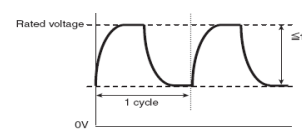
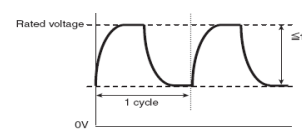
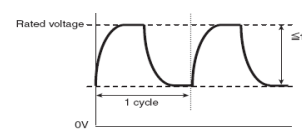


VQ Series

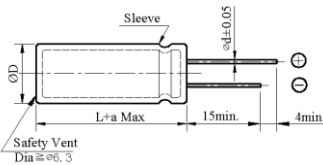
- Capacitor For Over Voltage Application
- Load life 5,000 hours at 105°C



◆ SPECIFICATIONS

Item	Performance Characteristics											
Category Temperature Range	-25 ~ +105°C											
Working Voltage Range	160 ~ 450Vdc											
Capacitance Range	22 ~ 680 µF											
Capacitance Tolerance	±20% (at 25°C and 120Hz)											
Dissipation Factor (tanδ) (at 25°C, 120Hz)	Rated Voltage (V) 160 ~ 250 400 ~ 450											
	tanδ(Max) 0.12 0.15											
Leakage Current	I=0.02CV or 3000 µA whichever is smaller I : Leakage current (µA) C : Rated capacitance (µF) V : Rated voltage (V) Impress the rated voltage for 2 minutes											
Low Temperature Characteristics Impedance Ratio(MAX)	Rated voltage (V) 160~250 400 420 ~ 450											
	Z(-25°C)/Z(+20°C) 3 5 6											
Charge and Discharge	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to charge and discharge test with the voltage waveform shown below at room temperature(15 to 35°C)											
	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Number of cycles</th> <th>Voltage waveform</th> </tr> </thead> <tbody> <tr> <td>5Hz</td> <td>200million times</td> <td>  </td> </tr> </tbody> </table> <table border="1"> <tr> <td>Capacitance change</td> <td>≒ ±20% of the initial value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 200% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≒ specified value</td> </tr> </table>	Frequency	Number of cycles	Voltage waveform	5Hz	200million times		Capacitance change	≒ ±20% of the initial value	Dissipation factor(tanδ)	≒ 200% of the specified value	Leakage current
Frequency	Number of cycles	Voltage waveform										
5Hz	200million times											
Capacitance change	≒ ±20% of the initial value											
Dissipation factor(tanδ)	≒ 200% of the specified value											
Leakage current	≒ specified value											
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 5,000 hours at 105°C.											
	Capacitance change ≒ ±20% of the initial value											
	Dissipation factor(tanδ) ≒ 200% of the specified value											
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 1,000 hours at 105°C without voltage applied.											
	Capacitance change ≒ ±20% of the initial value											
	Dissipation factor(tanδ) ≒ 200% of the specified value											
Others	Conforms to JIS-C-5101-4 (1998), characteristic W											

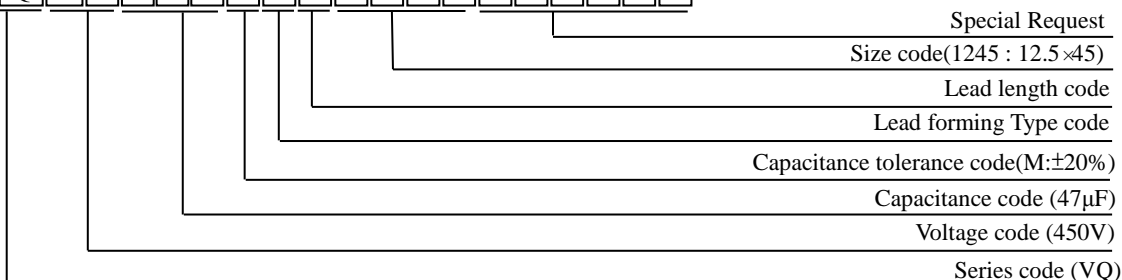
◆ DIMENSIONS (mm)



ΦD	10	12.5	16	18
ΦD	ΦD + 0.5 Max			
Φd	0.6	0.6	0.8	0.8
F	5.0	5.0	7.5	7.5
a	L + 1.5 Max	≤ 35 L + 1.5 Max ≥ 40 L + 2.0 Max	L + 1.5 Max	

