VINATech *Vision for Nature*

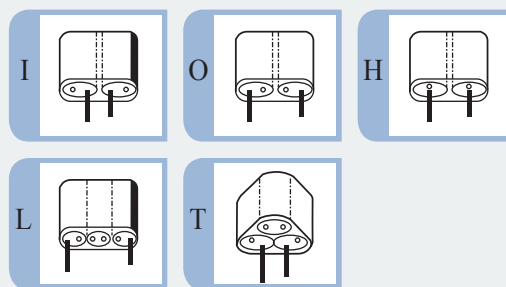It is only customers that let us exist
Hy-Cap / VinaTech Supercapacitor
Part Number

PART NUMBER SYSTEM

VEC 2R7 357 QG - H

Module Terminal Type Code
(2 or 3 serial connection)

I   O   H

L   T

Design Code
ex) G : Standard
A, C, D : Non - Standard

Capacitance Tolerance

CODE	TOLERANCE	CODE	TOLERANCE
K	-10 ~ +40%	M	-20 ~ +20%
Q	-10 ~ +30%	V	-10 ~ +20%

Capacitance Code
ex) 305 :   3F $(30 \times 10^5\ \mu F)$
357 : 350F $(35 \times 10^7\ \mu F)$

Rated Voltage

VOLTAGE	2.3 V	2.5 V	2.5 V	3.0 V
CODE	2R3	2R5	2R7	3R0

Series

| CODE	Full name
VHC	VINA Hybrid Capacitor
VEC	VINA EDLC
VEM	VINA EDLC Module

NOTE ON USING HY-CAP

1. Make sure of polarity(+and –marking) when using.
2. Do not use higher than rated voltage.
   In case of connecting more than 2 units for modules, we recommend "unit voltage -0.2" per unit for the sake of safer voltage balancing (e.g. 2.5V in case of 2.7V unit).
3. please store or use products under the proper conditions.
4. When soldering, be aware of proper conditions in order to avoid excessive heat or time on the products.
※ For more details, please contact us.

2-Serial Module 6.0V 0.5F

FEATURES

Electric double layer capacitor
2 cells serially connected supercapacitor
Semi-permanent, quick charge and discharge than batteries
Suitable for smart meter or car driving recorder application
UL and ISO/TS certificated, RoHS compliant
Radial design with lead terminal type customized in 3 ways

DIMENSIONS

I TYPE   O TYPE   H TYPE
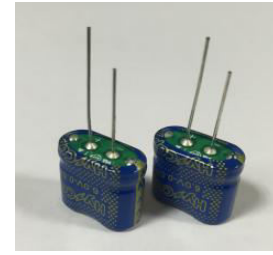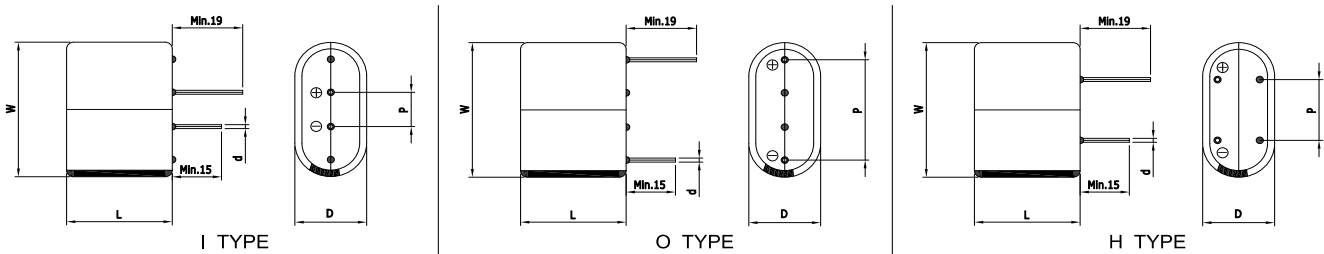
Dimensions in mm						
D +0.1 Max	W ± 1.0	L ± 1.5	d ± 0.1	P ± 0.2		
Φ8.5	17.0	15.5	Φ0.6	I: 4.7	O: 12.3	H: 8.5

This drawing is not to be scaled.

