

ISSUE: July 2024

## 50-V GaN FET Enables High Power Density In USB-C PD Applications

<u>EPC</u>'s 50-V, 8.5-m $\Omega$  EPC2057 GaN FET is specifically designed to meet the evolving needs of high-power USB-C devices including those used in consumer electronics, in-car charging, and eMobility. The GaN FET boasts an ultra-low on-resistance of 8.5 m $\Omega$ , significantly reducing power losses and its tiny 1.5-mm x 1.2-mm footprint (see the figure) makes it well suited for space-constrained applications, allowing for smaller, more efficient power adapters and chargers.

With the increasing adoption of USB-C PD, there is a growing demand for power components that can deliver higher efficiency and performance while minimizing size and heat generation. EPC's new GaN FET is designed to meet this demand, offering a superior alternative to traditional silicon-based FETs.

The EPC90155 development board is a half bridge featuring the EPC2057 GaN FET. It is designed for 40-V maximum operating voltage and 10-A maximum output current. This 2-in. x 2-in. (50.8-mm x 50.8-mm) board is designed for optimal switching performance and contains all critical components for easy evaluation.

The GaN FET is priced at \$0.67 each in 2.5-Ku volumes. The EPC90155 development board is priced at \$200.00 each. Product is available through any one of EPC's <u>distribution partners</u> or order directly from the <u>EPC website</u>. For more information, see the EPC2057 <u>page</u>.



Figure. With its low 8.5-m $\Omega$  on-resistance and 1.5-mm x 1.2-mm footprint, the 50-V EPC2057 GaN FET enables high efficiency and high power density for USB-C PD adapters and chargers.