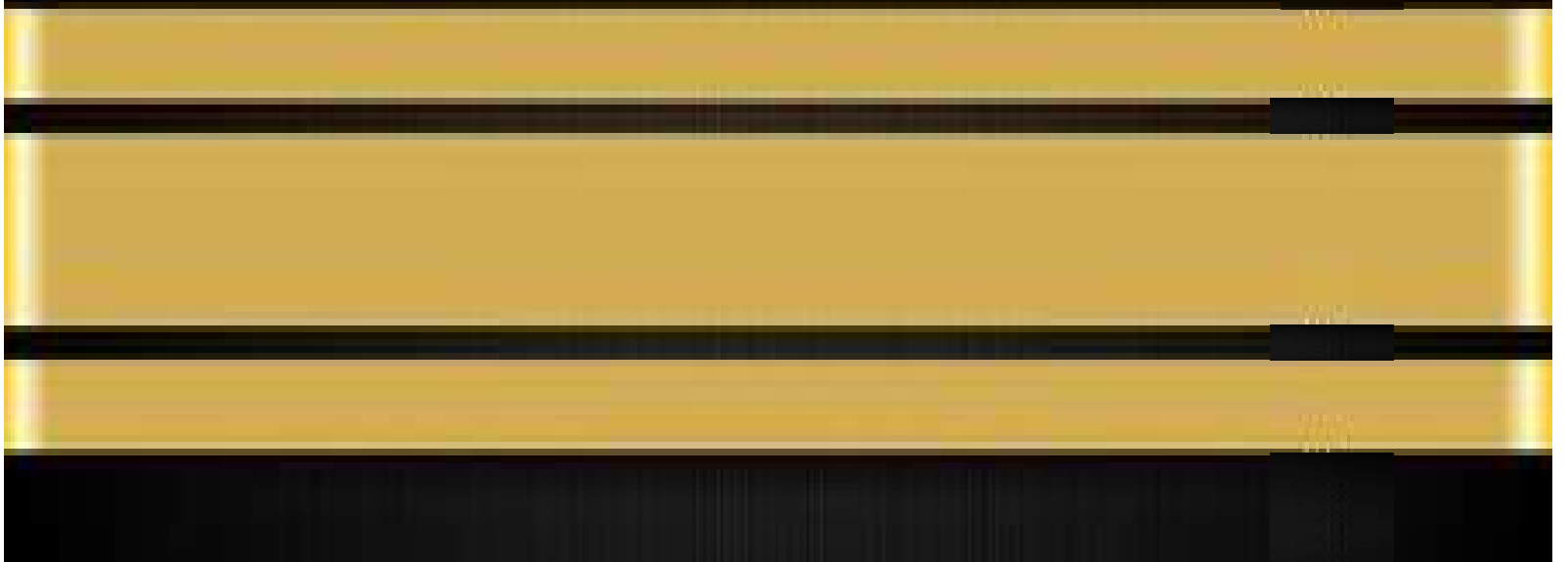




onus
international



Certificate of Conformity

ONUS INTERNATIONAL

3-5 Floor, Jiawang Building, Shennan Road, Futian, Shenzhen

The following products have been tested by us with the listed standards and found in compliance with the European Community Low Voltage Directive 2014/35/EU
Assessment of compliance of the product with the requirements relating to the low voltage directives (LVD) was based on the following standards:

EN 60384-4:2016

Product: **Electrolytic Capacitor**

Model No.: **25V100 μ F 6*12, 25V470 μ F 8*12, 16V1000 μ F 8*16, 35V470 μ F 10*17, 63V470 μ F 13*21, 25V47 μ F 5*11, 50V0.47 μ F 5*11, 25V10 μ F 5*11, 63V4.7 μ F 5*11, 63V1 μ F 5*11, 50V220 μ F 8*12, 50V100 μ F 8*12**

Parameters: **16-63VDC, 0.47-470 μ F**

The statement is based on a single evaluation of one sample of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. Logo.

The manufacture should ensure that all product in series production are in conformity with the product sample detailed in this report. The applicant should hold the whole technical report at disposal of the competent all the right.



After preparation of the necessary technical documentation as well as the conformity declaration the required CE marking can be affixed on the product.

Other relevant directives have to be observed.