SPECIFICATIONS

Part Number	Rated Voltage, V_R	Rated Capacitance	AC ESR 1kHz	DC IR	Maximum Current	Leakage Current	Stored Energy	Dimension D x W x L	Weight
	(V)	(F)	(mΩ)	(mΩ)	(A)	(mA)	(J)	(mm)	(g)
VEC 6R0 504 QG-X	6.0	0.5	295.00	445.00	1.	0.003	9.0	8.5 x 17.0 x 15.5	2.5

* X is variant type code such as I, O or H.
* Maximum Current: 1 second discharge to ½·V_R
* Leakage Current: After 72hours at V_R and 25℃

Item	Characteristics	Remarks
Rated Voltage(V_R)	6.0V	
Capacitance Tolerance	-10 ~ +30%	
Operating Temperature (T_{min} ~ T_{max})	-40 ~ +65℃	|Δcap| ≤ 30% of initial value at 25℃ |ΔESR| ≤ 100% of specified value at 25℃ After 1,000 hours application of V_R at T_{max}
Storage Temperature	-40 ~ 70℃	
Cycle Life	500,000 cycles	|Δcap| ≤ 30% of initial value at 25℃ |ΔESR| ≤ 100% of specified value at 25℃ Cycles from V_R to ½·V_R under constant current at 25℃
Shelf Life	2 years	|Δcap| ≤ 10% of initial value at 25℃ |ΔESR| ≤ 50% of specified value at 25℃ Without electrical charge under T_{max}

2-Serial Module 6.0V 1.5F

Hy⚡Cap

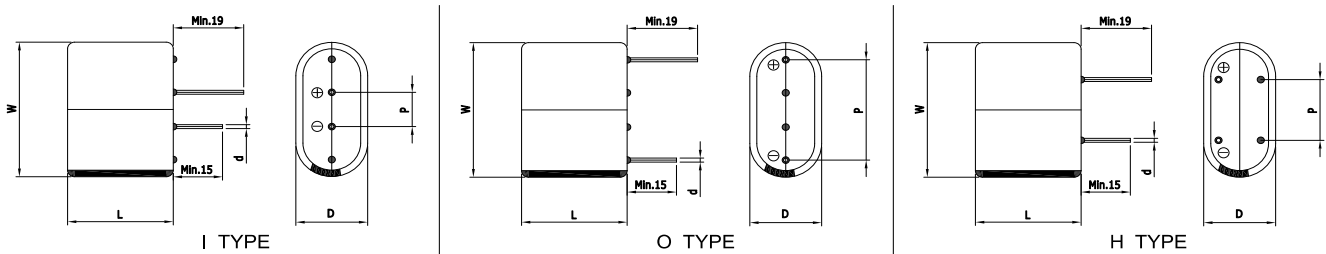## FEATURES

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I TYPE   O TYPE   H TYPE

Dimensions in mm						
D +0.1 Max	W ± 1.0	L ± 1.5	d ± 0.1		P ± 0.2	
Φ8.5	17.0	22.0	Φ0.6	I: 4.7	O: 12.3	H: 8.5

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SPECIFICATIONS

Part Number	Rated Voltage, V_R	Rated Capacitance	AC ESR 1kHz	DC IR	Maximum Current	Leakage Current	Stored Energy	Dimension D x W x L	Weight
	(V)	(F)	(mΩ)	(mΩ)	(A)	(mA)	(J)	(mm)	(g)
VEC 6R0 155 QG-X	6.0	1.5	145.00	215.00	3.5	0.010	27.0	8.5 x 17.0 x 22.0	3.3

* X is variant type code such as I, O or H.
* Maximum Current: 1 second discharge to $\frac{1}{2} \cdot V_R$
* Leakage Current: After 72hours at V_R and 25℃

| Item	Characteristics	Remarks
Rated Voltage(V_R)	6.0V	
Capacitance Tolerance	-10 ~ +30%	
Operating Temperature ($T_{min} \sim T_{max}$)	-40 ~ +65℃	|Δcap| ≤ 30% of initial value at 25℃ |ΔESR| ≤ 100% of specified value at 25℃ After 1,000 hours application of V_R at T_{max}
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2-Serial Module 6.0V 2.5F

