

Attracting Tomorrow



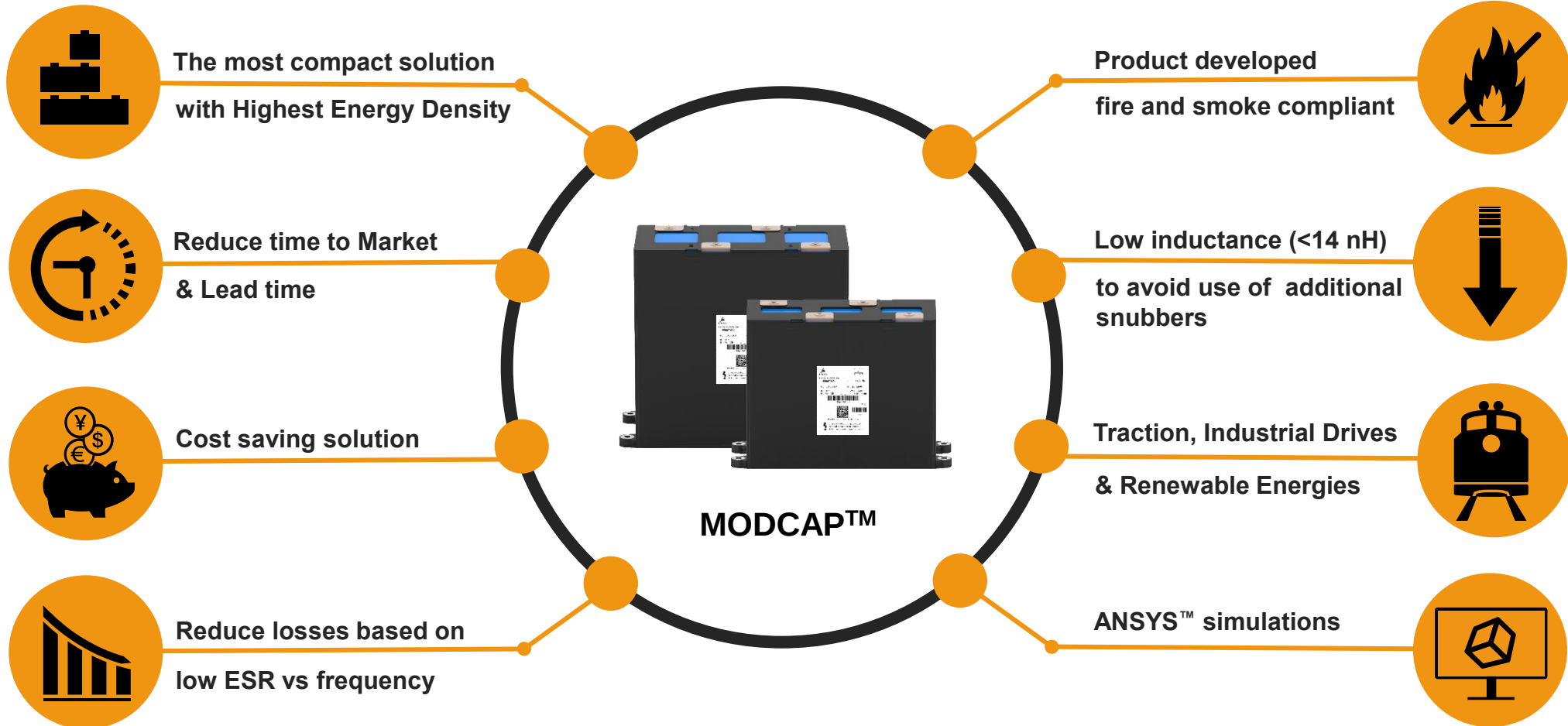
Product brief - ModCap™

DCR Modular | New Modular Standard Series

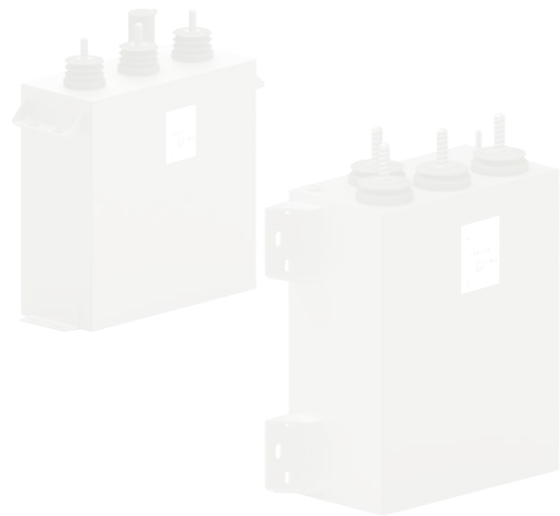
CAP Business Group
BD ES, PM PEC HP
January 2020

