



ZPMV2.E64158 Wiring, Printed - Component

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Wiring, Printed - Component

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EXCELLO CIRCUITS, INC

E64158

1924 Nancita Cir

Placentia, CA 92870 USA

| Type | Cond Width | | Cond Thk mic(mil) | SS/ DS/ DSO | Max | | Max | | Meets UL796 Class | C I | |
|--|--------------|--------------|-------------------------|-------------------|------------|--------|------|-------|-------------------------|--------|-----|
| | Min | Edge | | | Area | Solder | Oper | Flame | | | DSR |
| | mm(in) | mm(in) | | | Diam | Limits | Temp | | | | |
| | | | | | mm(in) | C | sec | | | | |
| Mass laminated (multilayered) printed wiring boards. | | | | | | | | | | | |
| LXD-4 | 0.09 (0.004) | 0.15 (0.006) | 17 (0.67) | DS | 25.4 (1.0) | 288 | 10 | 130 | V-0 | All | * |
| Mass-laminated printed wiring boards. | | | | | | | | | | | |
| GBU-11 | 0.15 (0.006) | 0.23 (0.009) | 34 (1.34) | DS | 25.4 (1.0) | 288 | 20 | 130 | V-0 | All | - |
| Metal base multilayer printed wiring boards. | | | | | | | | | | | |
| M3(d) | 0.1 (0.004) | 0.12 (0.005) | 17 (0.67) Int:136 | SS | 50.8 (2.0) | 288 | 20 | 90 | V-0 | All | 0 |
| M4(d) | 0.1 (0.004) | 0.12 (0.005) | 17 (0.67) Int:136 | SS | 50.8 (2.0) | 288 | 20 | 90 | V-0 | All | 0 |
| Metal base single layer printed wiring boards. | | | | | | | | | | | |
| D2(a) | 0.1 (0.004) | 0.14 (0.006) | 35 (1.38) | SS | 50.8 (2.0) | 288 | 20 | 50 | V-0 | All | 0 |
| D3(b) | 0.1 (0.004) | 0.14 (0.006) | 35 (1.38) | SS | 50.8 (2.0) | 288 | 20 | 110 | V-0 | All | 0 |
| D4(c) | 0.1 (0.004) | 0.15 (0.006) | 35 (1.38) | SS | 50.8 (2.0) | 288 | 20 | 90 | V-0 | All | 0 |
| D6(e) | 0.1 (0.004) | 0.14 (0.006) | 35 (1.38) | SS | 50.8 (2.0) | 288 | 20 | 110 | V-0 | All | 0 |
| D7(e) | 0.1 (0.004) | 0.14 (0.006) | 35 (1.38) | SS | 50.8 (2.0) | 288 | 20 | 110 | V-0 | All | 0 |
| Metal base single layer printed wiring boards, flammability only Recognition. | | | | | | | | | | | |
| D5 | - | - | - | SS | - | 288 | 20 | - | V-0 | - | - |
| Multilayer printed wiring boards. | | | | | | | | | | | |
| 1MA | 0.12 (0.005) | 0.12 (0.005) | 17 (0.67) Int:102 | DS | 50.8 (2.0) | 288 | 10 | 105 | V-0 | All | - |
| 2MA | 0.06 (0.002) | 0.06 (0.002) | 12 (0.47) Int:136 | DS | 50.8 (2.0) | 288 | 10 | 130 | V-0 | All | - |
| GBU-12 | 0.12 (0.005) | 0.13 (0.005) | 34 (1.34) Int:70 | DS | 50.8 (2.0) | 288 | 20 | 130 | V-0 | All | * |
| GBU-12A | 0.12 (0.005) | 0.13 (0.005) | 34 (1.34) Int:70 | DS | 50.8 (2.0) | 288 | 20 | 130 | V-0 | All | * |
| GBU-13 | 0.07 (0.003) | 0.07 (0.003) | 11 (0.43) Int:34 | DS | 50.8 (2.0) | 288 | 20 | 130 | V-0 | All | * |
| LXD-M | 0.09 (0.004) | 0.15 (0.006) | 17 (0.67) Int:34 | DS | 25.4 (1.0) | 288 | 10 | 130 | V-0 | All | * |

