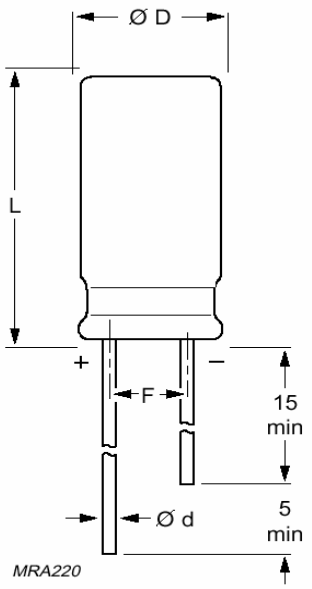
Preliminary

ENYCAP ™ Energy storage Capacitor 230 EDLC - HV
100F – 3,0V – 20x40mm

FEATURES

- Polarized Electrical Double Layer Capacitor
- Very high energy and power density
- Rapid charge and discharge
- High number of cycles > 500.000 times
- Wide temperature range
- RoHS compliant

Schematic



Form CA
(dimensions in mm)

MECHANICAL / PHYSICAL DATA

ϕD_{Max}	20,5 mm
L_{Max}	43,5 mm
ϕd	1,0 mm
F	7,5 ± 0,5 mm
Weight	20,0 g

PACKAGING

Form CA, 100 pieces per box (=smallest packing quantity)

QUICK REFERENCE: ELECTRICAL DATA (at 20°C, unless otherwise specified)

Capacitance, initial C_R	100 F
Tolerance on C_R , initial	-20% / +50 %
Rated voltage, U_R (T_{MAX} 65°C / 85°C)	3,0 V / 2,6 V
Surge voltage, U_S (< 1sec, non repetitive)	3,15 V
Max. ESR_{DC}, initial(2)	15 mΩ
Max. peak current, I_{Peak}(3) (65°C / 85°C)	35 A / 30 A
Max. leakage Current after 0,5 h / 72 hours, I_{L1}	50 mA / 500 uA
Stored energy E at U_R (65°C / 85°C)	0,125 Wh / 0,09 Wh
Specific energy Ed at U_R (65°C / 85°C)	6,25 Wh/kg / 4,7 Wh/kg
Operating temperature range:	
Minimum, T_{MIN}	-40 °C
Maximum, T_{MAX} (U_R 3V / 2,6V)	+65°C / +85°C
Useful life:	2.000 hours @ U_R, T_{MAX}

Further characteristics for series **230 EDLC-HV** are specified in our data sheet at www.vishay.com.
Data sheet series **230 EDLC-HV**: http://www.vishay.com/capacitors/list/product-28450/

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CONDITIONS (electrical measurements at 20°C, unless otherwise specified)(1):

Capacitance C_R and ESR_{DC}	Measured by DC discharging method as described in "Measuring of Characteristics". (2)
Maximum peak current	Non repetitive current for maximum 1 s at specified operating temperature. Maximum operating voltage (refer to derating table) must not be exceeded. Usually to be tested with constant current discharge from U to 0,5*U_R. Max. Current should not be used in normal operation and is only provided as reference value.
Leakage current I_L	Measured at U_R. Capacitor is charged to the rated voltage at 20 °C. Leakage current is the current at specified time that is required to keep the capacitor charged at the rated voltage.
Useful life	After loading the capacitor for the specified time at maximum specified temperature $T_{max.}$ = 85 °C and related maximum operating voltage U = 2,6 V, following parameters are valid within a timeframe of 1000 h:
Capacitance	Within ± 50% of minimum initial specified value.
ESR	Less than 4 x initial specified value.
Leakage	Within specified value.
Storage at upper category temperature	After loading the capacitor for the specified time at maximum specified temperature $T_{max.}$ = 85 °C and without charge and under 40 % RH, following parameters are valid within a timeframe of 1000 h:
Capacitance	Within ± 30 % of minimum initial specified value.
ESR	Less than 3 x initial specified value.
Leakage	Within specified value.
Cycle life	Cycles at 20 °C between rated voltage and half of rated voltage U_R with constant current and 1 s rest between charge and discharge: > 500 000 cycles
Capacitance	Within ±30% of minimum initial specified value.
ESR	Less than 2 x initial specified value.
Stored energy E, specific energy Ed and Ev	E [Wh] = ½ × C × $(U_R)^2$ × 1/3600 Ed [Wh/kg] = ½ × C ×$(U_R)^2$ × 1/3600 × 1/mass Ev [Wh/L] = ½ × C ×$(U_R)^2$ × 1/3600 × 1/volume
Soldering	Hand or wave soldering allowed. For details refer to soldering requirements for radial aluminum electrolytic capacitors in supplementary document.
Cleaning	For printed circuit board cleaning, apply only non aggressive cleaning agents. For details refer to cleaning requirements for Aluminum electrolytic capacitors in supplementary document.
Environmental conditions	Do not expose capacitors to • temperatures outside specified range. • high humidity atmospheres. • corrosive atmospheres, e.g. halogenides, sulphurous or nitrous gases, acid or alkaline solutions, etc. • environments containing oil and grease.

Notes
• General remark: temperatures to be measured at capacitor case
(1) Conditions: electrical measurements at 20 °C, unless otherwise specified
(2) Rated capacitance C_R and ESR_{DC}; measurement current acc. IEC 62391-1
(3) See table above, pos. maximum peak current

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REVISION HISTORY

Rev #	Date	Name	Change
0	Nov 12th , 2019	GT	Initial version
1	Dec 06th, 2019	GT	Leakage Current
2	May 27th, 2020	GT	Electrical data update

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