Introducing the New Modular Standard Series

Highlights



~ AC FILTER



MKK-HP

=

DC-LINK / DC FILTER



ModCap™ / MKK-DCR / MKK-DCi-R / MKK-DCi-H

ModCap™ Series | B25645

DC-Link Applications

Attracting Tomorrow 

Energy Transmission

Renewable Energies

Traction

Industry



Solar



Wind



Loco & EMU



Light Train



LV



MV



General Overview

B25645 Series

Attracting Tomorrow



=

ModCap™ (Dry-modular)

NEW



Recommended applications

Features

- Capacity range from 1395 μF up to 3,900 μF & Voltage from 1100 V up to 2,300 V
- Low ESL <14
- Temperature range up to 90 °C hotspot
- IEC 61071, IEC 61881-1, EN 45545-2 HL3 R23 (fire and smoke)
- Filled with Polyurethane Resin (Dry Technology)
- Plastic case (opened)
- Flat windings

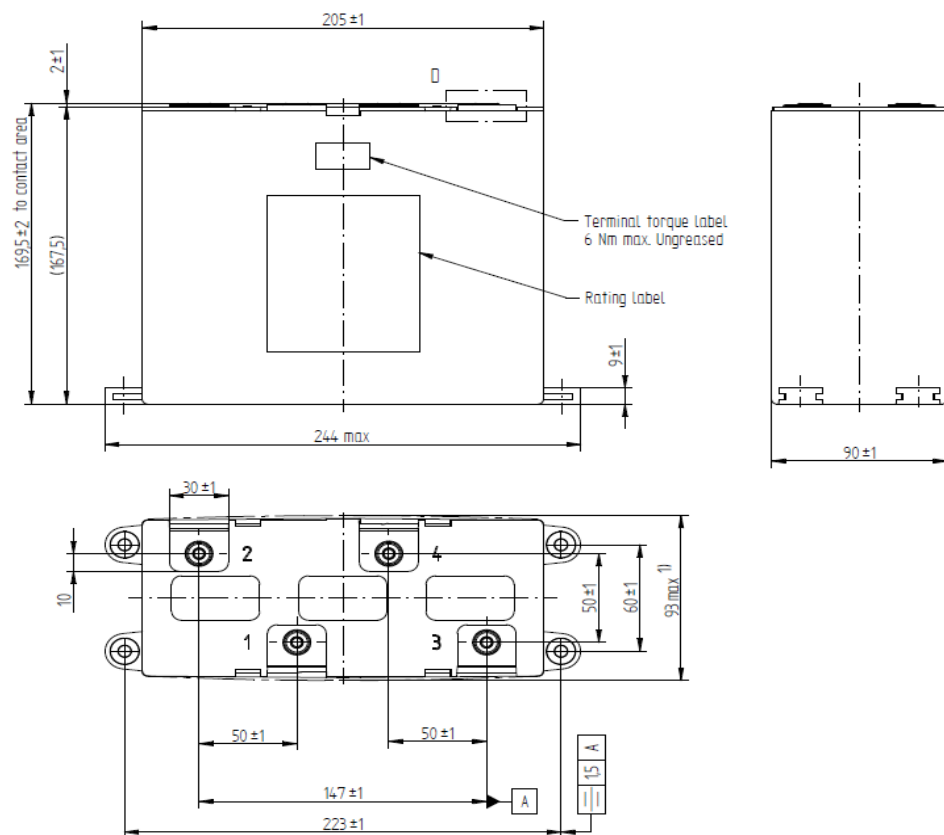
Benefits

- High Energy Density, ultra compact solution
- Modular concept for parallelization
- Snubber avoidance / low voltage overshoot
- Lifetime up to 200,000 hours
- ANSYS™ simulations available for the whole series
- Cost oriented solution
- Reduced time to market & lead time