Marks Licence No.: ACT18020311
Ref. Test Report: 68.5.13.10.2800.2342
Issued Date: 2018-02-06

Steve Li
Chief Director



COMPANY INTRODUCTION

 ONUS International

is a professional aluminum electrolytic capacitor production and manufacturing enterprises.

The company has a complete, scientific quality management system and has established its own brand "ONUS capacitor"

The company's development goals and

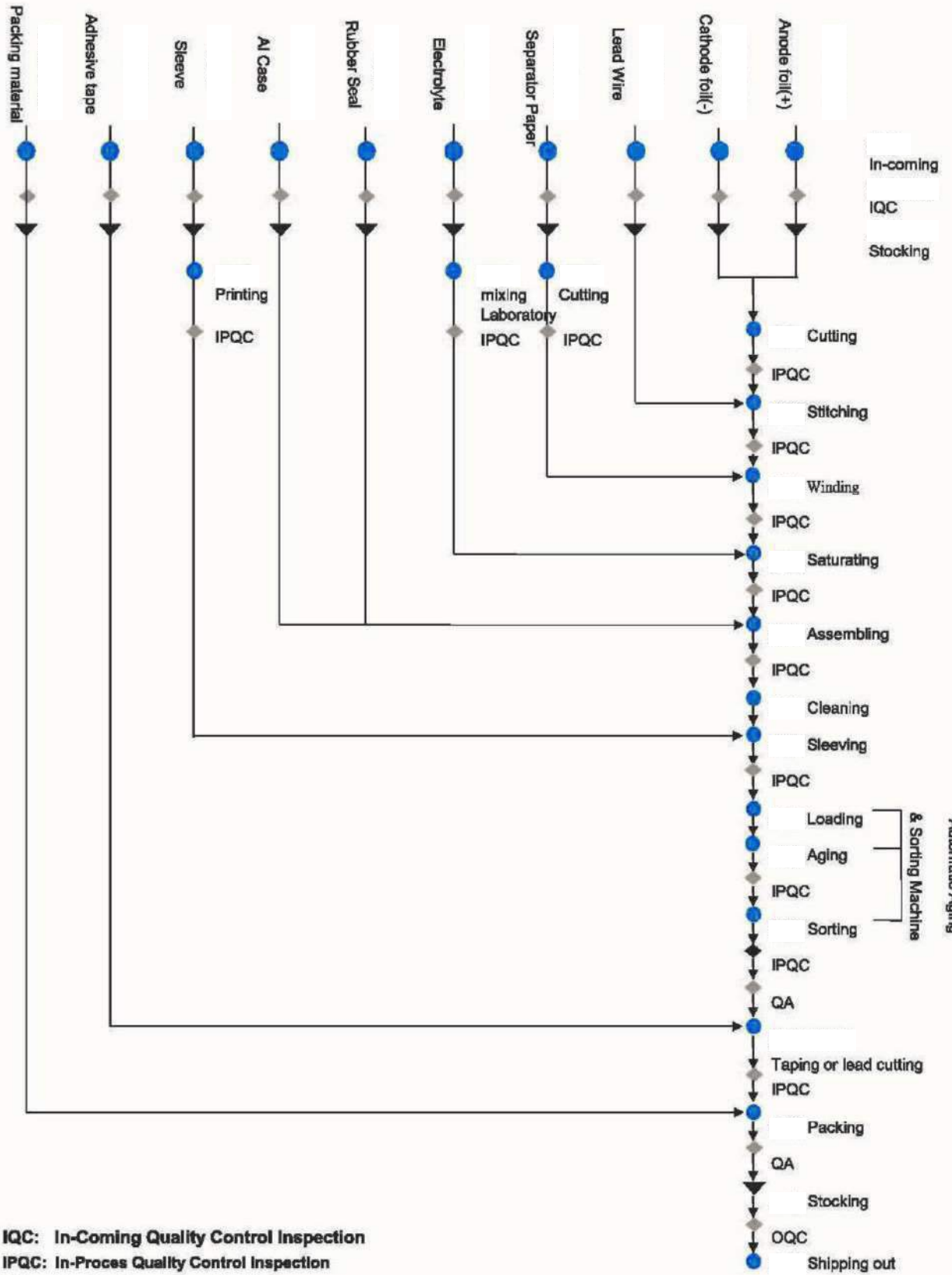
business philosophy is "Technology-based, realistic and innovative, the pursuit of excellence, quality first".

Onus International develops product quality, reasonable price and customer service in order to satisfy with all customer's and market's requirement.

