# Test result of the Recording layer

**Recording speed *** : ☐ 2x ☐ 3x ☐ 5x ☐ 6x ☐ 8x ☐ 12x**

Best write strategy described in Lead-in area of the disc

| | For Groove | | For Land | |
|---|---|---|---|---|
| • Peak power (Pp) | | mW | | mW |
| • Bias power1 (PB1) | | mW | | mW |
| • Bias power2 (PB2) | | mW | | mW |
| • Bias power3 (PB3) | | mW | | mW |

• Mode flag of adaptive write pulse control

$T_{MP}$ _____ ns or T/16

$T_{LC}$ _____ ns or T/16

| ☐ case 1 | | | ☐ case 2 | | |
|---|---|---|---|---|---|
| $T_{EFP}$ | | ns or T/16 | $T_{FP}$ | | ns or T/16 |
| $T_{SLP}$ | | ns or T/16 | $T_{LP}$ | | ns or T/16 |

• Adaptive write control tables

| First pulse start time $T_{SFP}$ (ns or T/16) | | Mark Length | | | |
|---|---|---|---|---|---|
| | | 3T | 4T | 5T | >5T |
| Leading space length | 3T | | | | |
| | 4T | | | | |
| | 5T | | | | |
| | >5T | | | | |

| Last pulse end time $T_{ELP}$ (ns or T/16) | | Mark Length | | | |
|---|---|---|---|---|---|
| | | 3T | 4T | 5T | >5T |
| Trailing space length | 3T | | | | |
| | 4T | | | | |
| | 5T | | | | |
| | >5T | | | | |

 

| Para -graph** | Items | Measuring points* | | Specification | Unit | Measurement value | | Judgment (Lab use) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Applicant | Lab. | |
| 2.8.2 a | Jitter | Zone n | G | less than 9.0 | % | | | |
| | | | L | | | | | |
| | | Zone m | G | | | | | |
| | | | L | | | | | |
| 2.8.2 b | $I_{14}$ / $I_{14H}$ | Zone n | G | 0.40 min. | | | | |
| | | | L | | | | | |
| | | Zone m | G | | | | | |
| | | | L | | | | | |
| | $I_3$ / $I_{14}$ | Zone n | G | 0.15 min. | | | | |
| | | | L | | | | | |
| | | Zone m | G | | | | | |
| | | | L | | | | | |
| | $(I_{14max} - I_{14min})$ / $I_{14max}$ within one sector | Zone n | G | 0.10 max. | | | | |
| | | | L | | | | | |
| | | Zone m | G | | | | | |
| | | | L | | | | | |
| | $(I_{14Hmax} - I_{14Hmin})$ / $I_{14Hmax}$ within one read-out side of a disc | Zone n | G | 0.33 max. | | | | |
| | | | L | | | | | |
| | | Zone m | G | | | | | |
| | | | L | | | | | |
| | $(I_{14Hmax} - I_{14Hmin})$ / $I_{14Hmax}$ within one track | Zone n | G | 0.15 max. | | | | |
| | | | L | | | | | |
| | | Zone m | G | | | | | |
| | | | L | | | | | |
| | $[ (I_{14H}+I_{14L}) - (I_{3H}+I_{3L}) ] / 2(I_{14H}-I_{14L})$ | Zone n | G | −0.05 to 0.15 | | | | |
| | | | L | | | | | |
| | | Zone m | G | | | | | |
| | | | L | | | | | |

*: Measuring zone:

| Disc size \ Recording speed | 2x-speed | 3x-speed | 5x-speed | 6x-speed | 8x-speed | 12x-speed |
|---|---|---|---|---|---|---|
| 12 cm (Zone n/m) | Z0/Z34 | Z0/Z34 | Z0/Z34 | Z0/Z34 | Z17/Z34 | - / Z34 |
| 8 cm (Zone n/m) | Z0/Z13 | Z0/Z13 | Z0/Z13 | Z0/Z13 | - /Z13 | - /- |

**: Refer to DVD Specifications for Rewritable Disc Part 1: Ver. 2.2.

***: This form is common for each recording speed. Check on column to identify recording speed to test and copy form if you need every test for the recording speed.

