Film Capacitors – Power Electronic Capacitors

PEC MKP DC

Series/Type:	**B2569x**
Ordering code:	**B25690A1427K101**
Date:	2019-5-27
Version:	Preliminary1

Preliminary datasheet

Applications

- Wind power, Solar power
- UPS, SVG, APF, Energy storage
- Motor driver systems, Frequency drives
- EV / HEV, Locomotive traction

Reference only

Features

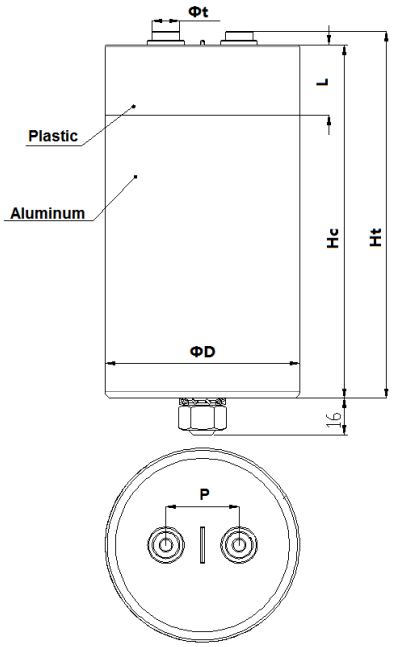
- Low ESR, Low ESL, Low Losses
- High ripple current, High capacitance density
- Self-healing property, High reliability, Long lifetime
- Naturally air cooling or forced air cooling
- UL810(Construction) Approved, File E502394
- RoHS Compliance

Construction

- Metallized polypropylene film
- Non-PCB, Hard polyurethane resin
- Extruded round aluminum can with stud

Preliminary datasheet

Dimensional drawings



Item	Dimension	Unit
ØD	85±0.5	mm
Hc	135	mm
Ht	141±1.5	mm
L	10	mm
Terminals	M6 ×10	mm
Øt	12±0.3	mm
P	32±0.5	mm
Fixing Nut	M12 × 6	mm

General technical data

Voltage between terminals V_{TT}, (10 s)	1.5 V_{RDC}	V_{DC}
Voltage between terminals and Case V_{TC}, (10s)	$\sqrt{2}V_{RDC}$+1000 or 4000 [1)]	V_{AC}
Dielectric dissipation factor Tan δ_0	$2 \cdot 10^{-4}$	
Storage temperature range	−40 ... +85	°C
Operation ambient temperature range (T_{hs}≤ 85°C)	−40 ... +85	°C
Max. temperature allowed at the capacitors hot spot T_{hs}	85	°C
Max. permissible altitude (above sea level)	2000	m
Life expectancy (@V_{RDC}/T_{hs}=75°C)	100,000	h
Climatic Category	40/85/56	
Reference standard	IEC 61071, UL810	

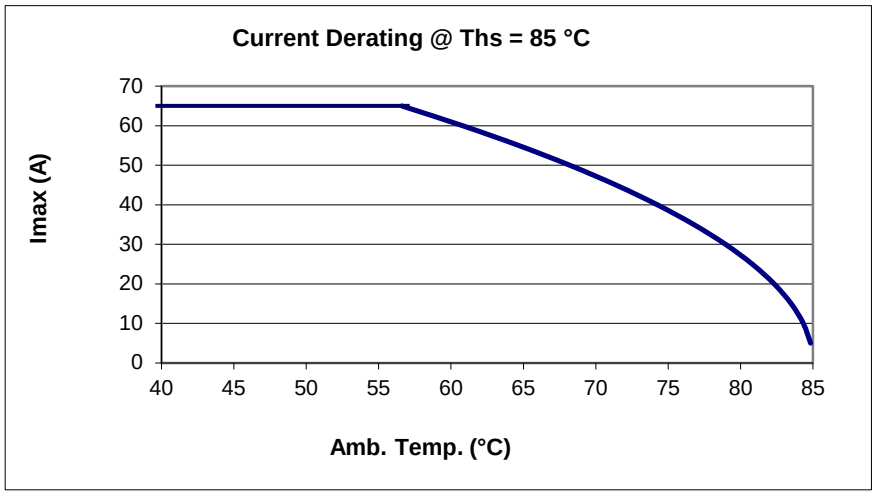
1): Whichever is the highest value

C_R uF	Tol.	V_{RDC} V_{DC}	I_{MAX}* A_{rms}	L_{self} nH	R_{TH} K/W	$ESR_{(typical)}$ mΩ	Tan δ (100HZ)	Weight kg
420	±10%	1100	65	≤40	2.8	2.4	≤1.0	1.0

