



PRODUCT SPECIFICATION

CKM 1258 SERIES

WIRE TO BOARD 1.25 mm PITCH CONNECTOR

INDEX

1. SCOPE.....	P2
2. APPLICABLE STANDARDS.....	P2
3. APPLICABLE SERIES NO:.....	P2
4. PRODUCT SHAPE, DIMENSIONS AND MATERIALS.....	P2
5. ACCOMMODATED P.C. BOARD.....	P2
6. RATINGS.....	P2
7. PERFORMANCE REQUIREMENTS AND TEST DESCRIPTIONS.....	P2
8. TEST REQUIREMENTS AND PROCEDURES SUMMARY.....	P3~P5
9. CRIMPING SPECIFICATION.....	P6
10. RECOMMENDED REFLOW TEMPERATURE PROFILE.....	P6
11. MATING AND UN-MATING FORCE(REMOVE LATCH).....	P6
12. RODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE.....	P7

REVISION HISTORY:

REV	REVISION DESCRIPTION	DATE	CREATED/REVISED
C	UPDATE VIBRATION	2016/11/09	Rock
D	Add Housing Lock Strength	2020/3/11	Rock
E	UPDATE Housing Lock Strength	2020/9/28	Rock
F	UPDATE Temperature range	2022/05/31	Rock

REVISION: F	ECR/ECN INFORMATION: EC No.: EC-22041195 DATE: 2022/04/30	TITLE: WIRE TO BOARD 1258 SERIES		SHEET No. 1 of 7
DOCUMENT NUMBER: PS-1258-001		CREATED/REVISED	CHECKED BY	APPROVED BY



1. SCOPE

This specification contains the test requirement of subject connectors when tested under the condition and procedure with terminals crimped on the specified maximum size for wire.

2. APPLICABLE STANDARDS

EIA-364-18 Methods for test of connectors for electronic equipment
MIL-STD-202
JIS C5402
UL 1977

3. APPLICABLE SERIES NO: 1258 SERIES

Product Name	Part No.
Housing	1258H-XP-X-XX(-HF)
Terminal	1258TOP-XX
Wafer Assembly ST. (SMT)	1258WVS-XP-XX-XX(-HF)
Wafer Assembly RA. (SMT)	1258WRS-XP-XX-XX(-HF)

X or (-HF):Refer to the drawing

4. PRODUCT SHAPE, DIMENSIONS AND MATERIALS

*See attached drawings.

5. ACCOMMODATED P.C. BOARD

5.1 Thickness: 1.0 mm (.039 ")~1.2mm (.047 "), 1.6 mm (.063 ")

5.2 P.C. Board Layout: See attached drawings

6. RATINGS

6.1 Current rating: 1.2A AC, DC (AWG #26)
1.0A AC, DC (AWG #28)
0.8A AC, DC (AWG #30)

6.2 Voltage rating: 50V AC, DC

6.3 Temperature range: -40°C to +105°C

6.4 Applicable wire: AWG #26 to #30, Insulation O.D.: 0.80~1.00mm Max.

7. PERFORMANCE REQUIREMENTS AND TEST DESCRIPTIONS

The product is designed to meet the electrical, mechanical and environmental performance Requirements as specifics in **8. REQUIREMENTS.**

REVISION: F	ECR/ECN INFORMATION: EC No.: EC-22041195 DATE: 2022/04/30	TITLE: WIRE TO BOARD 1258 SERIES		SHEET No. 2 of 7
DOCUMENT NUMBER: PS-1258-001		CREATED/REVISED	CHECKED BY	APPROVED BY

**8.0 TEST REQUIREMENTS AND PROCEDURES SUMMARY**

TEST ITEM		REQUIREMENT	PROCEDURE
8.1	Examination of Product	Meets requirements of product drawing. No physical damage.	Per EIA-364-18 Visual inspection
ELECTRICAL REQUIREMENT			
8.2	Contact Resistance	30mΩ Max (Initial) 50mΩ Max (Final)	Mate connectors, measure by dry circuit, 20mV MAX., 100mA. Mated Length : 50mm (AWG #28) (Based upon JIS C5402 5.4)
8.3	Insulation Resistance	100MΩ Min	Mate connectors, apply 100V D.C. Between adjacent terminal or ground. (Based upon JIS C5402 5.2 / MIL-STD-202 Method 302 Condition B)
8.4	Dielectric Withstanding Voltage	No change.	Mate connectors, apply 500V A.C. for 1 minute between adjacent terminal or ground. (Based upon JIS C5402 5.1/ MIL-STD-202 Method 301)
MECHANICAL REQUIREMENT			
8.5	Terminal crimp Tensile strength	See Item 9.	Fix the crimped terminal, apply axial pull out force on the wire at speed rate of 25±3 mm/minute. *Crimping specification refer to Figure 2
8.6	Terminal / Housing Retention Force (For Plug)	0.5kgf Min.	Retention speed 25±3 mm per minute from housing
8.7	Mating & Un-mating force	See Item 11.	Insert and withdraw connector at speed of 25 ±3 mm per minute

