molex

PRODUCT SPECIFICATION

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PRODUCT SPECIFICATION

MX150 RECEPTACLE AND BLADE TERMINALS

1.0 SCOPE

This Product Specification covers the MX150 Receptacle and Blade terminals crimped to an array of wires utilizing crimp technology.

2.0 PRODUCT DESCRIPTION



Receptacle Terminal



Receptacle ISO grip, M3 Terminal



Blade Terminal



Blade ISO grip, M3 Terminal

2.1 PRODUCT NAME AND ATTRIBUTES

Terminal Family	Gender	Sealing	Plating	Grip Code	Special Characteristics	Current Rating
MX150	Receptacle	Mat Seal	Sn	22	High Performance Sn	12.5A
MX150	Receptacle	Mat Seal	Au	22	High Performance Au	12.5A
MX150	Receptacle	Mat Seal	Ag	22	High Performance Ag	12.5A
MX150	Receptacle	Mat Seal	Sn	18	High Performance Sn	16.5A
MX150	Receptacle	Mat Seal	Au	18	High Performance Au	16.5A
MX150	Receptacle	Mat Seal	Ag	18	High Performance Ag	16.5A
MX150	Receptacle	Mat Seal	Sn	14	High Performance Sn	22A
MX150	Receptacle	Mat Seal	Au	14	High Performance Au	22A
MX150	Receptacle	Mat Seal	Ag	14	High Performance Ag	22A
MX150	Receptacle	Mat Seal	Sn	M3	High Performance Sn ISO Grip	12.5A
MX150	Receptacle	Mat Seal	Au	M3	High Performance Au ISO Grip	12.5A
MX150	Receptacle	Mat Seal	Ag	M3	High Performance Ag ISO Grip	12.5A
MX150	Receptacle	Mat Seal	Sn	M3	Standard performance Sn ISO Grip	12.5A
MX150	Receptacle	Unsealed	Sn	22	High Performance Sn	12.5A
MX150	Receptacle	Unsealed	Au	22	High Performance Au	12.5A
MX150	Receptacle	Unsealed	Ag	22	High Performance Ag	12.5A
MX150	Receptacle	Unsealed	Sn	18	High Performance Sn	16.5A
MX150	Receptacle	Unsealed	Au	18	High Performance Au	16.5A
MX150	Receptacle	Unsealed	Ag	18	High Performance Ag	16.5A
MX150	Receptacle	Unsealed	Sn	14	High Performance Sn	22A
MX150	Receptacle	Unsealed	Au	14	High Performance Au	22A
MX150	Receptacle	Unsealed	Ag	14	High Performance Ag	22A
MX150	Blade*	Mat Seal	Sn	22	High Performance Sn	12.5A
MX150	Blade*	Mat Seal	Au	22	High Performance Au	12.5A
MX150	Blade*	Mat Seal	Ag	22	High Performance Ag	12.5A
MX150	Blade*	Mat Seal	Sn	18	High Performance Sn	17A
MX150	Blade*	Mat Seal	Au	18	High Performance Au	17A
MX150	Blade*	Mat Seal	Ag	18	High Performance Ag	17A
MX150	Blade*	Mat Seal	Sn	14	High Performance Sn	22A

MX150	Blade*	Mat Seal	Au	14	High Performance Au	22A
MX150	Blade*	Mat Seal	Ag	14	High Performance Ag	22A
MX150	Blade*	Mat Seal	Sn	M3	High Performance Sn ISO Grip	12.5A
MX150	Blade*	Mat Seal	Au	M3	High Performance Au ISO Grip	12.5A
MX150	Blade*	Mat Seal	Ag	M3	High Performance Ag ISO Grip	12.5A
MX150	Blade*	Mat Seal	Sn	M3	Standard performance Sn ISO Grip	12.5A

*Also applicable for unsealed application

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

All dimensions, terminal materials, plating descriptions and ID locations can be found on the applicable sales drawing.

