

# Base Material Line Up



## SDI03K/SDI03KB

### 1. CORE (C-STAGE)

| Thickness |      | ply-up | RC (%) | Dk    |       |       |        | Df     |        |        |        |
|-----------|------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|
| mm        | mil  |        |        | 1 GHz | 3 GHz | 5 GHz | 10 GHz | 1 GHz  | 3 GHz  | 5 GHz  | 10 GHz |
| 0.030     | 1.2  | 1x1027 | 64     | 3.71  | 3.70  | 3.68  | 3.64   | 0.0078 | 0.0083 | 0.0089 | 0.0095 |
| 0.038     | 1.5  | 1x1027 | 69     | 3.60  | 3.59  | 3.56  | 3.53   | 0.0081 | 0.0086 | 0.0092 | 0.0098 |
| 0.043     | 1.7  | 1x1037 | 69     | 3.60  | 3.59  | 3.56  | 3.53   | 0.0081 | 0.0086 | 0.0092 | 0.0098 |
| 0.048     | 1.9  | 1x1037 | 71     | 3.56  | 3.55  | 3.51  | 3.48   | 0.0082 | 0.0087 | 0.0093 | 0.0099 |
| 0.053     | 2.1  | 1x106  | 71     | 3.56  | 3.55  | 3.51  | 3.48   | 0.0082 | 0.0087 | 0.0093 | 0.0099 |
| 0.053     | 2.1  | 1x1037 | 73     | 3.52  | 3.51  | 3.46  | 3.44   | 0.0083 | 0.0088 | 0.0094 | 0.0100 |
| 0.053     | 2.1  | 1x1067 | 66     | 3.67  | 3.66  | 3.63  | 3.59   | 0.0079 | 0.0084 | 0.0090 | 0.0096 |
| 0.058     | 2.3  | 1x1078 | 55     | 3.91  | 3.90  | 3.89  | 3.84   | 0.0074 | 0.0079 | 0.0084 | 0.0090 |
| 0.064     | 2.5  | 1x1078 | 58     | 3.84  | 3.83  | 3.82  | 3.77   | 0.0075 | 0.0080 | 0.0085 | 0.0091 |
| 0.076     | 3.0  | 1x1086 | 60     | 3.80  | 3.79  | 3.77  | 3.73   | 0.0076 | 0.0081 | 0.0087 | 0.0093 |
| 0.089     | 3.5  | 1x1086 | 66     | 3.67  | 3.66  | 3.63  | 3.59   | 0.0079 | 0.0084 | 0.0090 | 0.0096 |
| 0.089     | 3.5  | 1x3313 | 51     | 4.00  | 3.99  | 3.98  | 3.93   | 0.0072 | 0.0077 | 0.0081 | 0.0087 |
| 0.102     | 4.0  | 1x3313 | 56     | 3.89  | 3.88  | 3.87  | 3.82   | 0.0074 | 0.0079 | 0.0084 | 0.0090 |
| 0.107     | 4.2  | 1x2116 | 49     | 4.04  | 4.03  | 4.02  | 3.98   | 0.0071 | 0.0076 | 0.0080 | 0.0086 |
| 0.127     | 5.0  | 1x2116 | 55     | 3.91  | 3.90  | 3.89  | 3.84   | 0.0074 | 0.0079 | 0.0084 | 0.0090 |
| 0.127     | 5.0  | 2x1080 | 58     | 3.84  | 3.83  | 3.82  | 3.77   | 0.0075 | 0.0080 | 0.0085 | 0.0091 |
| 0.163     | 6.4  | 1x1506 | 47     | 4.09  | 4.08  | 4.07  | 4.02   | 0.0070 | 0.0075 | 0.0079 | 0.0085 |
| 0.203     | 8.0  | 1x7628 | 45     | 4.14  | 4.13  | 4.12  | 4.07   | 0.0069 | 0.0074 | 0.0078 | 0.0084 |
| 0.254     | 10.0 | 2x2116 | 55     | 3.91  | 3.90  | 3.89  | 3.84   | 0.0074 | 0.0079 | 0.0084 | 0.0090 |
| 0.318     | 12.5 | 2x1506 | 47     | 4.09  | 4.08  | 4.07  | 4.02   | 0.0070 | 0.0075 | 0.0079 | 0.0085 |

