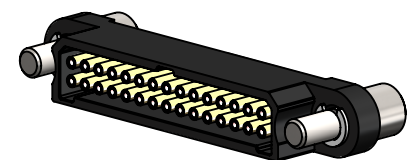
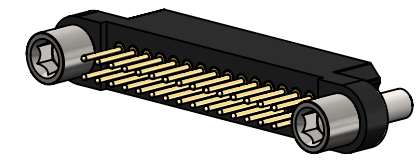
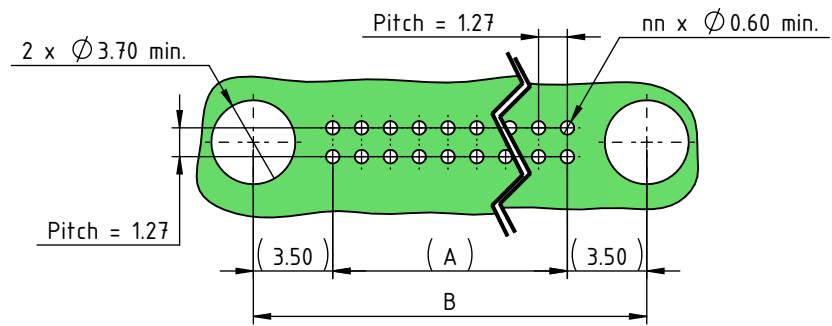


Connector support face



| Connector EMM series 220 female | | | | | | | |
|---------------------------------|-----------------------------|-------|--------------|-----------------------------------|----|----|----|
| LF contacts number nn | Distance in mm between axes | | Length in mm | LF contacts reference mark number | | | |
| | A | B | | D | E | F | G |
| 04 | 1.27 | 8.27 | 12.87 | 1 | 2 | 3 | 4 |
| 06 | 2.54 | 9.54 | 14.14 | 1 | 3 | 4 | 6 |
| 08 | 3.81 | 10.81 | 15.41 | 1 | 4 | 5 | 8 |
| 10 | 5.08 | 12.08 | 16.68 | 1 | 5 | 6 | 10 |
| 12 | 6.35 | 13.35 | 17.95 | 1 | 6 | 7 | 12 |
| 14 | 7.62 | 14.62 | 19.22 | 1 | 7 | 8 | 14 |
| 16 | 8.89 | 15.89 | 20.49 | 1 | 8 | 9 | 16 |
| 18 | 10.16 | 17.16 | 21.76 | 1 | 9 | 10 | 18 |
| 20 | 11.43 | 18.43 | 23.03 | 1 | 10 | 11 | 20 |
| 22 | 12.7 | 19.7 | 24.3 | 1 | 11 | 12 | 22 |
| 24 | 13.97 | 20.97 | 25.57 | 1 | 12 | 13 | 24 |
| 26 | 15.24 | 22.24 | 26.84 | 1 | 13 | 14 | 26 |
| 28 | 16.51 | 23.51 | 28.11 | 1 | 14 | 15 | 28 |
| 30 | 17.78 | 24.78 | 29.38 | 1 | 15 | 16 | 30 |
| 32 | 19.05 | 26.05 | 30.65 | 1 | 16 | 17 | 32 |
| 34 | 20.32 | 27.32 | 31.92 | 1 | 17 | 18 | 34 |
| 36 | 21.59 | 28.59 | 33.19 | 1 | 18 | 19 | 36 |
| 38 | 22.86 | 29.86 | 34.46 | 1 | 19 | 20 | 38 |
| 40 | 24.13 | 31.13 | 35.73 | 1 | 20 | 21 | 40 |
| 42 | 25.4 | 32.4 | 37 | 1 | 21 | 22 | 42 |
| 44 | 26.67 | 33.67 | 38.27 | 1 | 22 | 23 | 44 |
| 46 | 27.94 | 34.94 | 39.54 | 1 | 23 | 24 | 46 |
| 48 | 29.21 | 36.21 | 40.81 | 1 | 24 | 25 | 48 |
| 50 | 30.48 | 37.48 | 42.08 | 1 | 25 | 26 | 50 |
| 52 | 31.75 | 38.75 | 43.35 | 1 | 26 | 27 | 52 |
| 54 | 33.02 | 40.02 | 44.62 | 1 | 27 | 28 | 54 |
| 56 | 34.29 | 41.29 | 45.89 | 1 | 28 | 29 | 56 |
| 58 | 35.56 | 42.56 | 47.16 | 1 | 29 | 30 | 58 |
| 60 | 36.83 | 43.83 | 48.43 | 1 | 30 | 31 | 60 |

