



**American Standard Circuits**  
**Sunstone Circuits**

## Embedded into our DNA

Join ASC Sunstone at the vanguard of embedded resistors and capacitors. These innovative technologies reduce size, weight, and costs while boosting reliability and performance, ideal for tight spaces and high-frequency needs.

Using Oak-Mitsui FaradFlex® for superior results, our embedded capacitors use a thin ceramic-filled epoxy layer between copper foils, optimizing power distribution and freeing up board space.

For resistors, we integrate Quantic Ticer TCR®, TCR-EHF®, and OhmegaPly®—effectively handling 10-1000 Ohm/square materials.

Pair these innovations with our Ultra-HDI and HDI portfolio, including cavities, coins and vias—blind, buried, or micro—and discover how ASC Sunstone's embedded passives can transform your electronics and business today!

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## SMALLER CAN BE BETTER

### SAVE ON SPACE

Integrating passive components saves board space, ideal for miniaturized devices.

### SAVE ON PRODUCTION

Simplifies assembly, reduces handling, and boosts manufacturing efficiency and yield.

### SAVE ON COSTS

Setup costs are offset by long-term savings of fewer components and simpler assembly.

### SAVE ON ENERGY

Minimize parasitic effects, enhancing high-frequency performance and signal integrity.

### IMPROVE DESIGN FLEXIBILITY

Allows custom component values, geometries, and placements, optimizing performance.

### IMPROVE RELIABILITY

Enhance durability with components resistant to stress, vibration, and environmental factors.

### IMPROVE PERFORMANCE

Easier circuit matching and control, with precise & consistent electrical characteristics.

### IMPROVE THERMAL DYNAMICS

Better heat distribution and thermal management in high-power applications.

## FAQS



### FARADFLEX

Get all your questions answered about the how the laminates from FaradFlex can improve your PCBs.



### QUANTIC

Get all your questions answered about revolutionary materials from Quantic.



Allow yourself more compact and efficient designs, by reducing device size and weight

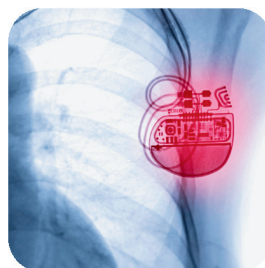


Minimize failure points in the harshest theaters, by reducing the number of solder joints and connections.



### TCR DESIGN GUIDLINES

Learn resistor orientation, etch variation control, spacing allowances, and signal integrity for TCR® embedded resistors.



Miniaturize and improve signal integrity, ensuring accurate and reliable data transmission where it's critical



Reduce noise and interference for better performance at high frequencies while improving thermal management.



### IMPROVE YOUR RESISTORS

Learn the material and process factors to control to ensure proper resistor tolerance of  $\pm 10\%$ .

## FOR MORE INFORMATION

### TECH TEAM

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