Comments:

 February 2007

# Test result of the Signal from groove and land in the written recording field

**Recording speed *** : ☐ 2x ☐ 3x ☐ 5x ☐ 6x ☐ 8x ☐ 12x**

| Para -graph** | Items | Zone* | Specification | Unit | Measurement value | | Judgment (Lab use) |
|---|---|---|---|---|---|---|---|
| | | | | | Applicant | Lab. | |
| 2.7.2.1 | $(I_1-I_2)pp$ / $(I_1+I_2)a$ Written Recording field | Zone n | 0.35 to 1.05 | | | | |
| | | Zone m | | | | | |
| 2.7.2.2 | $[(I_1-I_2)/(I_1+I_2)]pp$ Written Recording field | Zone n | 1.10 to 1.65 | | | | |
| | | Zone m | | | | | |
| | $\{[(I_1-I_2)/(I_1+I_2)]pp\}min$ /$\{[(I_1-I_2)/(I_1+I_2)]pp\}max$ in the written Recording fields | Zone n | 0.70 min. | | | | |
| | | Zone m | | | | | |
| 2.7.2.5b | SNR of the wobble signal on written groove track | Zone n | 34 min. | dB | | | |
| | | Zone m | | | | | |
| | SNR of the wobble signal on written land track | Zone n | 34 min. | dB | | | |
| | | Zone m | | | | | |

*: Measuring zone:

| Recording speed / Disc size | 2x-speed | 3x-speed | 5x-speed | 6x-speed | 8x-speed | 12x-speed |
|---|---|---|---|---|---|---|
| 12 cm (Zone n/m) | Z0/Z34 | Z0/Z34 | Z0/Z34 | Z0/Z34 | Z17/Z34 | - / Z34 |
| 8 cm (Zone n/m) | Z0/Z13 | Z0/Z13 | Z0/Z13 | Z0/Z13 | - /Z13 | - /- |

**: Refer to DVD Specifications for Rewritable Disc Part 1: Ver. 2.2.

***: This form is common for each recording speed. Check on column to identify recording speed to test and copy form if you need every test for the recording speed.

Comments:

 

# Test result of the Power margin

**Recording speed * : ☐ 2x ☐ 3x ☐ 5x ☐ 6x ☐ 8x ☐ 12x**

(Groove)

Condition A:
Peak power Pp _____ mW Bias power PB1 _____ mW PB2 _____ mW PB3 _____ mW

Condition B:
Pp×1.05 _____ mW PB1×1.05 _____ mW PB2×1.05 _____ mW PB3×1.05 _____ mW

Condition C:
Pp×0.90 _____ mW PB1×0.90 _____ mW PB2×0.90 _____ mW PB3×0.90 _____ mW

(Land)

Condition A:
Peak power Pp _____ mW Bias power PB1 _____ mW PB2 _____ mW PB3 _____ mW

Condition B:
Pp × 1.05 _____ mW PB1×1.05 _____ mW PB2×1.05 _____ mW PB3×1.05 _____ mW

Condition C:
Pp × 0.90 _____ mW PB1×0.90 _____ mW PB2×0.90 _____ mW PB3×0.90 _____ mW

(Measuring Item : Deviation between leading edge jitter and trailing edge jitter)

| Para -graph | Test Condition | G/L ** | Specification | Unit | Leading edge jitter–Trailing edge jitter | | Judgment (Lab use) |
|---|---|---|---|---|---|---|---|
| | | | | | Applicant | Lab. | |
| | 10 times overwrite with Condition A | G | Recommended Specification −1.0 to 1.0 | % | | | |
| | | L | | | | | |
| | 10 times overwrite with Condition B | G | | | | | |
| | | L | | | | | |
| | 10 times overwrite with Condition C | G | | | | | |
| | | L | | | | | |