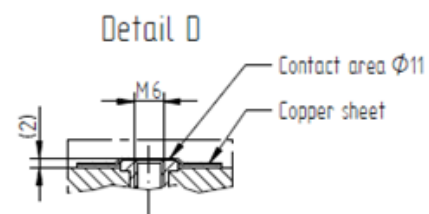
Construction A

Simplified drawing & 3-D

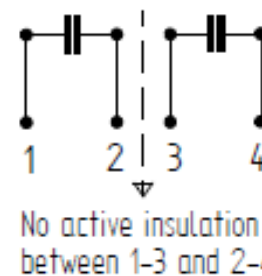
Main dimensions: 243 x 169,5 x 90 mm



Terminal



Electric diagram



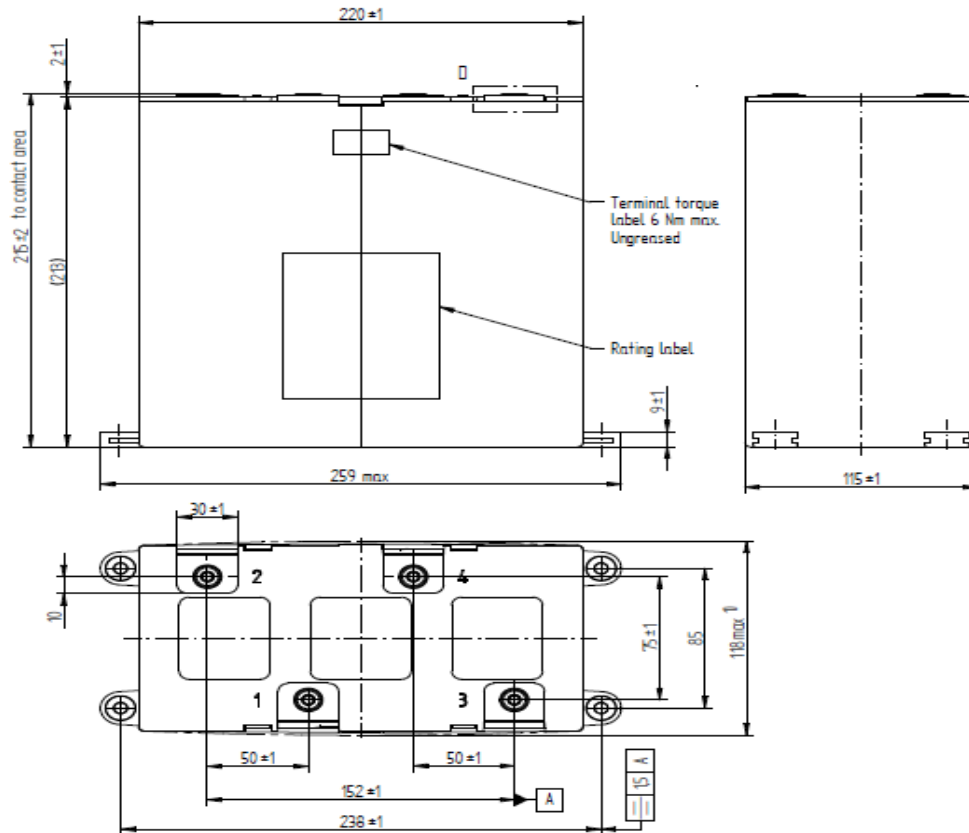
3D



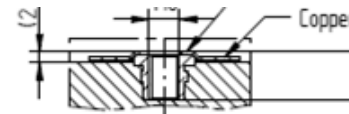
Construction B

Simplified drawing & 3-D

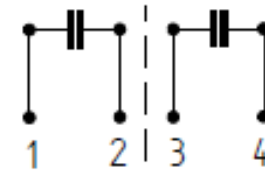
Main dimensions: 258 x 215 x 115 mm



Terminal



Electric diagram



No active insulation between 1-3 and 2-4

3D

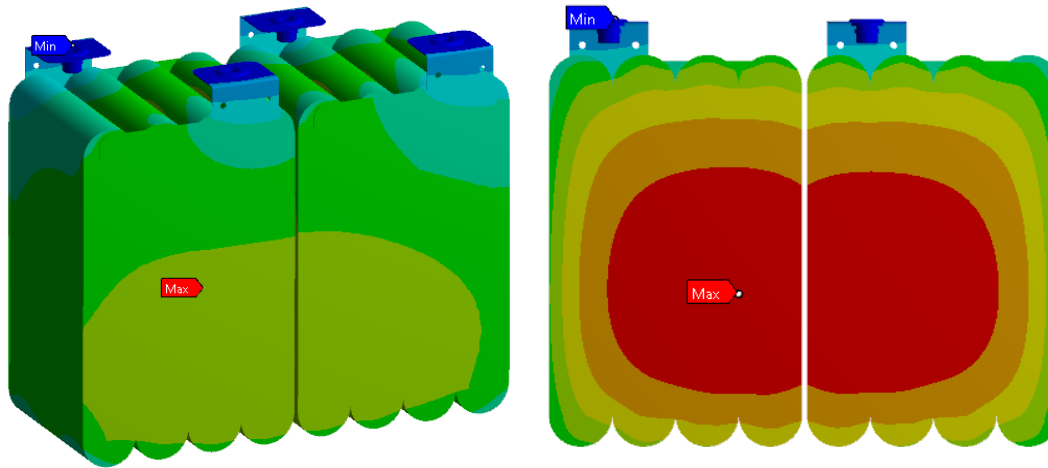


Thermal & Electromagnetic Model Simulations

Thermal: Hot spot & Temperature mapping

B: 2kHz Spectrum
Naked
Type: Temperature
Unit: °C
Time: 1

90 Max
87,8
85,5
83,3
81,1
78,9
76,7
74,4
72,2
70 Min



Thermal model available for specific simulation according to spectrum and boundary conditions defined by the customer.

Electromagnetic

Customer input

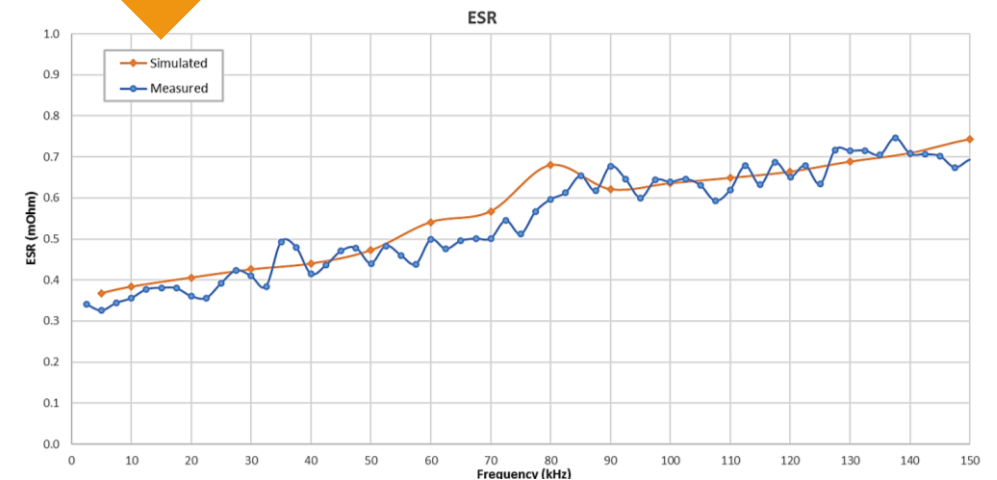
- AC Current Spectrum
- Boundary conditions

TDK input

- 3D Model