2.3 FEATURES AND BENEFITS

- High performance copper alloy
- One piece terminal design
- Molex cavity compatible
- High current carrying capability
- Validated to USCAR-21 crimp performance requirements across a wide array of wires
- Validated to USCAR-2 terminal performance requirements

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Description	Document Number	
	Receptacle	Blade
Sales Drawing	SD-33012-002	SD-33000-001
Application Specification (Crimp)	AS-33012-002	AS-33000-001
Packaging Specification	PK-31300-516	

4.0 SAFETY AGENCY APPROVALS

Agency	Approval Status
CSA File Number	Not Applicable
TUV License number	Not Applicable
UL File Number	Not Applicable
IMDS	Available upon request
Environmental Compliance	Available on molex.com

5.0 RATINGS / PERFORMANCE / VALIDATION

5.1 ELECTRICAL

Item	Description	Condition	Rating
5.1.1	Operating Voltage	Applied voltage during operation	14 Volts DC Maximum
5.1.2	Crimp Resistance	Post environment crimp resistance	Change in crimp resistance ≤ 0.33mΩ or ≤ 0.55mΩ crimp resistance.

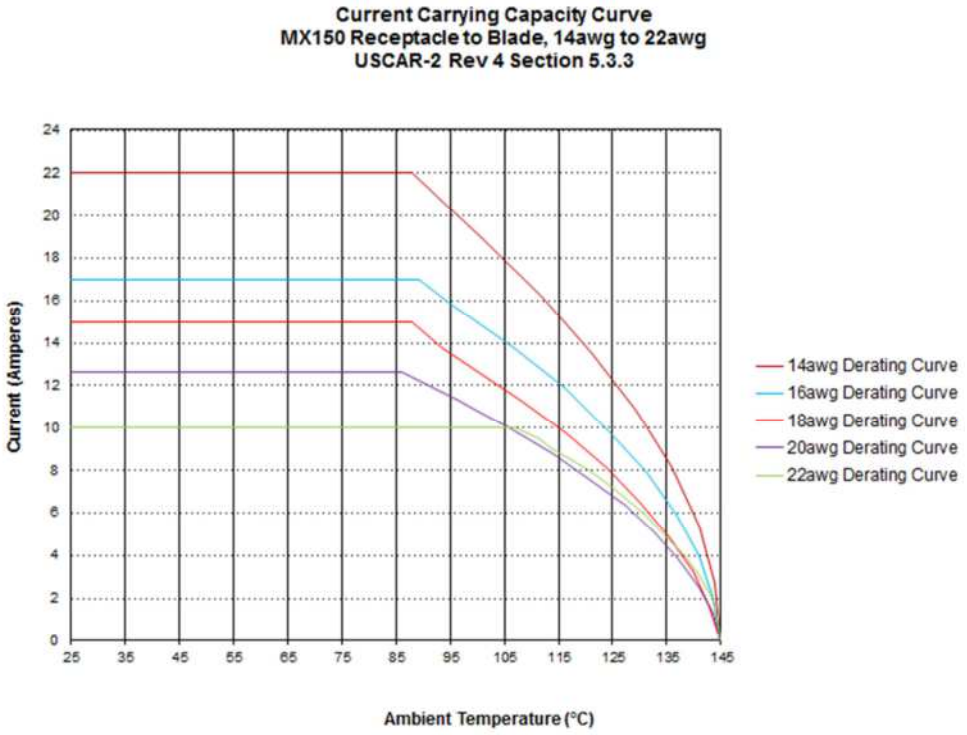
5.1.3 TERMINAL CURRENT DERATING CURVES

This test is used to determine the maximum test current at which a terminal system can operate in a room temperature environment before excessive thermal degradation and/or resistance begins to occur. Temperature Rise (Y axis) vs. Current (X axis) shall be plotted for each applicable conductor size.