(Measuring Item : Asymmetry)

| Para -graph | Test Condition | G/L ** | Specification | Unit | Leading edge jitter–Trailing edge jitter | | Judgment (Lab use) |
|---|---|---|---|---|---|---|---|
| | | | | | Applicant | Lab. | |
| | 10 times overwrite with Condition A | G | Recommended Specification −0.05 to 0.15 | | | | |
| | | L | | | | | |
| | 10 times overwrite with Condition B | G | | | | | |
| | | L | | | | | |
| | 10 times overwrite with Condition C | G | | | | | |
| | | L | | | | | |

*: This form is common for each recording speed. Check on column to identify recording speed to test and copy form if you need every test for the recording speed.

**: Measuring zone:

| Disc size \ Recording speed | 2x-speed | 3x-speed | 5x-speed | 6x-speed | 8x-speed | 12x-speed |
|---|---|---|---|---|---|---|
| 12 cm | Z0 | Z0 | Z0 | Z0 | Z17 | Z34 |
| 8 cm | Z0 | Z0 | Z0 | Z0 | Z13 | - |

# Test result of the Cross Power Over-write

**Recording speed * : ☐ 2x ☐ 3x ☐ 5x ☐ 6x ☐ 8x ☐ 12x**

(Groove)

Condition A:
Peak power Pp _____ mW Bias power PB1 _____ mW PB2 _____ mW PB3 _____ mW

Condition B:
Pp×1.05 _____ mW PB1×1.05 _____ mW PB2×1.05 _____ mW PB3×1.05 _____ mW

Condition C:
Pp×0.90 _____ mW PB1×0.90 _____ mW PB2×0.90 _____ mW PB3×0.90 _____ mW

(Land)

Condition A:
Peak power Pp _____ mW Bias power PB1 _____ mW PB2 _____ mW PB3 _____ mW

Condition B:
Pp×1.05 _____ mW PB1×1.05 _____ mW PB2×1.05 _____ mW PB3×1.05 _____ mW

Condition C:
Pp×0.90 _____ mW PB1×0.90 _____ mW PB2×0.90 _____ mW PB3×0.90 _____ mW

**Zone n****

| Para -graph | Overwrite Cycles | Write Power Condition (Peak/ Bias power) | G/L | Specification | Unit | Measurement value | | Judgment (Lab use) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Applicant | Lab. | |
| | 1 | Condition A | G | Recommended Specification 12.0 max. | % | | | |
| | | | L | | | | | |
| | 2 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 3 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 4 | Condition B | G | | | | | |
| | | | L | | | | | |
| | 5 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 6 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 7 | Condition A | G | | | | | |
| | | | L | | | | | |

*: This form is common for each recording speed. Check on column to identify recording speed to test and copy form if you need every test for the recording speed.

**: Measuring zone:

| Disc size \ Recording speed | 2x-speed | 3x-speed | 5x-speed | 6x-speed | 8x-speed | 12x-speed |
|---|---|---|---|---|---|---|
| 12 cm (Zone n/m) | Z0/Z34 | Z0/Z34 | Z0/Z34 | Z0/Z34 | Z17/Z34 | - / Z34 |
| 8 cm (Zone n/m) | Z0/Z13 | Z0/Z13 | Z0/Z13 | Z0/Z13 | - /Z13 | - /- |

