COMPONENT SPECIFICATION

M50 AND M52 SERIES CONNECTORS

AUGUST 2017

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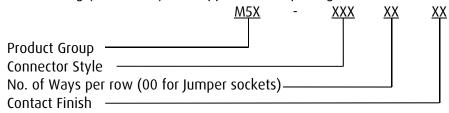
COMPONENT SPECIFICATION M50 AND M52 SERIES CONNECTORS

1. DESCRIPTION OF CONNECTOR AND INTENDED APPLICATION.

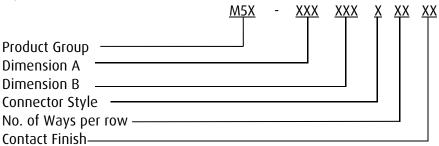
A range of 1.27mm pitch connectors, jumper sockets and IDC cable connectors, comprising vertical surface mount, vertical pc tail, horizontal pc tail, plugs and sockets of varying heights. Board-to-board spacing and configuration is obtained by the selection of an appropriate height plug and socket. M50 connectors are spaced 1.27mm between the rows, and are based on 0.40mm square or round pins. M52 connectors are spaced 2.54mm between the rows, and are based on 0.46mm square pins.

2. MARKING OF THE CONNECTOR AND/OR PACKAGE (ORDER CODE).

The marking (order code) shall appear on the package and shall be of the following style:



The marking (order code) for a pin header variant shall appear on the package and shall be of the following style:



Connector Style: See individual drawings for connector details.

COMPONENT SPECIFICATION M50 AND M52 SERIES CONNECTORS (continued)

3. RATINGS.

For M50 Pin Header variants, please see the relevant specifications for M50-350, 360 and 390. For M52 Pin Header variants, these are specified as "M52-PH". Note: individual components may exceed above ratings – check individual customer information sheets.

3.1.	MATERIAL & FINISH.	
	Moulding Material:	
		High Temperature Thermoplastic, UL94V-0 Black
	For IDC Cable connectors & Jumper sockets	
	Contact Material	Copper alloy
	Contact Finish:	
	M50-380 Contacts	
	Other 42 finish code	Nickel all over, Gold Flash on contact area, 100%
		Tin on tails
	45 finish code	Gold Flash over Nickel
3.2.	ELECTRICAL CHARACTERISTICS.	
5.2.	Current Rating (per contact):	
	M50-315	15A max
	M50-355, M50-365	
	M50-380, M50-90X	
	Others	
	Contact Resistance (initial)	
	Contact Resistance (after conditioning)	
	Dielectric Withstanding Voltage (Voltage Proof):	Johns Hida
	M50-330/380	1 000V ACm. for 1 minute
		300V AC, 500V DC for 1 minute
		1,000V AC, 500V BC for 1 minute (initial)
	M30-311	250V AC for 1 minute (final)
	MEN_2N2 /212 /214 /21E /2E2 /242 /2N2	500V AC for 1 minute (initial)
	18130-3037 3147 3137 3337 3537 3531	250V AC for 1 minute (final)
	M50-19X/20X/320	
	M50-90X/91X	
	·	500V AC, 1,000V DC for 1 minute
		1,000V ACrms/DC for 1 minute
	Insulation Resistance:	5.000MQ:-
	M50-355/365	,
	M50-310/312/430/470/480/490	
	M50-90X/91X	
	Others	1,000MΩ min
3.3.	ENVIRONMENTAL CHARACTERISTICS.	
	Operating Temperature Range:	
	M50-355/365	55°C to +125°C
	M50-90X/91X	20°C to +105°C
	Others	
	Vibration:	
		M5250-2000Hz, 3.13Grms, duration 45mins
	M50-303/313/314/311/315	
	Others	

COMPONENT SPECIFICATION M50 AND M52 SERIES CONNECTORS (continued)

3. RATINGS (continued).

J	ATTITUS (CONTINUES).	
3.3.	ENVIRONMENTAL CHARACTERISTICS (continued). Shock:	
	M50-19X/20X/300/320/350/360/380/390, All M52	30G for 11ms
	M50-311/315	
	M50-310/312/430/470/480/490	
3.4.	MECHANICAL CHARACTERISTICS.	
J.4.	Durability:	
	M50-310/312/330/380/430/470/480/490/90X/91X	100 operations
	M50-311M50-311	
	M50-311	•
		•
	M50-353/363/393	-
	Others	300 operations
	Insertion force (maximum):	4001
	M50-19X/20X	
	M50-320/330/380/90X/91X, M52-500/510	•
	M50-310/312/430	
	M50-311	
	M50-300/303/313/314/315, M52-501/505/511/515	1.5N per contact
	Withdrawal force (minimum):	
	M50-19X/20X	
	M50-310/312/315/330/380/430/90X/91X	
	M50-320, M52-500/510	•
	M50-300, M52-501/505/511/515	0.1N per contact
	M50-303/313/314	0.2N per contact
	Contact Retention force (minimum):	
	M50-19X/20X	4N
	M50-300/320/350/360/390, M52-PH/501/505/511/515	9.8N per contact
	M50-310/312/430/470/480/490, M52-500/510	1.5N per contact
	M50-303/311/313/314/315	
	M50-353/363/393	2N per contact
3.5	SOLDERING DATA.	
J.J.	Solderability (for PC Tail & SMT products):	
	M50-311	230°C for 3 seconds
	M50-311	
	Others	
	Soldering heat resistance (for PC Tail & SMT products)	Zou c ioi io seconds