

## tec-speed 30.0 VT-370X

UL Approval: E214381    Version: 30/10/2025    /230

### Laminate

### General Information

- > Ceramic filled PTFE composites
- > Dk 2.90 with extremely low Df
- > Tight Dk and thickness control



### Application

- > Patch Antenna
- > Satellite communication system
- > Power Amplifier
- > Aircraft Collision Avoidance Systems
- > Ground Radar Warning Systems

### Availability

- > Core Thickness: 0.0035", 0.004", 0.005", 0.008", 0.010"
- > Panel size: 18"\*12", 18"\*24", 20"\*24", 21"\*24", 21.3"\*24.3"
- > Copper Foil Type and Thickness:

| Copper Type | Copper Thickness | Remark   |
|-------------|------------------|----------|
| HVLP3       | Hoz, 1oz         | Standard |
| HTE         | Hoz, 1oz, 2oz    | Optional |
| RTF         | Hoz, 1oz, 2oz    | Optional |
| RA          | Hoz, 1oz         | Optional |

### Storage Condition & Shelf Life

| Properties        |                   | Laminate             |
|-------------------|-------------------|----------------------|
| Storage Condition | Temperature       | Room                 |
|                   | Relative humidity | /                    |
| Shelf Life        |                   | 24 months (airproof) |

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## Properties

| Properties                                        | Test Method                  | Units             | Typical Value     |
|---------------------------------------------------|------------------------------|-------------------|-------------------|
| <b>Electrical Properties</b>                      |                              |                   |                   |
| Dielectric Constant @10GHz                        | IPC-TM-650 2.5.5.13          | -                 | 2.9               |
| Dissipation Factor @10GHz                         | IPC-TM-650 2.5.5.13          | -                 | 0.00035           |
| Thermal Coefficient of Dk                         | IPC-TM-650 2.5.5.5 -50~150°C | -                 | -60               |
| Volume Resistivity                                | IPC-TM-650 2.5.17.1          | MΩ-cm             | 8*10 <sup>7</sup> |
| Surface Resistivity                               | IPC-TM-650 2.5.17.1          | MΩ                | 5*10 <sup>7</sup> |
| <b>Thermal Properties</b>                         |                              |                   |                   |
| Td                                                | ASTM D3850                   | °C                | 525               |
| Thermal Conductivity                              | ASTM D5470                   | W/mK              | 0.45              |
| x, y-axis CTE                                     | IPC-TM-650 2.4.24.5          | ppm/°C            | 30/32             |
| z-axis CTE                                        | IPC-TM-650 2.4.24            | ppm/°C            | 50                |
| <b>Mechanical Properties</b>                      |                              |                   |                   |
| Peel Strength (1oz HVLP3)<br>After thermal stress | IPC-TM-650 2.4.8             | lb/in (N/mm)      | 13(2.28)          |
| Tensile Modulus                                   | ASTM D638                    | MPa               | 850               |
| <b>Physical Properties</b>                        |                              |                   |                   |
| Density                                           | ASTM D792                    | gm/m <sup>3</sup> | 2.1               |
| Moisture Absorption                               | IPC-TM-650 2.6.2.1           | %                 | 0.03              |
| Flammability                                      | UL-94                        | Rating            | V-0               |
| Lead free process compatible                      | -                            | -                 | YES               |

All test data provided are preliminary typical values and not intended to be specification values.

**Disclaimer:** The information and data contained in this technical literature is based on data and knowledge correct at the time of publishing/printing and is believed to be accurate and is offered in good faith for the benefit of the user. The user should make his own tests to verify the suitability of this product for any application before its use. All data are typical values only and subject to change without notice.