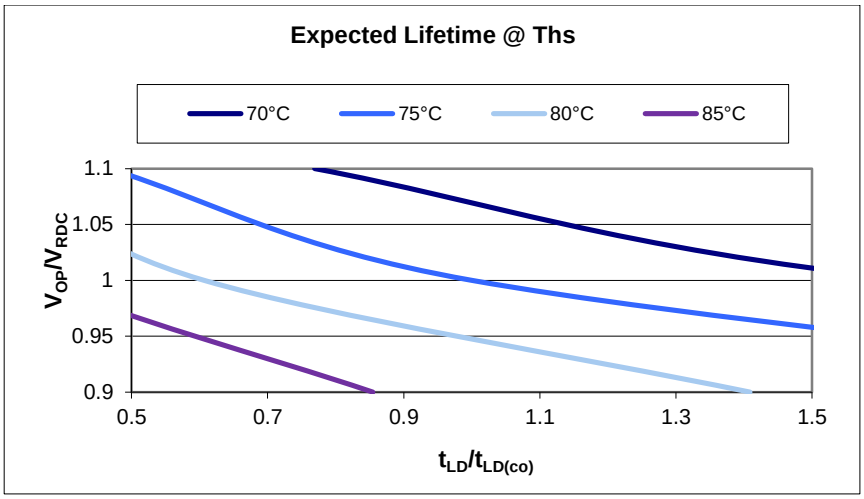
Preliminary datasheet

***Current de-rating according to maximum temperature**

T_{hs} = + 85 °C (Altitude ≤ 2000m)

