08/08/02 REV. 4  DATATWIST(R) 600E-7851A

.

I. DESCRIPTION: NON-PLENUM

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4 PAIR UTP (UNSHIELDED TWISTED PAIR) CABLE, 23 AWG SOLID BARE COPPER, POLYOLEFIN INSULATED SINGLES @ ESPLINE FLR, RIPCORD, FLEXIBLE PVC JACKET. JACKET IS SEQUENTIALLY MARKED AT TWO FOOT INTERVALS.

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II. APPLICATIONS:

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SUPPORTS CURRENT SUCH AS 100 BASE TX, 100 BASE VG ANYLAN, AND 155 ATM. IDEAL FOR USE IN EXISTING OR FUTURE HIGH BANDWIDTH APPLICATIONS SUCH AS 622 ATM AND GIGABIT ETHERNET.

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III. PHYSICAL CHARACTERISTICS:

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|---|---|
| TEMPERATURE RANGE: | -20 TO 75 C |
| INSULATION MATERIAL: | POLYOLEFIN |
| JACKET / FILLER MATERIAL: | PVC / FR POLYOLEFIN |
| MAX. PULLING TENSION: | 45 LBS. |
| MIN. CONDUCTOR OD: | 0.0234" |
| MIN. INSULATION OD: | 0.0415" |
| NOM. WEIGHT/1000 FT: | 31.3 LBS. |
| MIN. BEND RADIUS: | 0.250" |
| NOM. DIAMETER: | 0.265" (0.225" X 0.310") |
| APPLICABLE SPECIFICATIONS: | ANSI/TIA/EIA-568-B.2 CAT 6 |
| FLAME RATING AND TEST: | UL TYPE CMR, UL1666<br>RISER LISTED.<br>C(UL)TYPE CMR, CSA FT4 |

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IV. COLOR CODE AND CW ROTATION:

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|---|---|---|
| PAIR #1: | WHITE/GREEN & GREEN | (MINOR AXIS) |
| PAIR #2: | WHITE/ORANGE & ORANGE | (MAJOR AXIS) |
| PAIR #3: | WHITE/BLUE & BLUE | (MINOR AXIS) |
| PAIR #4: | WHITE/BROWN & BROWN | (MAJOR AXIS) |

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V. ELECTRICAL CHARACTERISTICS:

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|---|---|
| MAX. OPERATING VOLTAGE: | 300 V RMS |
| NOM. CAPACITANCE @ 1 KHZ: | 15.5 PF/FT. |
| NOM. VELOCITY OF PROPAGATION: | 67% |

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| ;DELAY ; SKEW | ; DELAY @ 100 MHZ ;(NS/100 | ;CAPACITANCE;UNBALANCE ;(PF/100 M) | ;DCR ;@ 20C ;(OHMS/ | ;DCR ;UNBALANCE ;(%) |
|---|---|---|---|---|

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       ; M)     ; M)        ;           ; 100 M);
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MAXIMUM; 38     ;   538     ;   65.6    ; 25.0  ;  3.0
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| FREQ. (MHZ) | IMPEDANCE SPEC | MIN RL (DB) | MAX ATTEN (DB/100M) | MIN PSNEXT (DB) | MIN. PSACR (DB/100M) |
|---|---|---|---|---|---|
| 1.0 | 100+/-12% | 20.0 | 1.9 | 80.3 | 78.5 |
| 4.0 | 100+/-12% | 23.0 | 3.6 | 71.3 | 67.7 |
| 8.0 | 100+/-12% | 24.5 | 5.1 | 66.8 | 61.7 |
| 10.0 | 100+/-12% | 25.0 | 5.7 | 65.3 | 59.6 |
| 16.0 | 100+/-12% | 25.0 | 7.2 | 62.3 | 55.0 |
| 20.0 | 100+/-12% | 25.0 | 8.1 | 60.8 | 52.7 |
| 25.0 | 100+/-15% | 25.0 | 9.1 | 59.3 | 50.3 |
| 31.25 | 100+/-15% | 25.0 | 10.2 | 57.9 | 47.7 |
| 62.5 | 100+/-15% | 25.0 | 14.7 | 53.4 | 38.7 |
| 100 | 100+/-15% | 25.0 | 18.9 | 50.3 | 31.4 |
| 155 | 100+/-15% | 22.8 | 23.9 | 47.5 | 23.5 |
| 200 | 100+/-15% | 21.6 | 27.5 | 45.8 | 18.3 |
| 250 | 100+/-20% | 20.5 | 31.2 | 44.3 | 13.2 |
| 350 | 100+/-22% | 19.8 | 37.7 | 40.2 | 4.5 |
| 400 | 100+/-22% | 19.5 | 40.6 | 39.3 | 0.6 |
| 500 | 100+/-22% | 18.4 | 46.2 | 37.8 | >0 TO 460 |
| 550 | 100+/-22% | 18.0 | 48.8 | 37.2 | |
| 600 | 100+/-22% | 17.6 | 51.4 | 36.6 | |

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| FREQ. (MHZ) | MIN NEXT (DB) | MIN ACR (DB) | MIN ELFEXT (DB/100M) | MIN. PSELFEXT (DB/100M) |
|---|---|---|---|---|
| 1.0 | 82.3 | 80.5 | 73.8 | 70.8 |
| 4.0 | 73.3 | 69.7 | 61.8 | 58.8 |
| 8.0 | 68.8 | 63.7 | 55.7 | 52.7 |
| 10.0 | 67.3 | 61.6 | 53.8 | 50.8 |
| 16.0 | 64.3 | 57.0 | 49.7 | 46.7 |
| 20.0 | 62.8 | 54.7 | 47.8 | 44.8 |
| 25.0 | 61.4 | 52.3 | 45.8 | 42.8 |
| 31.25 | 59.9 | 49.7 | 43.9 | 40.9 |
| 62.5 | 55.4 | 40.7 | 37.9 | 34.9 |
| 100 | 52.3 | 33.4 | 33.8 | 30.8 |
| 155 | 49.5 | 25.5 | 30.0 | 27.0 |
| 200 | 47.8 | 20.3 | 27.8 | 24.8 |
| 250 | 46.4 | 15.3 | 25.8 | 22.8 |
| 350 | 42.2 | 6.5 | 22.9 | 19.9 |
| 400 | 41.3 | 2.6 | 21.8 | 18.8 |
| 500 | 39.9 | >0 TO 460 | 19.8 | 16.8 |
| 550 | 39.2 | | 19.0 | 16.0 |

600 38.6 18.2 15.2

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DATA IN THE ABOVE TABLES REPRESENTS DISCRETE FREQUENCY POINTS. ALL TEST ARE SWEEP TESTED OUT TO 600 MHZ.

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THE BELDEN DIVISION OFFICE AND ENGINEERING CENTER ARE ISO 9001 CERTIFIED FACILITIES. BELDEN'S U.S. DOMESTIC MANUFACTURING PLANTS ARE ISO 9002 CERTIFIED.

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APPLICABLE PATENTS: 5606151, 5734126, 5789711 AND 6297454B1.