CAUTION: These graphs are NOT to be used for actual terminal application in a vehicle. This test is conducted on terminals alone, thus eliminating the variation that may be introduced by variations in the heat dissipating characteristics of differing connector housing designs and sizes. This test cannot establish the Maximum Current Capability of a specific terminal application. For specific applications, several factors other than current load must be considered (see SAE/USCAR-2 appendix F for more information).

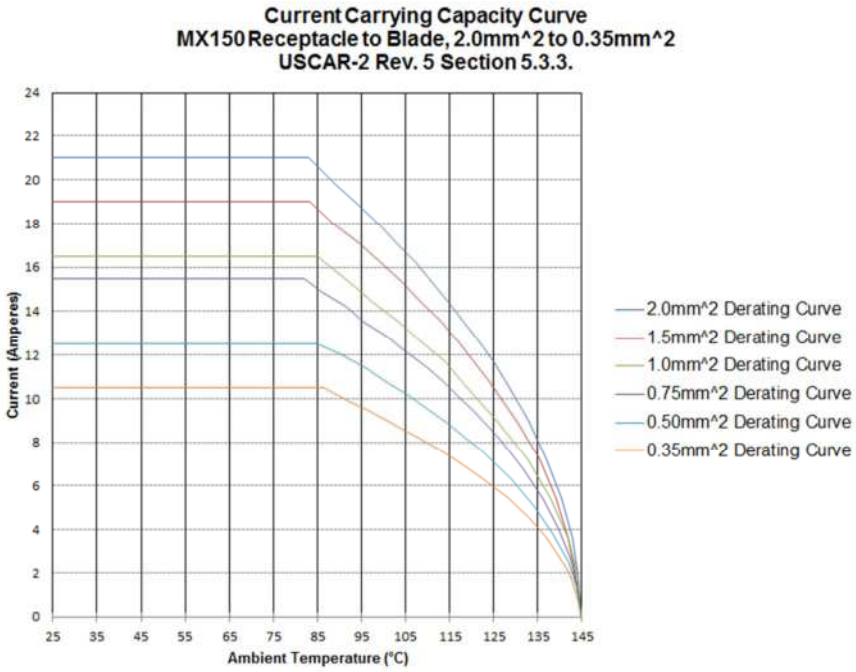
5.1.3.1 SAE WIRES TERMINAL

USCAR DERATING CURVE



5.1.3.2 ISO WIRES TERMINAL

USCAR DERATING CURVE



5.2 TEMPERATURE

Sn Plated Terminal
Non-operating temperature: - 40°C to +125°C
Operating temperature: - 40°C to +125°C

Au & Ag Sn Plated Terminals
Non-operating temperature: - 40°C to +155°C
Operating temperature: - 40°C to +155°C

****For terminal validation information contact your Molex Sales Engineer**
****For connector system level performance see related product specification**

6.0 PACKAGING

Parts are packaged to protect against damage during handling, transit and storage. Please refer to PK-31300-516 reel wind direction. Terminals on reels should be stored in original packaging until ready for use. Storage temperature is recommended between 65 and 95°F (18 and 35°C) and storage humidity at less than 85% relative humidity. Under these conditions Molex recommended shelf life is 12 months from manufacturing date on terminal reel.

7.0 GAGES AND FIXTURES

Gages and Fixtures are referenced in the appropriate control plans of the receptacle terminals. For terminal electrical checking, please refer to the related connector application specification.

8.0 OTHER INFORMATION / MISCELLANEOUS

MOLEX REPRESENTS AND WARRANTS TO BUYER FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF DELIVERY OF THE PRODUCTSTHAT:
1) THE PRODUCTS SHALL CONFORM TO THE MOLEX SPECIFICATIONS FOR THE PRODUCTS IN FORCE AT THE DATE OF DELIVERY OF THE PRODUCTS TO BUYER, AND
2) THE PRODUCTS SHALL BE FREE FROM DEFECTS IN MATERIALS AND MANUFACTURING.

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