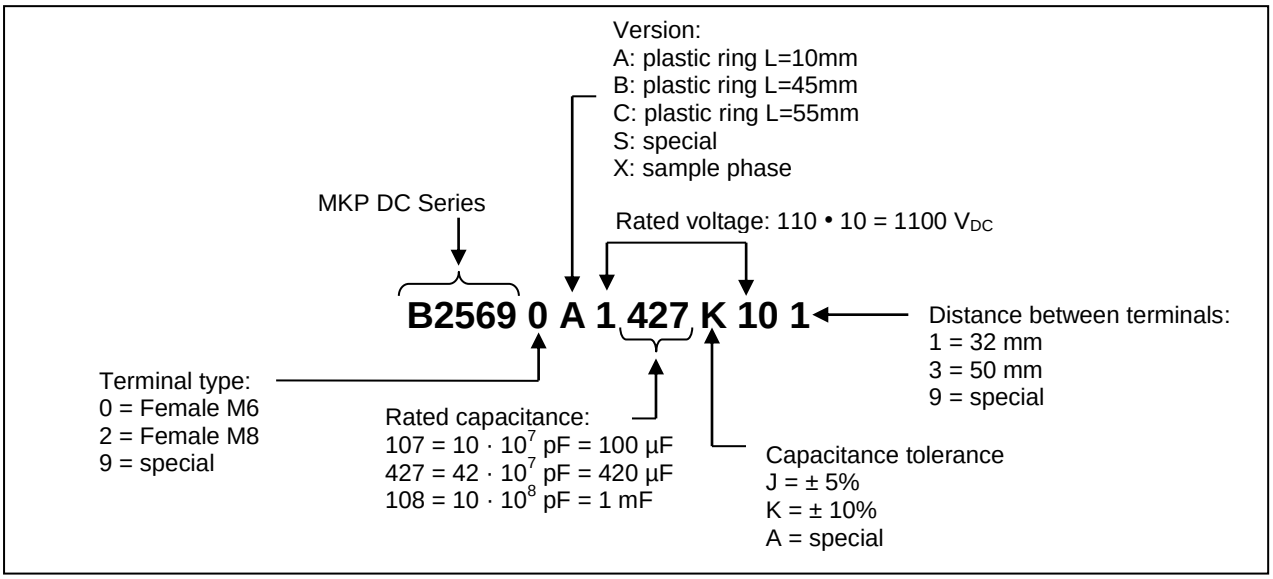


Expected lifetime

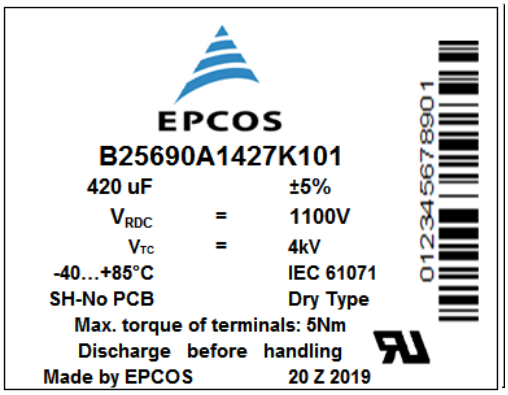


Preliminary datasheet

Structure of ordering code



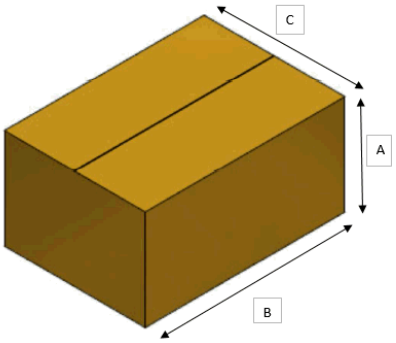
Label information (Reference only)



Date code explanation
WW Z YYYY
WW Z YYYY: production weeks (ex.: 20)
WW **Z** YYYY: produced in Zhuhai (China)
WW Z **YYYY**: production year (ex.: 2019)

Bar code explanation
Bar code consists of batch number and serial number.
Batch number: 9 digits (ex.: 012345678)
Serial number: 3 digits (ex.: 901)

Packing information



Packing unit: 12 pieces per box

Typical dimensions:

A: 465mm;
B: 355mm;
C: 205mm;

Cautions and warnings

- In case of dents of more than 1 mm depth or any other mechanical damage, capacitors must not be used at all.
- Check tightness of the connections/terminals periodically.
- The energy stored in capacitors may be lethal. To prevent any chance of shock, discharge and short-circuit the capacitor before handling.
- Failure to follow cautions may result, worst case, in premature failures, bursting and fire.
- Protect the capacitor properly against over current and short circuit.
- TDK Electronics is not responsible for any kind of possible damages to persons or things due to improper installation and application of capacitors for power electronics.

Safety

Electrical or mechanical misapplication of capacitors may be hazardous. Personal injury or property damage may result from bursting of the capacitor or from expulsion melted material due to mechanical disruption of the capacitor.

- Ensure good, effective grounding for capacitor enclosures.
- Observe appropriate safety precautions during operation (self-recharging phenomena and the high energy contained in capacitors).
- Handle capacitors carefully, because they may still be charged even after disconnection.
- The terminals of capacitors, connected bus bars and cables as well as other devices may also be energized.
- Follow good engineering practice.

Thermal load

After installation of the capacitor it is necessary to verify that maximum hot-spot temperature is not exceeded at extreme service conditions.

Mechanical protection

The capacitor has to be installed in a way that mechanical damages and dents in the aluminum can are avoided.

Storage and operating conditions

Do not use or store capacitors in corrosive atmosphere, especially where chloride gas, sulfide gas, acid, alkali, salt or the like are present. In dusty environments regular maintenance and cleaning especially of the terminals is required to avoid conductive path between phases and/or phases and ground.

Service life expectancy

Electrical components do not have an unlimited service life expectancy; this applies to self-healing capacitors, too. The maximum service life expectancy may vary depending on the application the capacitor is used in.

Display of ordering codes for TDK Electronics products

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2. We also point out that **in individual cases, a malfunction of electronic components or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified.** In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
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Important notes

8. The trade names EPCOS, CeraCharge, CeraDiode, CeraLink, CeraPad, CeraPlas, CSMP, CTVS, DeltaCap, DigiSiMic, ExoCore, FilterCap, FormFit, LeaXield, MiniBlue, MiniCell, MKD, MKK, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, PowerHap, PQSine, PQvar, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.tdk-electronics.tdk.com/trademarks.

Release 2018-10

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- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
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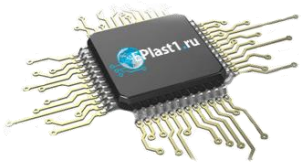
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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