- Electrical parameters of the capacitor (capacitor design)

Simulation

- ESR vs Freq Graph



ModCap™

Ordering Code System

Nominal voltage (V)	Capacitance ±10% (µF)	Nominal current (A)	Surge current (kA)	Repetitive peak current (kA)	Dimensions (LxWxH, mm)	Construction	Part Number
1100	1395	180	215	5	243x169,5x90	A	B25645A1138K003
	2525	140	240	5	258x215x115	B	B25645A1258K003
1250	1100	170	210	5	243x169,5x90	A	B25645A1118K003
	1985	135	235	5	258x215x115	B	B25645A1198K003
1350	1025	160	205	5	243x169,5x90	A	B25645A1108K013
	1865	130	230	5	258x215x115	B	B25645A1188K003
1600	755	150	200	5	243x169,5x90	A	B25645A1757K003
	1375	120	225	5	258x215x115	B	B25645A1138K013
1800	560	140	195	5	243x169,5x90	A	B25645A1567K003
	1025	115	220	5	258x215x115	B	B25645A1108K003
2000	445	130	185	5	243x169,5x90	A	B25645A2447K003
	820	110	210	5	258x215x115	B	B25645A2827K003
2300	365	120	175	5	243x169,5x90	A	B25645A2367K003
	670	105	200	5	258x215x115	B	B25645A2677K003



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