf min.
Terminal Insertion	Insert the crimped terminal into the housing	0.5 Kgf max..
Terminal/Housing Retention force	Apply axial pull out force at the speed rate of 25 ± 3 mm/min. on the Terminal assembly in the housing.	0.5 Kgf min.
Pin Retention Force	Apply axial pull out force at the speed rate of 25 ± 3 mm/min.	0.5 Kgf min.

3.3 Environmental Performance and Others

Repeated Actuator Insertion / Withdra	When mated up to 30 cycles, repeatedly by the rate of 10 cycles/minute.	Contact Resistance : 40 mohms max.
Temperature Rise	Carrying rated current load. (Base on UL 498)	Temperature rise : 30°C max.
Vibration	Amplitude : 1.5 mm P-P Sweep time : 10-55-10 Hz in 1 minute Duration : 2 hours in each X.Y.Z. Axis (Base on MIL-STD-202, method 201A)	Appearance : No damage Contact Resistance : 40 mohms max. Discontinuity : 1 μ sec. max.
Shock	50 G, 3 strokes in each X.Y.Z. axis. (Base on MIL-STD-202, method 213B Cond.A)	Appearance : No damage Contact Resistance : 40 mohms max. Discontinuity : 1 μ sec.max.

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Heat Resistanc	85 ±2°C, 96 hrs. (Base on JIS C0021 /MIL-STD-202, method 10 Cond.A)	Appearance : No damage Contact Resistance : 40 mohms max.
Cold Resistanc	-40±2°C, 96 hrs (Base on JIS C0020)	Appearance : No damage Contact Resistance : 40 mohms max.
Humidity	Temperature : 60 ± 2°C Relative humidity : 90 ~ 95 % Duration : 96 hrs. (Base on JIS C0020/MIL-STD-202 method 103 B, Cond.B)	Appearance : No damage Contact Resistance : 40 mohms max. Insulation Resistance: 10 Mohms min.
Temperature Cycling	5 cycles of : (a) -55 °C ± 3 °C, 30 minutes (b) +85 °C ± 2 °C, 30 minutes (Base on JIS C0025)	Appearance : No damage Contact Resistance : 40 mohms max.
Salt Spray	48 ± 4 hrs. exposure to salt spray from 5 ± 1% solution at 35 ± 2°C. (Base on JIS C5028/MIL-STD-202 method 101 D, Cond.B)	Appearance : No damage
SO ₂ Gas	24 hrs. exposure to 50 ± 5 ppm. SO ₂ gas at 40 ± 2°C	Contact Resistance : 40 mohms max..
NH ₃ Gas	40 minutes exposure to NH ₃ gas evaporating from 28% ammonia solution at 25 ± 2°C	Contact Resistance : 40 mohms max.
Solder-Ability	Soldering time : 3 ± 0.5 sec. Solder temperature : 230 ± 5°C 0.5 mm from Terminal tip and fitting nail tip	95% of immersed area must show no voids, pin holes

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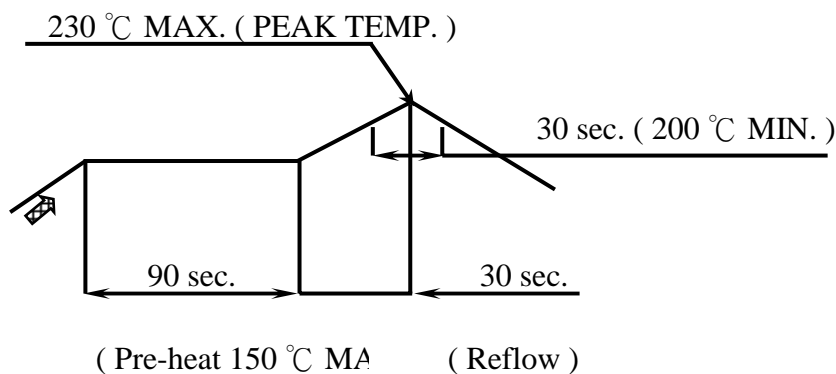
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Resistance to Soldering heat	Soldering time : 3 ± 0.5 sec. Solder temperature : $230 \pm 5^\circ\text{C}$ 0.5 mm from Terminal tip and fitting nail tip	Appearance : No damage Contact Resistance : 40 mohms max.
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4. Actuator Insertion/Extraction Force

No of CKT	Insertion Force (Kgf, Max)			Extraction Force (Kgf, Min)		
	1st	6th	30th	1st	6th	30th
2	2.00	1.80	1.60	0.28	0.23	0.18
3	2.50	2.30	2.10	0.30	0.25	0.20
4	3.00	2.80	2.60	0.33	0.28	0.23
5	3.50	3.30	3.10	0.38	0.33	0.28
6	4.00	3.80	3.60	0.43	0.38	0.33
7	4.50	4.30	4.10	0.48	0.43	0.38
8	5.00	4.80	4.60	0.53	0.48	0.43
9	5.50	5.30	5.10	0.56	0.51	0.46
10	6.00	5.80	5.60	0.59	0.54	0.49
11	6.50	6.30	6.10	0.62	0.57	0.52
12	7.00	6.80	6.60	0.65	0.60	0.55
13	7.50	7.30	7.10	0.68	0.63	0.58
14	8.00	7.80	7.60	0.71	0.66	0.61
15	8.50	8.30	8.10	0.74	0.69	0.64

5. INFRARED REFLOW CONDITION



TEMPERATURE CONDITION GRAI
(TEMPERATURE ON BOARD PATTERN SIDE)