



CT31 Series Capacitors for DC Link 400VDC-900VDC

Features

High temperature metallized polypropylene film dielectric
 Excellent self-healing performance
 Low ESR, high ripple current handling capabilities
 Low self-inductance, Wide range working temperature, long life time
 Plastic case filled resin, internal bus bars design
 Used in DC Link circuits as filtering or energy storage

Applications

Hybrid / Electric Vehicles
 EV/HEV Inverter Modules
 Motor Drives
 Variable speed drive

Technical Specifications

Specifications	Reference value
Reference standards	IEC 61071:2007, GB/T 17702, AEC Q200D-2010
Climatic category	40/105/56
Working temperature range	-40℃~+105℃ [$\Theta_{\max(\text{hotspot})} \leq +105^\circ\text{C}$]
Storage temperature range	-40℃~+105℃
Rated voltage	400VDC-900VDC
Rated capacitance	280μF-2000μF
Capacitance tolerance	±5% (J), ±10% (K)
Test voltage between terminals	1.5U _n 10s(25℃±5℃)
Test voltage terminals to case	3000VAC 60s(50Hz, 25℃±5℃)
Dielectric dissipation factor	$\leq 2 \times 10^{-4}$ @100Hz, 25℃±5℃
Equivalent series resistance (ESR)	0.3mΩ~1.0mΩ (< 10kHz)
Self inductance(ESL)	10nH~40nH
Maximum RMS current	100A~300A
Maximum peak current	2kA~8kA
Overvoltage protection	1.1U _n : 30% of the service period
	1.15U _n : 30min/day
	1.2U _n : 5min/day
	1.3U _n : 1min/day
	1.5U _n : $\leq 30\text{ms}$, 1000 times during the life
Life expectancy	15,000 小时 hours, refer to corresponding curve
Failure rate	50 FIT
Self discharge time constant	$C \times R_{is} \geq 10\,000\text{s}$ (25℃, 500VAC)
Maximum torque of terminals	4.5Nm
Maximum torque of mounting tabs	8.5Nm
Maximum working humidity	65℃, 93% RH
Maximum altitude without derating	2000m
Mounting mode	Arbitrary direction
Outline type	custom products on request