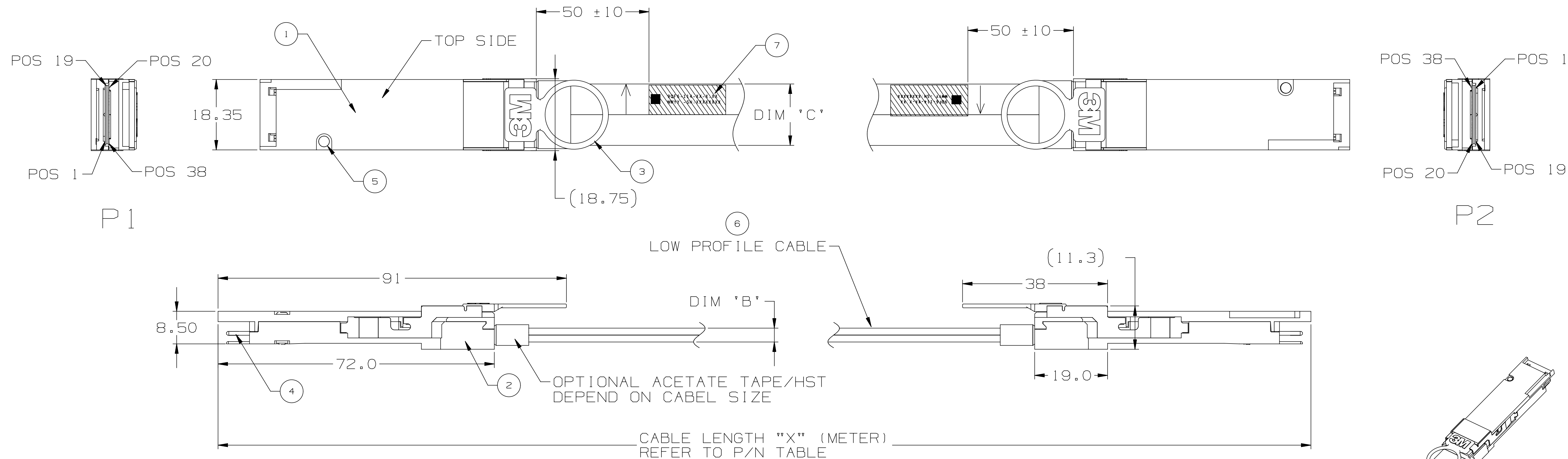


3M™ 100G QSFP28 Direct Attach Copper Cable Assemblies, 9Q Series



| WIRING LIST | | | |
|-------------|----------|--------|----------|
| P1 END | | P2 END | |
| POS | SIGNAL | POS | SIGNAL |
| 1 | GND (TX) | 20 | GND (RX) |
| 2 | TX2n | 21 | RX2n |
| 3 | TX2P | 22 | RX2p |
| 4 | GND (TX) | 23 | GND (RX) |
| 5 | TX4n | 24 | RX4n |
| 6 | TX4P | 25 | RX4p |
| 7 | GND (TX) | 26 | GND (RX) |
| 13 | GND (RX) | 32 | GND (TX) |
| 14 | RX3p | 33 | TX3p |
| 15 | RX3n | 34 | TX3n |
| 16 | GND (RX) | 35 | GND (TX) |
| 17 | RX1p | 36 | TX1p |
| 18 | RX1n | 37 | TX1n |
| 19 | GND (RX) | 38 | GND (TX) |
| 20 | GND (RX) | 1 | GND (TX) |
| 21 | RX2n | 2 | TX2n |
| 22 | RX2p | 3 | TX2P |
| 23 | GND (RX) | 4 | GND (TX) |
| 24 | RX4n | 5 | TX4n |
| 25 | RX4p | 6 | TX4P |
| 26 | GND (RX) | 7 | GND (TX) |
| 32 | GND (TX) | 13 | GND (RX) |
| 33 | TX3p | 14 | RX3p |
| 34 | TX3n | 15 | RX3n |
| 35 | GND (TX) | 16 | GND (RX) |
| 36 | TX1p | 17 | RX1p |
| 37 | TX1n | 18 | RX1n |
| 38 | GND (TX) | 19 | GND (RX) |


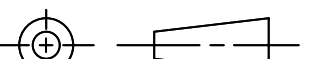
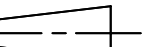



