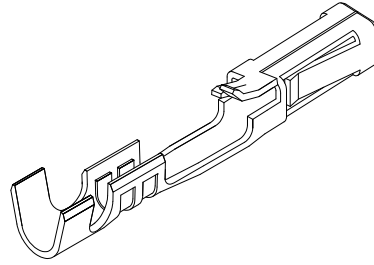




PRODUCT SPECIFICATION

SL BOX CRIMP TERMINAL



1.0 SCOPE

This Product Specification covers the crimp terminal #70058-**** used with the single row fully stackable connector housing #70066-****, the dual row fully stackable connector housing #70450-****, and the dual row with latch connector housing #74130-****.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

70058 Box Crimp Terminal

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

2.2.1 For information on dimensions see the individual sales drawings.

2.2.2 Material: High strength copper alloy

2.2.3 Plating

2.2.3.1 *Tin*: 3.81 micrometers/150 microinches minimum tin plate overall over nickel underplate overall

2.2.3.2 *Tin-Lead*: 3.81 micrometers/150 microinches minimum tin-lead (90-10) plate overall over nickel underplate overall

2.2.3.3 *50 Gold*: 1.25 micrometers/50 microinches minimum gold plate in contact area; 1.91 micrometers/75 microinches minimum tin plate in crimp area; over nickel underplate overall

2.2.3.4 *30 Gold*: 0.76 micrometers/30 microinches minimum gold plate in contact area; 1.91 micrometers/75 microinches minimum tin plate in crimp area; over nickel underplate overall

2.2.3.5 *15 Gold*: 0.38 micrometers/15 microinches minimum gold plate in contact area; 1.91 micrometers/75 microinches minimum tin plate in crimp area; over nickel underplate overall

2.2.3.6 *Tin-Sel*: 3.81 micrometers/150 microinches minimum tin plate in contact area; 1.91 micrometers/75 microinches minimum tin plate in crimp area; over nickel underplate overall

2.2.4 Connector Assemblies Mates with:

2.2.4.1 0.64 mm/.025 in square round pins assembled directly into PC board on .100 centers

2.2.4.2 Shrouded or unshrouded single or dual-row wafers, with 0.64mm/.025in square or round pins

2.2.4.2 70021 Crimp Terminal

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2.2.5 Connector to accept wire range from 36 to 20 AWG. For recommended wire types and crimp heights, contact the Molex Inside Sales department.

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

- 3.1** Mil Std. 202
- 3.2** IEC 68-2-14
- 3.3** IEC 69-2-42

4.0 PERFORMANCE

4.1 MECHANICAL REQUIREMENTS

4.1.1 Insertion/Withdrawal Forces

4.1.1.1 Tin Plating System: 150 microinches minimum Tin over nickel underplate overall

4.1.1.2 Gold Plating System: 30 microinches minimum Gold over nickel underplate overall

4.1.1.3 Steel gage pins used to perform test:

Insertion Gage Pin: .0260+.0000/-.0001

Withdrawal Gage Pin: .0240+.0001/-.0000

AVERAGE INSERTION AND WITHDRAWAL FORCES *

PLATING TYPE	AFTER 1 CYCLE		AFTER 10 CYCLES		AFTER 25 CYCLES		AFTER 50 CYCLES	
	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE	INSERTION FORCE	WITHDRAWAL FORCE
TIN 4.1.1.1	.32 lbf 1.4 N	.26 lbf 1.2 N	.23 lbf 1.0 N	.27 lbf 1.2 N	.24 lbf 1.1 N	.25 lbf 1.1 N	No Data	No data
GOLD 4.1.1.2	.34 lbf 1.5 N	.18 lbf 0.8 N	.27 lbf 1.2 N	.15 lbf 0.7 N	No Data	No Data	.25 lbf 1.1 N	.14 lbf 0.6 N

4.2 ELECTRICAL/ENVIRONMENTAL REQUIREMENTS

Note: These requirements apply to the 70058 terminal only

4.2.1 The following performance criteria is based on grouped, sequential testing

4.2.2 All contact resistance values measured at 20 millivolts maximum open circuit voltage and 5-15 milliamperes using the 4 point dry circuit method, with a Hewlett-Packard Milliohmeter, Model #4328A.

4.2.3 All tin contact systems cycled 1, 5 & 25 times prior to grouped sequential testing, using 0.64mm/.025 in square pins with 150 microinches minimum tin over nickel underplate overall

All gold contact systems cycled 1, 25 & 50 times prior to grouped sequential testing, using 0.64mm/.025 in square pins with 30 microinches minimum gold over nickel underplate overall

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4.2.4 Group I Sequence: Mated Environment

	Test/Specifications	Test Severity/Duration
5.4.1	Thermal Shock IEC 68-2-14	-40°C to +105°C 30 minute dwell at each temperature is one cycle. 10 cycles
5.4.2	Thermal Aging Mil. Std. -202F, 108A	+105°C for 10 days
5.4.3	Cyclic Humidity Mil. Std. -202F, 106D without cold dip	Temperature cycles between +25°C to +65°C at 96% R.H. for 240 hours.
5.4.4	Flowers of Sulphur	Exposed to sulphur vapors for 24 hours at +65°C.
5.4.5	Contact resistance to be less than 10 milliohm change from Initial	

4.2.4 Group II Sequence: Mated Environment

	Test/Specifications	Test Severity/Duration
5.5.1	Thermal Shock IEC 68-2-14	-40°C to +105°C 30 minute dwell at each temperature is one cycle. 10 cycles
5.5.2	Thermal Aging Mil. Std. -202F, 108A	+105°C for 10 days
5.5.3	Steady State Humidity Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days
5.5.4	Flowers of Sulphur IEC 69-2-42	Exposed to sulphur vapors for 24 hours at +65°C
5.5.5	Mate once, contact resistance to be less than 10 milliohm change from Initial	

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4.2.4 Group III Sequence: Mated Environment

	Test/Specifications	Test Severity/Duration
5.6.1	Steady State Humidity, Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days.
5.6.2	Physical Shock Mil. Std. -202F 213B	½ Sine Wave, 50G, 11MS pulse 3 shocks per axis for 240 hours.
5.6.3	Vibration Mil. Std. -202F, 201A	10-55-10 HZ, 1 minute cycles for 2 hours in each axis. .03 inch excursion, 10G.
5.6.4	Contact resistance to be less than 10 milliohm change from Initial	

4.2.4 Group IV Sequence: Mated Environment

	Test/Specifications	Test Severity/Duration
5.7.1	Steady State Humidity, Mil. Std. -202F, 103B Condition A	+40°C at 96% R.H. for 10 days.
5.7.2	Temperature Rise	Increase current to achieve 30°C rise above ambient. Dwell for 48 hours at that current.
5.7.3	Current Ratings:	30 Awg - 0.7A 36 Awg - 0.21A 28 Awg - 1.2A 34 Awg - 0.32A 26 Awg - 1.8A 32 Awg - .045A 24 Awg - 3.0A 22 Awg - 3.0A

4.2.4 Capacitance: Less than 1.2 pico-farads

Note: For Assembly (Housing/Terminal) environmental requirements see Product Specification PS-70400

5.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. See Sales drawings for packaging specification.

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