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
F	EC No.: EC-22041195 DATE: 2022/04/30	WIRE TO BOARD 1258 SERIES	3 of 7
DOCUMENT NUMBER: PS-1258-001		CREATED/REVISED	CHECKED BY
			APPROVED BY



8.8	Durability	Contact resistance: Less than twice of initial Dielectric Withstanding Voltage: To pass Para 9.4 * See Item 11.	Connector shall be subjected to 30 cycles of insertion and withdrawal (repeatedly by the rate of 10 cycles per minute)
8.9	Pin retention force (For Header)	0.5kgf Min.	Push pin from insulator base at speed 25± 3 mm per minute
8.10	Housing Lock Strength (Positive Lock)	2P~3P: 1.0Kgf(10 N) Min. 4P~5P: 1.5Kgf(15N) Min. 6P~9P: 2.0Kgf (20N) Min. 10P~15P: 2.5Kgf (25N) Min.	Mated connectors, and apply axial pull out force at the speed rate of 25±3mm/minute.

ENVIRONMENTAL REQUIREMENTS

8.11	Temperature rise	30°C max.	Apply rated current load on mated connector in series-connection. Measure change of temperature on contact using thermocouples for 4 hours. (Based upon UL 1977)
8.12	Vibration	Appearance: No damage; Contact resistance: 50mΩ Max; Discontinuity: 1 micro second max.	Amplitude: 1.52mm Sweep Time: 10-55-10 Hz/minute Duration: 2 Hours in each X,Y,Z axials (Based upon MIL-STD-202 Method 201)
8.13	Heat aging	No damage Contact resistance: Less than twice of initial	Mated connector shall be placed in an oven for 96±4 hours at 105 ± 2°C. (Based upon JIS C5402 7.8)
8.14	Cold Resistance	Appearance: No damage; Contact resistance: 50mΩ Max;	Mated connector shall be placed in a temperature chamber for 96±4 hours at -40±3°C. (Based upon JIS C5402 7.9)

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
F	EC No.: EC-22041195 DATE: 2022/04/30	WIRE TO BOARD 1258 SERIES	4 of 7
DOCUMENT NUMBER: PS-1258-001		CREATED/REVISED	CHECKED BY
			APPROVED BY



8.15	Humidity	Appearance: No damage Contact resistance: Less than twice of initial Insulation resistance: To pass Para 9.3	Mated connector shall be placed in a humidity chamber on the following conditions. (Based upon MIL-STD-202 Method 103 Condition A) Temperature : 40±2°C Relative Humidity : 90~95% Duration : 96 Hours
8.16	Temperature cycling	Appearance: No damage Contact resistance: Less than twice of initial	Mated connector shall be set to temperature cycling for 5 cycles of which 1 cycle consists of: a) +25°C ~ 3 minutes b) -25°C ~ 30 minutes c) +25°C ~ 3 minutes d) +85°C ~ 30 minutes (Based upon JIS C5402 7.2)
8.17	Salt spray	Appearance: No damage Contact resistance: Less than twice of initial	Mated connector shall be placed on a salt spray chamber on the following conditions. (Based upon JIS C5402 7.1 / MIL-STD-202 Method 101 Condition B) Salt Solution Density : 5±1% Temperature : 35±2°C Duration : 48±4 Hours
8.18	Solder ability	Minimum: 90% of immersed area	Lead-Free Process for SMT Type: Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C
8.19	Resistance to IR reflow heat	No damage	Refer Reflow temperature profile
8.20	Soldering iron method	No damage	Apply solder iron in solder tail Temperature: 380±10°C, 3~5 sec.

