FEDEVEL EDUCATION

CERTIFICATION

This is to certify that

Filipe Tavares Carneiro

has successfully completed
EMCSTANDARDS course

Advanced PCB design/layout techniques for good EMC

Date: **21 FEB 2024**

Course tutor: Keith Armstrong

Course duration: 6h 38min
Course content: When should we use advanced techniques, Future trends and their implications, Guidelines, approximations, simulations and virtual design, Advanced EM zoning, Planes for 0V(GND) and other power rails (PWR), RF-bonding PCB Reference Planes at EMZ boundaries, Power supply decoupling, Switching power converters (AC/DC, DC/DC, DC/AC, etc.), Matched transmission line techniques, Layer stacking and trace routing, Devices with BGA packages and/or multiple DC rails, Some useful references, sources, and webinars

Certificate number: 1a77088c4973754b191a1d267