| | | | | | | | | | | | |
|---|---------------|---------------|--------------------|----|------------|-----|----|-----|-----|-----|---|
| M1 | 0.08 (0.003) | 0.12 (0.005) | 17 (0.67) Int:34 | DS | 25.4 (1.0) | 280 | 20 | 130 | V-0 | All | * |
| M1-1(#) | 0.08 (0.003) | 0.24 (0.009) | 17 (0.67) Int:136 | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All | * |
| M1-1t | 0.31 (0.012) | 0.33 (0.013) | 136 (5.35) Int:136 | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All | * |
| M11 | 0.08 (0.003) | 0.12 (0.005) | 17 (0.67) Int:34 | DS | 76.2 (3.0) | 280 | 20 | 130 | V-0 | All | * |
| M12 | 0.08 (0.003) | 0.08 (0.003) | 17 (0.67) Int:204 | DS | 50.8 (2.0) | 288 | 20 | 130 | V-0 | All | * |
| M2 | 0.08 (0.003) | 0.24 (0.009) | 17 (0.67) Int:136 | DS | 25.4 (1.0) | 280 | 20 | 130 | V-0 | All | * |
| ML | 0.05 (0.002) | 0.12 (0.005) | 17 (0.67) | DS | 12.7 (0.5) | 260 | 10 | 130 | V-0 | All | * |
| ML-1 (&) | | | | | | | | | | | |
| | 0.08 (0.003) | 0.10 (0.004) | 17 (0.67) Int:136 | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All | * |
| ML-2 | 0.114 (0.004) | 0.114 (0.004) | 17 (0.67) Int:70 | DS | 50.8 (2.0) | 260 | 20 | 100 | V-1 | - | * |
| ML-3 | 0.125 (0.005) | 0.375 (0.015) | 17 (0.67) Int:70 | DS | 50.8 (2.0) | 260 | 20 | 105 | V-0 | - | * |
| ML-4 | 0.15 (0.006) | 0.16 (0.006) | 17 (0.67) Int:70 | DS | 50.8 (2.0) | 260 | 20 | 105 | V-0 | - | * |
| ML-5 | 0.15 (0.006) | 0.16 (0.006) | 17 (0.67) Int:70 | DS | 50.8 (2.0) | 260 | 20 | 105 | V-0 | - | * |
| ML-6 (\$) | 0.08 (0.003) | 0.12 (0.005) | 17 (0.67) Int:136 | DS | 76.2 (3.0) | 280 | 20 | 130 | V-1 | All | 4 |
| ML-7 | 0.25 (0.010) | 0.45 (0.018) | 17 (0.67) Int:204 | DS | 50.8 (2.0) | 280 | 10 | 130 | V-0 | All | 3 |
| ML1 | 0.05 (0.002) | 0.12 (0.005) | 17 (0.67) Int:34 | DS | 76.2 (3.0) | 260 | 10 | 130 | V-0 | All | * |
| Single Layer Metal Base Printed Wiring Board, employing metal base laminate. | | | | | | | | | | | |
| GB-15A | 0.11 (0.004) | 0.18 (0.007) | 34 (1.34) | SS | 50.8 (2.0) | 288 | 30 | 125 | V-0 | - | - |
| GB-15B | 0.11 (0.004) | 0.18 (0.007) | 34 (1.34) | SS | 50.8 (2.0) | 288 | 30 | 125 | V-0 | All | - |
| GB-15D | 0.11 (0.004) | 0.18 (0.007) | 34 (1.34) | SS | 50.8 (2.0) | 288 | 30 | 115 | V-0 | All | 0 |
| GB-15E | 0.11 (0.004) | 0.18 (0.007) | 34 (1.34) | SS | 50.8 (2.0) | 288 | 30 | 105 | V-0 | - | 0 |
| GB-15F | 0.13 (0.005) | 0.21 (0.008) | 34 (1.34) | SS | 50.8 (2.0) | 288 | 30 | 90 | V-0 | - | 0 |
| GB-15G | 0.11 (0.004) | 0.18 (0.007) | 17 (0.67) | SS | 50.8 (2.0) | 288 | 30 | 130 | V-0 | All | 0 |
| Single layer printed wiring boards. | | | | | | | | | | | |
| 2V0A | 0.12 (0.005) | 0.12 (0.005) | 17 (0.67) | DS | 50.8 (2.0) | 288 | 10 | 105 | V-0 | All | - |
| D1 | 0.08 (0.003) | 0.15 (0.006) | 17 (0.67) | DS | 76.2 (3.0) | 280 | 20 | 130 | V-0 | All | * |
| D1-1(#) | 0.08 (0.003) | 0.24 (0.009) | 17 (0.67) | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All | * |
| D1-1t | 0.31 (0.012) | 0.33 (0.013) | 136 (5.35) | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All | * |
| DS | 0.05 (0.002) | 0.15 (0.006) | 17 (0.67) | DS | 76.2 (3.0) | 260 | 10 | 130 | V-0 | All | * |
| DS-1 (&) | | | | | | | | | | | |
| | 0.08 (0.003) | 0.10 (0.004) | 17 (0.67) | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All | * |
| DS-2 | 0.10 (0.004) | 0.16 (0.006) | 17 (0.67) | DS | 50.8 (2.0) | 260 | 20 | 105 | V-0 | All | * |
| DS-3 (@) | 0.08 (0.003) | 0.15 (0.006) | 17 (0.67) | DS | 76.2 (3.0) | 280 | 20 | 130 | V-1 | All | 4 |
| GB-01 | 0.15 (0.006) | 0.46 (0.018) | 34 (1.34) | SS | 50.8 (2.0) | 260 | 10 | 105 | HB | All | - |
| GB-03 | 0.15 (0.006) | 0.46 (0.018) | 34 (1.34) | SS | 50.8 (2.0) | 260 | 10 | 105 | V-0 | All | - |
| GB-08 | 0.15 (0.006) | 0.46 (0.018) | 34 (1.34) | SS | 50.8 (2.0) | 260 | 10 | 130 | V-0 | All | * |
| GB-09 | 0.13 (0.005) | 0.39 (0.015) | 34 (1.34) | DS | 25.4 (1.0) | 260 | 10 | 105 | V-0 | All | * |
| GB-10 | 0.15 (0.006) | 0.43 (0.017) | 34 (1.34) | DS | 25.4 (1.0) | 260 | 10 | 130 | V-0 | All | * |
| GB-10A | 0.15 (0.006) | 0.43 (0.017) | 34 (1.34) | DS | 25.4 (1.0) | 260 | 10 | 105 | V-0 | All | 0 |
| GB-11 | 0.10 (0.004) | 0.23 (0.009) | 17 (0.67) | DS | 50.8 (2.0) | 288 | 20 | 130 | V-0 | All | * |