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|       |      |        |    |      |      |      |      |        |        |        |        |
|-------|------|--------|----|------|------|------|------|--------|--------|--------|--------|
| 0.381 | 15.0 | 2x7628 | 42 | 4.22 | 4.20 | 4.19 | 4.18 | 0.0066 | 0.0072 | 0.0076 | 0.0082 |
| 0.406 | 16.0 | 2x7628 | 45 | 4.14 | 4.13 | 4.12 | 4.07 | 0.0069 | 0.0074 | 0.0078 | 0.0084 |
| 0.533 | 21.0 | 3x7628 | 40 | 4.27 | 4.25 | 4.24 | 4.23 | 0.0065 | 0.0070 | 0.0075 | 0.0081 |
| 0.711 | 28.0 | 4x7628 | 40 | 4.27 | 4.25 | 4.24 | 4.23 | 0.0065 | 0.0070 | 0.0075 | 0.0081 |
| 0.711 | 28.0 | 7x3313 | 55 | 3.91 | 3.90 | 3.89 | 3.84 | 0.0074 | 0.0079 | 0.0084 | 0.0090 |
| 0.787 | 31.0 | 4x7628 | 44 | 4.17 | 4.15 | 4.14 | 4.09 | 0.0068 | 0.0073 | 0.0077 | 0.0083 |

## 2. PREPREG (B-STAGE)

| Glass type | RC (%)<br>Nominal | Thickness |     | Dk   |      |      |       | Df     |        |        |        |
|------------|-------------------|-----------|-----|------|------|------|-------|--------|--------|--------|--------|
|            |                   | mm        | mil | 1GHz | 3GHz | 5GHz | 10GHz | 1 GHz  | 3 GHz  | 5 GHz  | 10 GHz |
| 1017       | 75                | 0.033     | 1.3 | 3.47 | 3.46 | 3.42 | 3.39  | 0.0084 | 0.0089 | 0.0096 | 0.0102 |
|            | 77                | 0.036     | 1.4 | 3.43 | 3.42 | 3.37 | 3.35  | 0.0085 | 0.0090 | 0.0097 | 0.0103 |
|            | 79                | 0.040     | 1.6 | 3.39 | 3.38 | 3.32 | 3.30  | 0.0086 | 0.0091 | 0.0098 | 0.0104 |
| 1027       | 69                | 0.040     | 1.6 | 3.60 | 3.59 | 3.56 | 3.53  | 0.0081 | 0.0086 | 0.0092 | 0.0098 |
|            | 71                | 0.043     | 1.7 | 3.56 | 3.55 | 3.51 | 3.48  | 0.0082 | 0.0087 | 0.0093 | 0.0099 |
|            | 73                | 0.047     | 1.9 | 3.52 | 3.51 | 3.46 | 3.44  | 0.0083 | 0.0088 | 0.0094 | 0.0100 |
|            | 75                | 0.051     | 2.0 | 3.47 | 3.46 | 3.42 | 3.39  | 0.0084 | 0.0089 | 0.0096 | 0.0102 |
| 1037       | 69                | 0.046     | 1.8 | 3.60 | 3.59 | 3.56 | 3.53  | 0.0081 | 0.0086 | 0.0092 | 0.0098 |
|            | 71                | 0.049     | 1.9 | 3.56 | 3.55 | 3.51 | 3.48  | 0.0082 | 0.0087 | 0.0093 | 0.0099 |
|            | 73                | 0.053     | 2.1 | 3.52 | 3.51 | 3.46 | 3.44  | 0.0083 | 0.0088 | 0.0094 | 0.0100 |
|            | 75                | 0.058     | 2.3 | 3.47 | 3.46 | 3.42 | 3.39  | 0.0084 | 0.0089 | 0.0096 | 0.0102 |
| 106        | 69                | 0.048     | 1.9 | 3.60 | 3.59 | 3.56 | 3.53  | 0.0081 | 0.0086 | 0.0092 | 0.0098 |
|            | 71                | 0.052     | 2.0 | 3.56 | 3.55 | 3.51 | 3.48  | 0.0082 | 0.0087 | 0.0093 | 0.0099 |
|            | 73                | 0.056     | 2.2 | 3.52 | 3.51 | 3.46 | 3.44  | 0.0083 | 0.0088 | 0.0094 | 0.0100 |
|            | 75                | 0.061     | 2.4 | 3.47 | 3.46 | 3.42 | 3.39  | 0.0084 | 0.0089 | 0.0096 | 0.0102 |

