

## 3-Terminal Resistor

The 3-terminal voltage sensing resistor is a new and exciting product in development from Thin Film Technology Corp. (TFT). The fundamental idea behind it lies in its integration of a third, voltage sensing terminal, which enhances measurement precision and accuracy. This third terminal functions like an E-field probe, sensing the Electric Field strength and providing a quantitative measurement.

### Accuracy and Precision

With this 3-terminal resistor, there is a significant improvement in measurement accuracy when compared to an E-field probe. This improvement is a result of the distance and direction of the voltage sensor embedded into the resistor. An E-field signal requires the E-field probe to be positioned perpendicularly to the direction of current, at no greater than 1mm, to sense the signal. Whereas the 3-terminal resistor is mounted on the current path and the sensing terminal is as close as possible to the E-field signal being emitted, leading to an increase in accuracy.

### Dynamic Range

The design of the voltage sense resistor aims to enable the measurement of a wide spectrum of electric field intensities, spanning both low and high frequencies. Voltage Sense resistors will allow engineers to identify, measure, and mitigate potential electromagnetic interference issues in electronic systems, helping to ensure the reliable operation of sensitive equipment in various environments.

Since its inception in 1979 and joining the Juneway Group in 2013, TFT has been leading the way as a seasoned manufacturer of high-quality electronic components. Through a steadfast dedication to quality and ingenuity, TFT has built a trusted reputation of expertise focused on serving the needs of its longstanding clients and its broadened our scope and reach.

A comprehensive product portfolio allows TFT to supply diverse industries, showcasing an ability to provide custom project solutions. TFT's cutting-edge engineering innovations ensure components meet the highest performance and reliability standards. With competitive lead times and flexible pricing structures, TFT maintains a customer-centric approach focused on responding to dynamic market trends. As a leader in component manufacturing, TFT's legacy of quality and innovation continues to shape the future.