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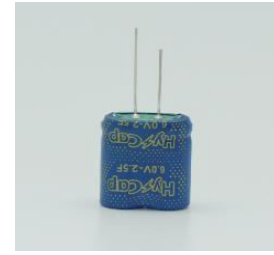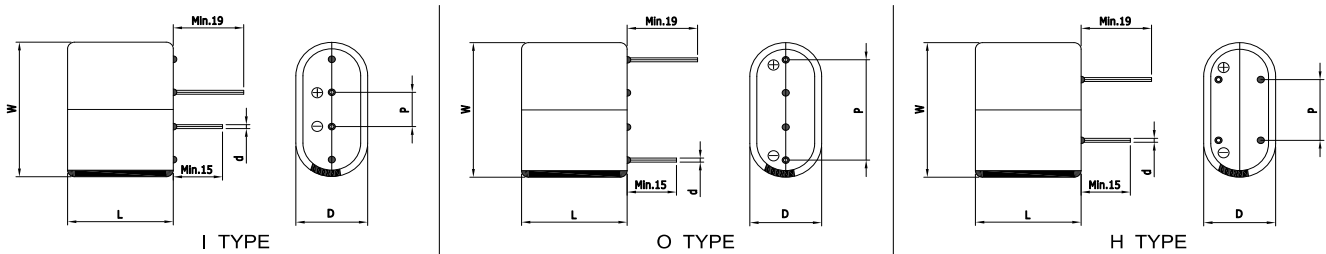
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D +0.1 Max	W ± 1.0	L ± 1.5	d ± 0.1	P ± 0.2	
Φ10.5	21.0	22.5	Φ0.6	I: 5.5 O: 15.5 H: 10.5	

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SPECIFICATIONS

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	(V)	(F)	(mΩ)	(mΩ)	(A)	(mA)	(J)	(mm)	(g)
VEC 6R0 255 QG-X	6.0	2.5	135.00	205.00	5.	0.015	45.0	10.5 x 21.0 x 22.5	4.7

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* Maximum Current: 1 second discharge to ½·V_R
* Leakage Current: After 72hours at V_R and 25℃

Item	Characteristics	Remarks
Rated Voltage(V_R)	6.0V	
Capacitance Tolerance	-10 ~ +30%	
Operating Temperature (T_{min} ~ T_{max})	-40 ~ +65℃	|Δcap| ≤ 30% of initial value at 25℃ |ΔESR| ≤ 100% of specified value at 25℃ After 1,000 hours application of V_R at T_{max}
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VinaTech

Tel: +82-31-455-3064   E-mail: hycap@vina.co.kr   Web: www.vina.co.kr
Design and specifications are subjected to change without notice.
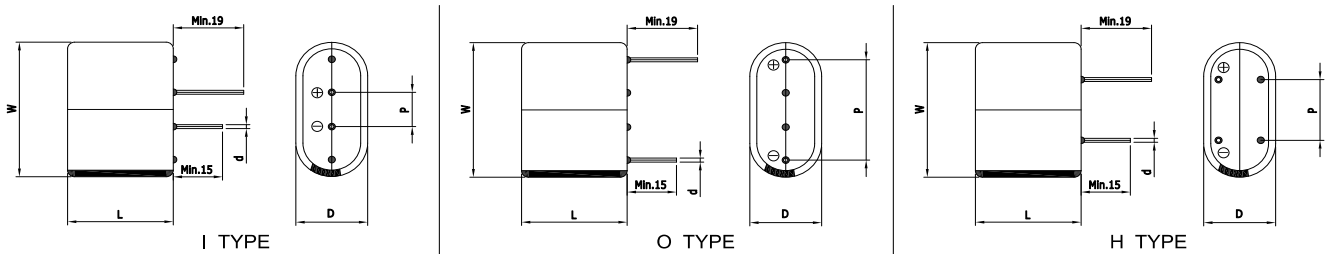version 9.1 on November 23, 2015

2-Serial Module 6.0V 5F

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	(V)	(F)	(mΩ)	(mΩ)	(A)	(mA)	(J)	(mm)	(g)
VEC 6R0 505 QG-X	6.0	5.	55.00	85.00	10.	0.030	90.0	10.5 x 21.0 x 32.0	6.6

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