 

| Para -graph | Overwrite Cycles | Write Power Condition (Peak/ Bias power) | G/L | Specification | Unit | Measurement value | | Judgment (Lab use) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Applicant | Lab. | |
| | 8 | Condition C | G | Recommended Specification 12.0 max. | % | | | |
| | | | L | | | | | |
| | 9 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 10 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 11 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 12 | Condition B | G | | | | | |
| | | | L | | | | | |
| | 13 | Condition C | G | | | | | |
| | | | L | | | | | |
| | 14 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 15 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 16 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 17 | Condition C | G | | | | | |
| | | | L | | | | | |
| | 18 | Condition B | G | | | | | |
| | | | L | | | | | |
| | 19 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 20 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 21 | Condition A | G | | | | | |
| | | | L | | | | | |

Comments:

 

**Zone m****

| Para -graph | Overwrite Cycles | Write Power Condition (Peak/ Bias power) | G/L | Specification | Unit | Measurement value | | Judgment (Lab use) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Applicant | Lab. | |
| | 1 | Condition A | G | Recommended Specification 12.0 max. | % | | | |
| | | | L | | | | | |
| | 2 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 3 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 4 | Condition B | G | | | | | |
| | | | L | | | | | |
| | 5 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 6 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 7 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 8 | Condition C | G | | | | | |
| | | | L | | | | | |
| | 9 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 10 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 11 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 12 | Condition B | G | | | | | |
| | | | L | | | | | |
| | 13 | Condition C | G | | | | | |
| | | | L | | | | | |
| | 14 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 15 | Condition A | G | | | | | |
| | | | L | | | | | |

 

| Para -graph | Overwrite Cycles | Write Power Condition (Peak/ Bias power) | G/L | Specification | Unit | Measurement value | | Judgment (Lab use) |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Applicant | Lab. | |
| | 16 | Condition A | G | Recommended Specification 12.0 max. | % | | | |
| | | | L | | | | | |
| | 17 | Condition C | G | | | | | |
| | | | L | | | | | |
| | 18 | Condition B | G | | | | | |
| | | | L | | | | | |
| | 19 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 20 | Condition A | G | | | | | |
| | | | L | | | | | |
| | 21 | Condition A | G | | | | | |
| | | | L | | | | | |

Comments:

 

# Test result of the Cross erasing

**Recording speed * : ☐ 2x ☐ 3x ☐ 5x ☐ 6x ☐ 8x ☐ 12x**

(Groove)
Condition A: Peak power (Pp) _____ mW Bias power1 (PB1) _____ mW
Bias power2 (PB2) _____ mW
Bias power3 (PB3) _____ mW

(Land)
Condition A: Peak power (Pp) _____ mW Bias power1 (PB1) _____ mW
Bias power2 (PB2) _____ mW
Bias power3 (PB3) _____ mW

(Track #N = Groove) **

| Para -graph | Overwrite cycles of Track #(N+1) and Track #(N-1) | Specification | Unit | Measurement value | | Judgment (Lab use) |
|---|---|---|---|---|---|---|
| | | | | Applicant | Lab. | |
| | 10 times | 9.0 max. | % | | | |
| | 10000 times | Recommended Specification 12.0 max. | | | | |
| | 50000 times | | | | | |
| | 100000 times | | | | | |

(Track #N = Land) **

| Para -graph | Overwrite cycles of Track #(N+1) and Track #(N-1) | Specification | Unit | Measurement value | | Judgment (Lab use) |
|---|---|---|---|---|---|---|
| | | | | Applicant | Lab. | |
| | 10 times | 9.0 max. | % | | | |
| | 10000 times | Recommended Specification 12.0 max. | | | | |
| | 50000 times | | | | | |
| | 100000 times | | | | | |

*: This form is common for each recording speed. Check on column to identify recording speed to test and copy form if you need every test for the recording speed.

**: Measuring zone:

| Disc size \ Recording speed | 2x-speed | 3x-speed | 5x-speed | 6x-speed | 8x-speed | 12x-speed |
|---|---|---|---|---|---|---|
| 12 cm | Z0 | Z0 | Z0 | Z0 | Z17 | Z34 |
| 8 cm | Z0 | Z0 | Z0 | Z0 | Z13 | - |

Comments:

 