| | | | | | | | | | | | |
|--|--------------|--------------|-----------|----|------------|-----|----|-----|-----|-----|---|
| GB-11A | 0.15 (0.006) | 0.23 (0.009) | 34 (1.34) | DS | 38.1 (1.5) | 288 | 20 | 130 | V-0 | All | - |
| GB-11B | 0.10 (0.004) | 0.23 (0.009) | 17 (0.67) | DS | 50.8 (2.0) | 288 | 20 | 130 | V-0 | All | * |
| GB-11T | 0.10 (0.004) | 0.27 (0.011) | 17 (0.67) | DS | 50.8 (2.0) | 288 | 20 | 130 | V-0 | All | - |
| GB-12 | 0.06 (0.002) | 0.18 (0.007) | 17 (0.67) | DS | 25.4 (1.0) | 288 | 20 | 130 | V-0 | All | * |
| GB-12A | 0.06 (0.002) | 0.18 (0.007) | 34 (1.34) | DS | 25.4 (1.0) | 260 | 20 | 130 | V-0 | All | * |
| LXD-2 | 0.09 (0.004) | 0.15 (0.006) | 17 (0.67) | DS | 25.4 (1.0) | 288 | 10 | 130 | V-0 | All | * |
| Single layer printed wiring boards, flammability rating only. | | | | | | | | | | | |
| GB-20 | - | - | - | DS | - | 260 | 10 | - | HB | - | - |
| GB-21 | - | - | - | DS | - | 260 | 10 | - | V-0 | - | - |

- when the external Cu thickness is 136 mic, Min. conductor width is 0.31 mm and Min. Edge conductor width is 0.33 mm.

\$ - when the external copper thickness is 136mic, the min. conductor and min. edge conductor width are both 0.29mm.

& - when the external copper thickness is 136mic, the min. conductor and min. edge conductor width are both 0.23mm.

@ - when the external copper thickness is 136mic, the min. conductor and min. edge conductor width are both 0.21mm.

a - when the external copper thickness is 136mic, the min. conductor and min. edge conductor width are both 0.15mm.

b - when the external copper thickness is 136mic, the min. conductor and min. edge conductor width are both 0.19mm.

c - when the external copper thickness is 136mic, the min. conductor and min. edge conductor width are both 0.17mm.

d - when the external copper thickness is 136mic, the min. conductor and min. edge conductor width are both 0.21mm.

e - Maximum external copper thickness is 136 mic.

* - CTI PLC is marked on individual board.



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