



Component Specification

C01811

**M22 Series Connectors
November 2021**

SECTION	TITLE	PAGE
1	Description of Connector and Intended Application	2
2	Ratings	2
Appendix 1	Gauges	4

1. **DESCRIPTION OF CONNECTOR AND INTENDED APPLICATION**

A range of 2mm pitch square pin connectors for interconnecting board to board. The socket is a box section design with barbs, to locate and hold in an insulated housing. Terminations are available for throughboard solder or surface mount in a vertical mounting.

The 0.5mm square plug pins are retained in a housing, and are available in either horizontal or vertical, throughboard solder mounting or surface mount.

Connectors are available in single and double row variations. Contacts may be gold with tin terminations, all-over gold or all-over tin plated.

2. **RATINGS**

Note:

- Individual components may exceed below ratings – check individual customer information sheets.
- Ratings for M22 Throughboard Pin Headers (including Pin header variants but excluding M22-220, M22-221 and M22-241 series), are detailed below as “M22-PH”.

2.1. **Material & Finish**

Housing Material:

For PC Tail or SMT connectors High Temperature Thermoplastic, UL94V-0
 For Cable connectors See individual drawing

Contact Material Copper alloy

Contact Finish See individual drawing

2.2. **Electrical Characteristics**

Current Rating (per contact):

M22-301/302/304/305 1A max

Other 2A max

Contact Resistance 20mΩ max

Dielectric Withstanding Voltage (Voltage Proof) 500V AC/DC for 1 minute

Insulation Resistance 1,000MΩ min

2.3. **Environmental Characteristics**

Operating Temperature Range:

M22-301/302/304/305 -25°C to +85°C

M22-220/221/306/307/308 -25°C to +105°C

Others -40°C to +105°C

Vibration:

M22-PH, M22-241/532/533/543/634/636/654/655 50-2,000Hz, 3.13G_{rms}, Duration 15 mins in each axis

Other Not tested

Shock:

M22-PH, M22-241//532/533/543/634/636/654/655 30G for 11ms

Other Not tested

2.4. Mechanical Characteristics

Durability:

M22-307	1 operation MAXIMUM
<i>M22-307 is not designed to be pulled apart or separated easily. This connector is ideal for one cycle only.</i>	
M22-306/308	100 operations
Others:	300 operations

Insertion Force (maximum):

M22-304/305	2.94N per contact
M22-306/308	6.9N per contact
M22-533/543/634/636/654/655/713/714	2.0N per contact

Withdrawal Force (minimum):

M22-304/305/306/308	0.98N per contact
M22-533/543/634/636/654/655/713/714	0.2N per contact

Contact Retention Force (minimum):

M22-PH, M22-220/221/306/308/530	9.8N per contact
M22-241/532/533/543/655/713/714	4.9N per contact

2.5. Soldering Data

Solderability (for PC Tail & SMT products):

M22-220/221	235°C for 3 seconds
M22-PH, M22-241/532/533/543/634/636/655	245°C for 5 seconds
M22-530	250°C for 5 seconds

APPENDICES NOTES:

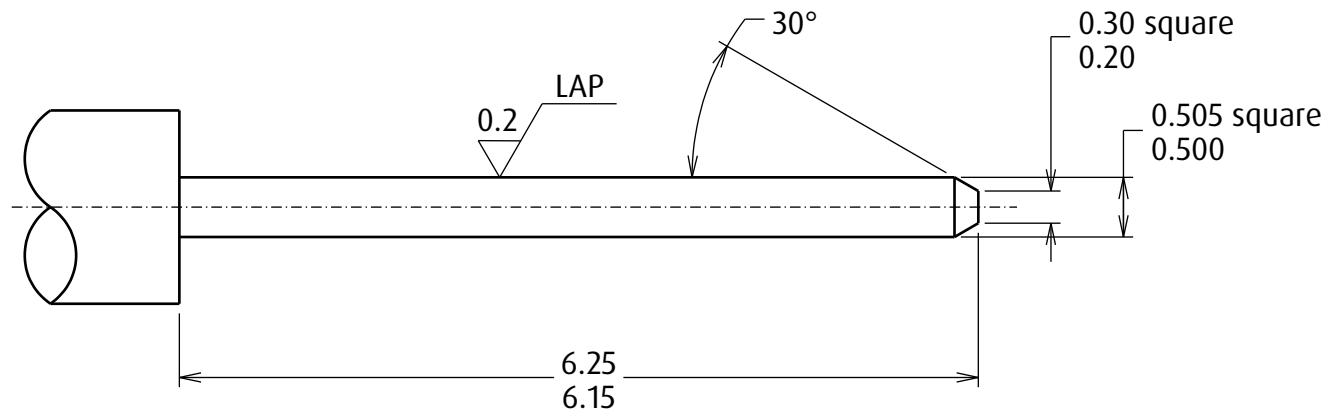
1. Third angle projection is used where projected views are shown.
2. All dimensions are in millimetres.
3. For explanation of dimensions, etc. see BS8888.
4. Unless otherwise stated, all dimensions are maxima.

APPENDIX 1 – GAUGES

NOTES:

1. Material = Steel to BS1407 or equivalent.
2. Gauging surfaces to be hardened/ground, 650 HV5 min.
3. These gauges to be used for testing fully assembled components only.
4. Ultimate wear limit 0.005mm is allowable on gauging dimensions.

A1.1. Sizing Gauge



A1.2. Holding Gauge (after conditioning)