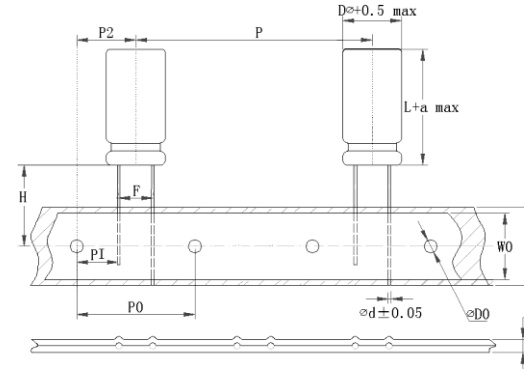
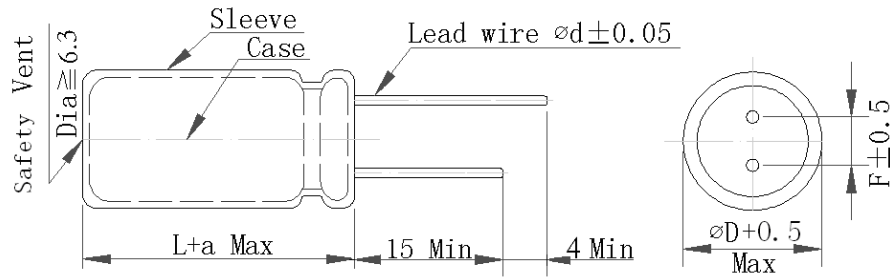
◆ PART NUMBER SYSTEM(Example : 450V 47µF)

V Q 2 W 4 7 0 M N N 1 2 4 5



Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	VQ	NO.:	PUBLISH DATE	2022-03-25
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Unit(mm):

P=30.0±1.0 H=18.5±0.5
P0=15.0±0.2 W=18.0±0.5
P1=3.75±0.5 W0=12.5MIN
P2=7.5±1.0 ØD0=4.0±0.2
F=7.5+0.8/-0.2 t=0.7±0.2

Original

FIG-1

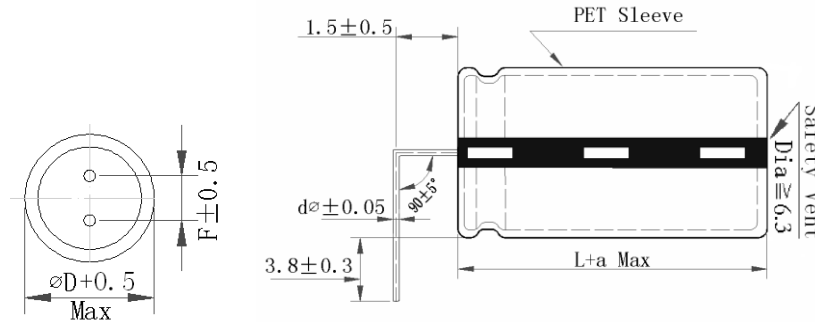
No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @ 105°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
															DΦ	L	a	d	F	
1	VQ2W680MNN1440	/	68 μF	±20%	450 V	/	-25~+105	/	/	650	/	/	/	5000	14.5	40	/	/	7.5	Original
2	VQ2E121MPI1620E	/	120 μF	±20%	250 V	/	-25~+105	/	/	700	/	/	40	5000	16	20	/	/	7.5	FIG-1

※Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.

REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
Sleeve Color: Black.	张洪斌	曾爱娥	梁慧妍

Aluminum Electrolytic Capacitor

Customer	Digi-Key	SERIES	VQ	NO.:	PUBLISH DATE	2022-03-25
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No.	CHINSAN Part No.	Customer Part No.	Capacitance (uF)	Tolerance On rated Capacitance (%)	Working Voltage (Vdc)	Surge Voltage (Vdc)	Category Temp Range (°C)	Tanδ @ 25°C (120Hz) (Max)	Leakage Current (uA) (2 min.)	Rated Ripple Current (mA rms) @ 105°C 120Hz	Rated Ripple Current (mA rms) @ 105°C 100kHz	ESR @25°C (mΩ max/ 120Hz)	Impedance @20°C (mΩ max/ 100kHz)	Endurance @ 105°C (Hours)	Dimensions (mm)					Appearance Drawing No
															DΦ	L	a	d	F	
1	VQ2W330MRT1620Z	/	33 μF	±20%	450 V	/	-25~+105	/	/	350	/	/	/	5000	16	20	/	/	7.5	---

※Test leakage current before testing dissipation factor and capacitance during the electric characteristic test.

REMARKS:	APPROVED BY	CHECKED BY	PREPARED BY
Sleeve Color: Black.	张洪斌	曾爱娥	梁慧妍