# EM-892K2 / EM-892BK2

## High Tg / Extreme Low Loss / Halogen Free

- Applications include: high-speed Ethernet, network, HPC, AI, 5G and antenna.
- Designed for high thermal reliability with excellent CAF resistance.
- Outstanding multiple lamination capability.
- Fabrication friendly resin can be combined with mid-loss resins for "hybrid" designs.
- RoHS Compliant
- UL File: E150504
- Applicable IPC Slash Sheets: IPC-4101 /134; IPC-4103 /230, /530

### *Basic Laminate Property*

| Property | Item | | Typical Value | Unit | Test Condition | IPC-TM-650 |
|---|---|---|---|---|---|---|
| Thermal | Tg | | N/A | °C | DSC | 2.4.25 |
| | | | 180 | °C | TMA | 2.4.24 |
| | | | 215 | °C | DMA | 2.4.24.4 |
| | CTE, X/Y-axis | | 12/13 | ppm/°C | < Tg, TMA | 2.4.24.5 |
| | CTE, Z-axis | | 40~45 | ppm/ °C | < Tg, TMA | 2.4.24 |
| | | | 185~205 | ppm/ °C | > Tg, TMA | |
| | Z-axis Expansion | | 1.8 | % | 50~260 °C | 2.4.24 |
| | Td | | 420 | °C | TGA (5% W.L) | 2.4.24.6 |
| | T288 | | >60 | min. | Clad | 2.4.24.1 |
| | | | >60 | min. | Etched | |
| | Thermal Conductivity | | 0.46 | W/m.K | - | ASTM D5470 |
| Electrical | Dk (R/C: 55/70%) | 1 GHz | 3.00/2.85 | - | C-24/23/50 | 2.5.5.9 |
| | | 10 GHz | 2.90/2.76 | - | | Cavity Resonator |
| | | | 2.90/2.76 | - | | SPC method |
| | Df (R/C: 55/70%) | 1 GHz | 0.0010/0.0010 | - | C-24/23/50 | 2.5.5.9 |
| | | 10 GHz | 0.0014/0.0013 | - | | Cavity Resonator |
| | | | 0.0011/0.0010 | - | | SPC method |
| | Volume Resistivity | | $>10^{10}$ | MΩ-cm | C-96/35/90 | 2.5.17.1 |
| | Surface Resistivity | | $>10^{9}$ | MΩ | C-96/35/90 | 2.5.17.1 |
| Physical | Water Absorption | | 0.07 | % | E-1/105+D-24/23 | 2.6.2.1 |
| | Peel Strength (HVLP3) | H oz | 3.5 | lb/in | As Received | 2.4.8 |
| | Flexural Strength | Warp | 450~510 | MPa | As Received | 2.4.4 |
| | | Fill | 400~450 | MPa | | |
| | Flame Resistance | | V-0 | - | A & E-24/125 | UL-94 |

Above typical values are tested under specified constructions and not intended for specification.