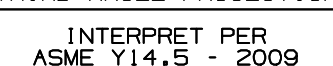
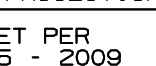
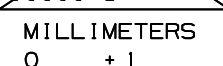
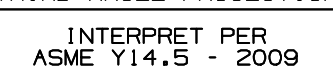
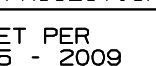
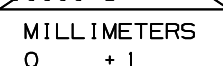
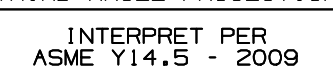
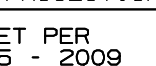
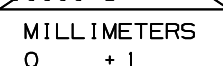
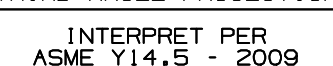
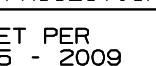
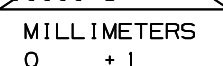
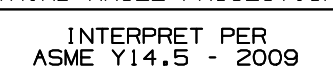
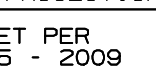
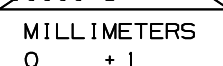
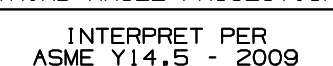
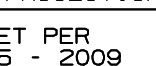
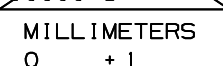
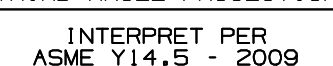
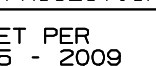
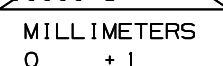
| LOW SPEED SIGNALS | |
|-------------------|---------|
| P1 & P2 | |
| POS | SIGNAL |
| 8 | ModSelL |
| 9 | ResetL |
| 10 | VccRx |
| 11 | SCL |
| 12 | SDA |
| 27 | ModPrsL |
| 28 | IntL |
| 29 | VccTx |
| 30 | VccI |
| 31 | LPMoDe |

A diagram of a standard product label. It consists of a black square on the left and a white rectangular area on the right. The white area contains the text "9QXX-114-XX-X.XX" on the top line and "WWYY - SN:XXXXXXXXX" on the bottom line.

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| | |
|-----------------|----------------------------------|
| 7 | PRODUCT LABEL |
| 6 | 3M™ LOW PROFILE TWIN AXIAL CABLE |
| 5 | RIVET |
| 4 | PADDLE CARD |
| 3 | LATCH WITH PULL TAB |
| 2 | BOTTOM SHELL |
| 1 | UPPER SHELL |
| BALLOON ITEM | DESCRIPTION |

| | | | | | | | | | |
|---|--|---|--|--|---------|--|-------------|------|--------|
| DESIGN REFERENCE | | NEXT ASSEMBLY | | REV | ECO | ISSUE DATE AND DESCRIPTION | | DRFT | CHKD |
| ASSEMBLIES | | | | DRFT | Yunlong | DATE | MAR 02,2017 | WFO | E CHEN |
| CODES | | | | CHKD | Yunlong | DATE | MAR 02,2017 | S | BANDHU |
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|  | |  | |  | | <div> <p>TITLE</p> <p>3M™ 100G QSFP28 Direct Attach Copper Cable Assemblies, 9Q Series</p> </div> | | | |
| THIRD ANGLE PROJECTION | | | |  | | | | | |
| INTERPRET PER ASME Y14.5 - 2009 | | | |  | | | | | |
|  | |  | |  | | <div> <p>CAGE NUMBER</p> <p>D</p> </div> | | | |
|  | |  | |  | | <div> <p>SIZE</p> <p>D</p> </div> | | | |
|  | |  | |  | | <div> <p>DRAWING NO.</p> <p>D78-5100-2672-3</p> </div> | | | |
|  | |  | |  | | <div> <p>REV.</p> <p>B</p> </div> | | | |
|  | |  | |  | | <div> <p>MODEL</p> <p>OSFP28</p> </div> | | | |
|  | |  | |  | | <div> <p>DET</p> <p>LISTS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> </div> | | | |
|  | |  | |  | | <div> <p>SHT 1 OF 2</p> </div> | | | |

| | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|--------------|-----------------------|----------------|----------------|---|---|---|----------------------|---------------------|------------|-----------------------|----------------|----------------|------------------|------|-------|--------|-------|--------|------------------|------|-------|--------|--|--|------------------|------|-------|------------------|------|-------|-------|--------|------------------|------|-------|------------------|------|-------|-------|-------|--------|------------------|------|--------------|------------------|------|--------------|-------|--------|--|
| | 3M™ 100G QSFP28 Direct Attach Copper Cable Assemblies, 9Q Series | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | <div><div>NOTES:</div><div><div>1. ORDERING INFORMATION:</div><div>9QXX-114-XX-X.XX</div><div><div>ASSEMBLY LENGTH X IN METERS SEE TABLE 1</div><div>EEPROM MEMORY MAP</div><div>22= IEEE Std 802.3bJ-2014 100GBASE-CR4</div><div>XX= CUSTOMIZATION(SEE 3M SALES REP)</div></div><div><div>AWG</div><div>0= 30AWG (only for below and 2 meters)</div><div>6= 26AWG (only for 2 meters and above)</div></div><div><div>CABLE TYPE</div><div>J= 30AWG UTJ PVC JACKET WITH SHIELD (UP TO 2 METERS)</div><div>N= 30AWG CL2 JACKET WITH SHIELD (UP TO 2 METERS)</div><div>H= 26AWG UTJ PVC JACKET WITH SHIELD (2 TO 4.5 METERS)</div><div>M= 26 AWG CL2 JACKET WITH SHIELD (2 TO 4.5 METERS)</div></div></div><div>2. REFER TO <u>TABLE 1</u> FOR CABLE LENGTH, WIDTH, THICKNESS AND WIRE AWG</div><div>3. PCB PINOUT DESIGNED TO SFF8436 SPECIFICATION</div><div>4. CABLE ASSEMBLY DESIGNED TO SFF 8661 & IEEE 802.3bJ SPECIFICATION</div><div>5. JACKET DETAIL: BLACK COLOR PVC, OTHER COLOR OPTION CONTACT 3M SALES REP.</div><div>6. UNLESS OTHERWISE NOTED,REFERENCES TO INDUSTRY SPECIFICATIONS ARE INTENDED TO INDICATE SUBSTANTIAL COMPLIANCE TO THE MATERIAL ELEMENTS OF THE SPECIFICATION. SUCH REFERENCES SHOULD NOT BE CONTRUED AS A GUARANTEE OF COMPLIANCE TO ALL REQUIREMENTS IN A GIVEN SPECIFICATION.</div><div>7. PRODUCT SPECIFICATION REFER TO 3M DOCUMENT: 78-5102-0262-1</div><div>8. CABLE RETURN LOSS PERFORMANCE IS VALID FOR CABLE ASSEMBLIES OF A MINIMUM OF 1.00 METER IN LENGTH. CABLE ASSEMBLIES LESS THAN 1.00 METER IN LENGTH MAY NOT ACHIEVE THE RETURN LOSS PERFORMANCE IN IEEE802.3bJ. CABLE RETURN LOSS PERFORMANCE IS SUBJECT TO CHANGE WITH DIFFERENT CABLE ASSEMBLY LENGTHS. END USER WILL NEED TO DETERMINE WHETHER THIS PRODUCT IS SUITABLE FOR THEIR INTENDED APPLICATION.</div><div>9. FOR CUSTOM LENGTHS CONTACT A 3M SALES REPRESENTATIVE</div></div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| A | <div><div>TABLE 1</div><table><tr><th>ORDERING INFORMATION</th><th>ASSY LENGTH="X" (m)</th><th>CABLE SIZE</th><th>LENGTH TOLERANCE (mm)</th><th>B NOMINAL (mm)</th><th>C NOMINAL (mm)</th></tr><tr><td>9QJ0-114-22-0.50</td><td>0.50</td><td>30AWG</td><td>+10/-0</td><td rowspan="3">(2.8)</td><td rowspan="3">(15.0)</td></tr><tr><td>9QJ0-114-22-1.00</td><td>1.00</td><td>30AWG</td><td colspan="3" rowspan="2">+50/-0</td></tr><tr><td>9QJ0-114-22-2.00</td><td>2.00</td><td>30AWG</td></tr><tr><td>9QH6-114-22-2.00</td><td>2.00</td><td>26AWG</td><td rowspan="2">(3.8)</td><td