Recommended PCB layout :



| | | | | |
|---|----------|-------|---------|----------|
| 1 | 22/07/19 | J.R. | A.J. | C.C. |
| Iss | Date | Drawn | Checked | Approved |
| Item : Connector EMM 220 female Y on PCB, nn LF contacts, E01 guiding | | | | |

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Catalogue Reference : E222YnnE01

Compliant matrix : MDC.P16020
Customer reference : E222YnnE01

General tolerance ±0.2
Scale 3:1
Page 1/2

PRODUCT SPECIFICATIONS
(connection connector to connector)

| Material | | Mechanical features | |
|--|--|--|---|
| Component | Characteristics | Mil 83513 Requirement | EMM Results |
| Insulator | Special LCP (Liquid Crystal Polymer thermoplastic) UL 94-V0 | Contact engagement and separation forces EIA 364-37B | Engagement force: 1N max Separation force: 0.15 N |
| LF Contacts | Female: Body: Copper alloy / Ni +Au 0.125µ mini Clip: Beryllium copper / Ni + Au 1.27µ mini | Connector mating and unmating forces EIA 364-13D | Values for configurations up to 30 pins Mating Force: 1.7N max Unmating Force: 0.1N min |
| | Male: Copper alloy / Ni + Au 0.75µ mini | Durability : 500 cycles MIL-DTL-83513G §4,5,16 | Values for configurations up to 30 pins Qualified |
| Fixing Hardware | Passivated stainless steel 300 series | Crimp tensile strength EIA 364-08B NASA-STD 8739.4 | AWG 24: 49.98 N min AWG 26: 36.64 N min AWG 28: 16.90 N min AWG 30: 11.30 N min |
| Electrical performance requirements | | Environmental features | |
| Mil 83513 Requirement | EMM Results | Mil 83513 Requirement | EMM Results |
| Dielectric withstanding voltage sea level EIA-364-20C | Dielectric withstanding voltage: 750 V RMS Breakdown voltage: 1000 V RMS Rated voltage: 250 V RMS | Sinusoidal Vibration EIA 364-28E TEST CONDITION III&IV | Values for configurations up to 30 pins Up to 45g |
| Dielectric withstanding voltage high altitude EIA-364-20C | Dielectric withstanding voltage @30 000 ft: 540 V RMS Dielectric withstanding voltage @70 000 ft: 480 V RMS | Shock EIA 364-27B TEST CONDITION G | Values for configurations up to 30 pins Up to 160g |
| Insulation Resistance EIA 364-21C | > 2000 GΩ@ 500V | Temperature cycling EIA 364-32D | -65°C +260°C |
| Contact Resistance EIA 364-06C | Less than 8 mΩ | Fluid immersion MIL-DTL-83513G §4,5,18 | Qualified |
| Low level contact resistance EIA 364-06C | Less than 9 mΩ | Humidity EIA 364-31B - Method IV | Qualified |
| Magnetic permeability ASTM A342/A342M | Less than 2 gamma | Salt spray (corrosion) Duration: 96 hours 364-26B TEST CONDITION A | Values for configurations up to 30 pins Qualified |
| Contact Current Capability (derating) IEC 60512-5-2 Test 5b | 3A@25°C and 1.6A@85°C for 30 pins | Thermal vacuum outgassing ASTM E595 (ECSS-Q-ST-70-02C) | Qualified PEEK (TML 0.18 %, CVCM 0.01 %) / LCP (TML 0.06 %, CVCM 0.01%) / STYCAST 2651 (TML 0.43 %, CVCM 0.01%) |
| | | Resistance to soldering heat EIA 364-29C | Values for configurations up to 30 pins Qualified |
| | | Marking MIL-STD-202, method 215 | Qualified |



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| | | | | |
|--|----------|-------|---------|----------|
| 1 | 22/07/19 | J.R. | A.J. | C.C. |
| Iss | Date | Drawn | Checked | Approved |
| Item : Connector EMM 220 female Y on PCB, nn LF contacts, E01 guiding | | | | |

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General tolerance ±0.2
Scale 3:1
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