REVISION: F	ECR/ECN INFORMATION: EC No.: EC-22041195 DATE: 2022/04/30	TITLE: WIRE TO BOARD 1258 SERIES		SHEET No. 5 of 7
DOCUMENT NUMBER: PS-1258-001		CREATED/REVISED	CHECKED BY	APPROVED BY



9. Crimping Specification

1258T0P-XX				
Wire Size(AWG)		#26	#28	#30
1. CONDUCTOR (mm)	CRIMP WIDTH	0.65±0.05		
	CRIMP HEIGHT	0.65~0.60	0.60~0.55	0.55~0.50
2. INSULATION (mm)	CRIMP WIDTH	0.78±0.05		
	CRIMP HEIGHT	1.10	1.05	1.00
CRIMP STRENGTH		1.2Kgf (MIN)	0.7Kgf (MIN)	0.5Kgf (MIN)

Figure 1

10. Recommended Reflow Temperature Profile:

Using Lead-Free Solder Paste

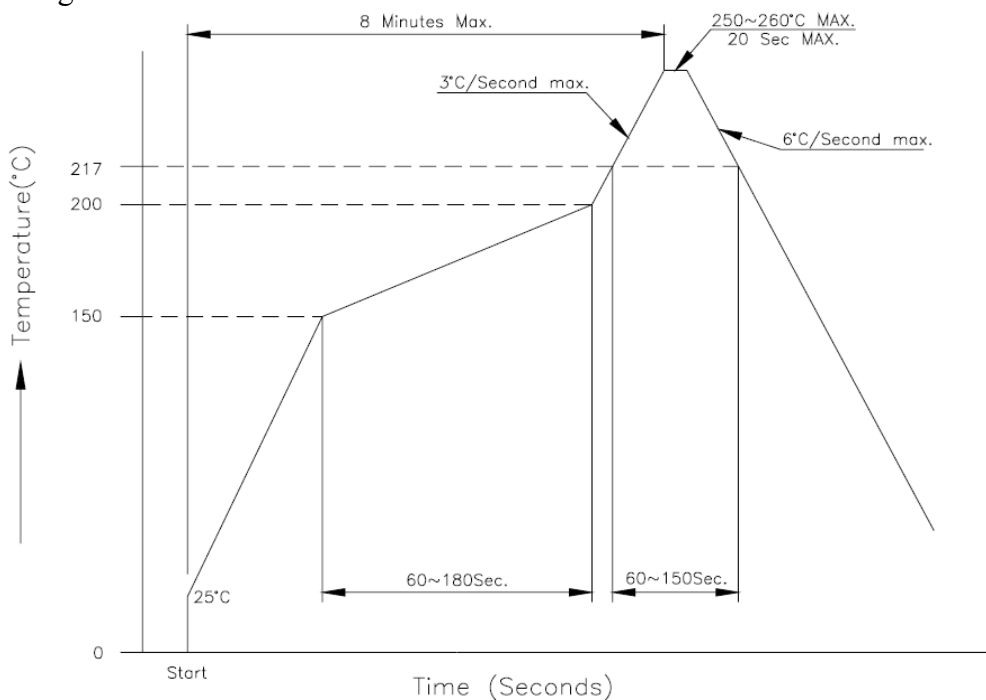


Figure 1

11. MATING AND UN-MATING FORCE (REMOVE LATCH)

UNIT: Kgf

Circuits	Insertion (MAX.)	Withdrawal (MIN.)		
	Initial	Initial	10th	30th
Single	0.25	0.07	0.06	0.05

REVISION: F	ECR/ECN INFORMATION: EC No.: EC-22041195 DATE: 2022/04/30	TITLE: WIRE TO BOARD 1258 SERIES	SHEET No. 6 of 7
DOCUMENT NUMBER: PS-1258-001		CREATED/REVISED	CHECKED BY
		APPROVED BY	



12. PRODUCT QUALIFICATION AND REQUALIFICATION TEST SEQUENCE

Test or Examination	Test Group												
	A	B	C	D	E	F	G	H	I	J	K	L	M
	Test Sequence (a)												
Examination of Product	1,8	1,7	1	1	1	1	1,3	1,5	1,5	1,5	1,5	1,3	1,3
Contact Resistance	2,7	2,6						2,4	2,4	2,4	2,4		
Insulation Resistance		3,5											
Dielectric withstanding Voltage	3,6												
Terminal crimp Tensile strength			2										
Terminal / Housing Insertion Force (For Plug)				2									
Mating & Un-mating force	4												
Durability	5												
Pin retention force (For Header)					2								
Temperature Rise						2							
Vibration							2						
Heat aging								3					
Cold Resistance									3				
Humidity		4											
Temperature cycling										3			
Salt spray											3		
Solder ability												2	
Resistance to IR reflow heat (SMT)													2
Sample Size	5	5	5	5	5	5	5	5	5	5	5	5	5

REVISION: F	ECR/ECN INFORMATION: EC No.: EC-22041195 DATE: 2022/04/30	TITLE: WIRE TO BOARD 1258 SERIES	SHEET No. 7 of 7
DOCUMENT NUMBER: PS-1258-001		CREATED/REVISED	CHECKED BY
		APPROVED BY	