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|      |    |       |     |      |      |      |      |        |        |        |        |
|------|----|-------|-----|------|------|------|------|--------|--------|--------|--------|
| 1067 | 69 | 0.059 | 2.3 | 3.60 | 3.59 | 3.56 | 3.53 | 0.0081 | 0.0086 | 0.0092 | 0.0098 |
|      | 71 | 0.063 | 2.5 | 3.56 | 3.55 | 3.51 | 3.48 | 0.0082 | 0.0087 | 0.0093 | 0.0099 |
|      | 73 | 0.069 | 2.7 | 3.52 | 3.51 | 3.46 | 3.44 | 0.0083 | 0.0088 | 0.0094 | 0.0100 |
|      | 75 | 0.075 | 3.0 | 3.47 | 3.46 | 3.42 | 3.39 | 0.0084 | 0.0089 | 0.0096 | 0.0102 |
| 1078 | 65 | 0.079 | 3.1 | 3.69 | 3.68 | 3.65 | 3.62 | 0.0079 | 0.0084 | 0.0090 | 0.0096 |
|      | 67 | 0.084 | 3.3 | 3.65 | 3.64 | 3.61 | 3.57 | 0.0080 | 0.0085 | 0.0091 | 0.0097 |
| 1080 | 64 | 0.080 | 3.1 | 3.71 | 3.70 | 3.68 | 3.64 | 0.0078 | 0.0083 | 0.0089 | 0.0095 |
|      | 66 | 0.085 | 3.3 | 3.67 | 3.66 | 3.63 | 3.59 | 0.0079 | 0.0084 | 0.0090 | 0.0096 |
|      | 68 | 0.092 | 3.6 | 3.63 | 3.62 | 3.58 | 3.55 | 0.0080 | 0.0085 | 0.0091 | 0.0097 |
| 3313 | 56 | 0.102 | 4.0 | 3.89 | 3.88 | 3.87 | 3.82 | 0.0074 | 0.0079 | 0.0084 | 0.0090 |
|      | 58 | 0.110 | 4.3 | 3.84 | 3.83 | 3.82 | 3.77 | 0.0075 | 0.0080 | 0.0085 | 0.0091 |
| 2116 | 51 | 0.115 | 4.5 | 4.00 | 3.99 | 3.98 | 3.93 | 0.0072 | 0.0077 | 0.0081 | 0.0087 |
|      | 54 | 0.127 | 5.0 | 3.93 | 3.92 | 3.91 | 3.86 | 0.0073 | 0.0078 | 0.0083 | 0.0089 |
|      | 56 | 0.133 | 5.2 | 3.89 | 3.88 | 3.87 | 3.82 | 0.0074 | 0.0079 | 0.0084 | 0.0090 |
| 7628 | 45 | 0.200 | 7.8 | 4.14 | 4.13 | 4.12 | 4.07 | 0.0069 | 0.0074 | 0.0078 | 0.0084 |

### 3. REMARK

- 1) Test method: TM 650 2.5.5.5.
- 2) Updated date: Feb, 2024.
- 3) All the values listed above are for your reference only. Please contact Shengyi Technology Co., Ltd. for detailed information. All rights from this line up are reserved by Shengyi Technology Co., Ltd.