

EM-A30 / EM-A3B

CTI PLC1 / High Reliability/ Halogen Free

- Applications Include: Automotive ECU, Power System, Heavy Copper
- Designed for High Thermal Reliability with Excellent CAF Resistance (1500V)
- Very Low Z-axis CTE: 1.7% (50~260°C)
- RoHS Compliant
- UL File: E150504

Basic Laminate Property

| Property | Item | | Typical Value | Unit | Test Condition | IPC-TM-650 |
|----------------------|---------------------|------------------|-------------------|--------------|-----------------|------------------|
| Thermal | Tg | | 190 | °C | DSC | 2.4.25 |
| | | | 185 | °C | TMA | 2.4.24 |
| | | | 220 | °C | DMA | 2.4.24.4 |
| | CTE, X/Y-axis | | 11/13 | ppm/°C | < Tg, TMA | 2.4.24.5 |
| | CTE, Z-axis | | 30~35 | ppm/°C | < Tg, TMA | 2.4.24 |
| | | | 140~160 | ppm/°C | > Tg, TMA | |
| | Z-axis Expansion | | 1.7 | % | 50~260°C | 2.4.24 |
| | Td | | 405 | °C | TGA (5% W.L) | 2.4.24.6 |
| | T288 | | >60 | Min | Clad | 2.4.24.1 |
| | | | >60 | Min | Etched | |
| Thermal Conductivity | | 0.58 | W/m.K | - | ASTM D5470 | |
| Electrical | Dk (R/C: 50/70%) | 1GHz | 4.3/ 3.8 | - | C-24/23/50 | 2.5.5.9 |
| | | 10GHz | 4.1/ 3.7 | - | | Cavity Resonator |
| | Df (R/C: 50/70%) | 1GHz | 0.010/ 0.011 | - | C-24/23/50 | 2.5.5.9 |
| | | 10GHz | 0.013/ 0.015 | - | | Cavity Resonator |
| | 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 | | 0.16 | % | E-1/105+D-24/23 | 2.6.2.1 |
| | Peel Strength (RTF) | 1.0 oz | 4.5 | lb/in | As Received | 2.4.8 |
| | Flexural Strength | Warp | 450~510 | MPa | As Received | 2.4.4 |
| | | Fill | 450~500 | MPa | As Received | |
| Flame Resistance | | V-0 | - | A & E-24/125 | UL-94 | |

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