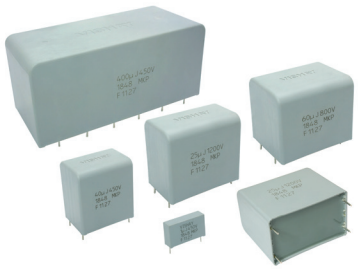
WHAT, WHY, WHERE?

THE ADVANTAGE OF VISHAY DC-LINK CAPACITORS



Series	Description	Rated Voltage U_{NDC}	Capacitance	Typical ESR	Maximum Temperature
MKP1848	DC-Link standard	450 V to 1200 V	1 µF to 400 µF	1.3 mΩ min.	105 °C
MKP1848C	DC-Link compact size	500 V to 1200 V	1 µF to 500 µF	1.5 mΩ min.	105 °C
MKP1848S	DC-Link low profile	500 V to 1000 V	1 µF to 100 µF	1.3 mΩ min.	105 °C

What and Why (ESR and Efficiency)

MKP1848x DC-Link capacitors from Vishay offer very low ESR (equivalent series resistance) down to 1.3 mΩ and 1.5 mΩ, depending on case size, voltage, and capacitance selections.

Lower ESR means lower power dissipation in the circuit and therefore higher temperature operation with a lower self-heating effect on the capacitor.

Overall efficiency is a further advantage, as overall losses are minimized. This is particularly important for inverter applications where system efficiency is a key objective.

What and Why (AEC-Q200)

They also provide an “off-the-shelf” AEC-Q200 qualified solution that avoids the need to request special testing or qualification packages from suppliers, which slows down the design process.

Where they are used

DC-Link capacitors are used in power inverter applications:

- EV (PHEV) on-board charging
- Solar inverters and micro-inverters
- UPS
- Standard power supplies
- Induction cookers
- Motor drives

Datasheet links:

- MKP1848 standard
- MKP1848C compact size
- MKP1848S low profile

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