rowspan="2">(16.0)</td></tr><tr><td>9QH6-114-22-3.00</td><td>3.00</td><td>26AWG</td></tr><tr><td>9QH6-114-22-4.00</td><td>4.00</td><td>26AWG</td><td rowspan="3">+50/0</td><td rowspan="2">(3.5)</td><td rowspan="2">(17.8)</td></tr><tr><td>9QN0-114-22-1.00</td><td>1.00</td><td>30AWG CL2</td></tr><tr><td>9QM6-114-22-3.00</td><td>3.00</td><td>26AWG CL2</td><td>(6.0)</td><td>(18.5)</td></tr></table></div> | | | | | | | | ORDERING INFORMATION | ASSY LENGTH="X" (m) | CABLE SIZE | LENGTH TOLERANCE (mm) | B NOMINAL (mm) | C NOMINAL (mm) | 9QJ0-114-22-0.50 | 0.50 | 30AWG | +10/-0 | (2.8) | (15.0) | 9QJ0-114-22-1.00 | 1.00 | 30AWG | +50/-0 | | | 9QJ0-114-22-2.00 | 2.00 | 30AWG | 9QH6-114-22-2.00 | 2.00 | 26AWG | (3.8) | (16.0) | 9QH6-114-22-3.00 | 3.00 | 26AWG | 9QH6-114-22-4.00 | 4.00 | 26AWG | +50/0 | (3.5) | (17.8) | 9QN0-114-22-1.00 | 1.00 | 30AWG CL2 | 9QM6-114-22-3.00 | 3.00 | 26AWG CL2 | (6.0) | (18.5) | |
| ORDERING INFORMATION | ASSY LENGTH="X" (m) | CABLE SIZE | LENGTH TOLERANCE (mm) | B NOMINAL (mm) | C NOMINAL (mm) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9QJ0-114-22-0.50 | 0.50 | 30AWG | +10/-0 | (2.8) | (15.0) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9QJ0-114-22-1.00 | 1.00 | 30AWG | +50/-0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9QJ0-114-22-2.00 | 2.00 | 30AWG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9QH6-114-22-2.00 | 2.00 | 26AWG | (3.8) | (16.0) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9QH6-114-22-3.00 | 3.00 | 26AWG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9QH6-114-22-4.00 | 4.00 | 26AWG | +50/0 | (3.5) | (17.8) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9QN0-114-22-1.00 | 1.00 | 30AWG CL2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9QM6-114-22-3.00 | 3.00 | 26AWG CL2 | | (6.0) | (18.5) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|------------------------|--|---------------------------------|--|----------------------------|--|--|--|---|--|--|--|------------|--|
| DESIGN REFERENCE | | NEXT ASSEMBLY | | REV | | ECO | | ISSUE DATE AND DESCRIPTION | | DRFT | | CHKD | |
| XREF CODES | | | | DR1 Yunlong | | DATE MAR 02,2017 | | EFC CHEN | | DATE MAR 02,2017 | | | |
| | | | | CHKD Yunlong | | DATE MAR 02,2017 | | APPL S BANDHU | | DATE MAR 02,2017 | | | |
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| | | | | ANGLES ±0.5° | | MODEL QSFP28 | | DET LISTS | | YES NO | | SHT 2 OF 2 | |

| | | | | | | | | | |
|---------------------------------------|--|--------------------------------------|--|--|-----|--|---------------|----------------------------|------|
| DESIGN REFERENCE | | NEXT ASSEMBLY | | REV | ECO | ISSUE DATE AND DESCRIPTION | | DRFT | CHKD |
| XREF CODES | | | | DR1 Yunlong | | DATE MAR 02,2017 | BY E CHEN | DATE MAR 02,2017 | |
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| | | THIRD ANGLE PROJECTION | | INTERPRET PER ASME Y14.5 - 2009 | | MAX SURFACE ROUGHNESS | | CAGE NUMBER | |
| <input type="checkbox"/> ALL SURFACES | | <input type="checkbox"/> MARKED ONLY | | INCHES 0 ±.1 .00 ±.008 ±.0000 ± | | MILLIMETERS 0 ±.1 .00 ±.10 ±.005 ± | | DRAWING NO. 78-5100-2672-3 | |
| | | | | ANGLES ±0.5° | | MODEL QSFP28 | | REV. B | |

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