



CERTIFICATION

This is to certify that
BETÜL KAVLAK

has successfully completed the course
**Advanced PCB design/layout techniques for good
EMC**

Date **18 NOV 2025**

Course tutor

Keith Armstrong

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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

www.fedevel.com

Certificate number: 1a77683c4953555b799a8d167