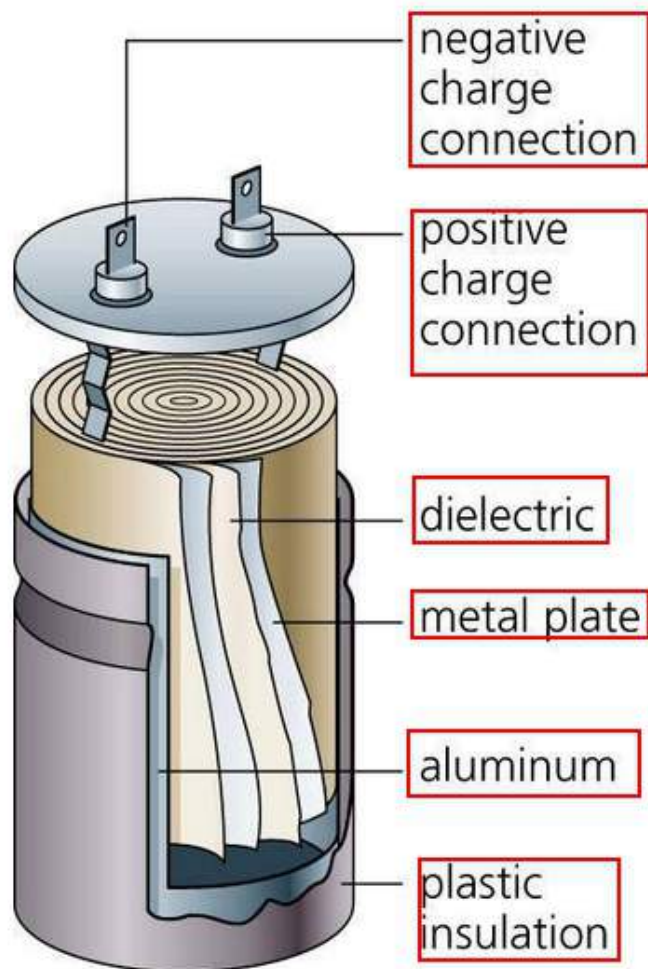
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Automatic Production Flow Chart



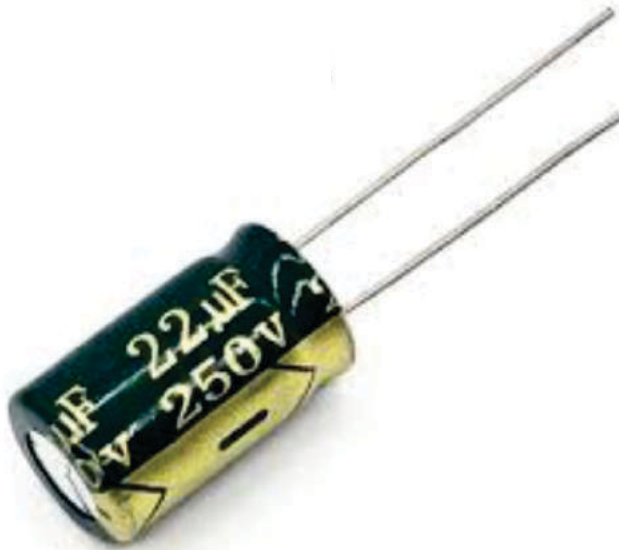
Application Guidelines For Aluminum Electrolytic Capacitors



1. Caution During Circuit Design

- (1) Please make sure the application and mounting conditions to which the capacitor will be exposed are within the conditions specified in the catalog or alternate product specification (Referred as to specification here after).
- (2) Design Aluminum Electrolytic Capacitors, please pay attention to the points listed below:
 - ① The capacitor shall not be used in an ambient temperature which exceeds the operating temperature specified in the specification.
 - ② Do not apply excessive current which exceeds the allowable ripple current.
 - ③ Make sure that no excess voltage (that is higher than the rated voltage) is applied to the capacitor.
 - (a) Please pay attention so that the peak voltage, which is DC voltage overlapped by ripple current, will not exceed the rated voltage.
 - (b) In the case where more than 2 aluminum electrolytic capacitors are used in series, please make sure that applied voltage will be lower than rated voltage and the voltage be will applied to each capacitor equally using a balancing resistor in parallel with the capacitors.
 - ④ Aluminum electrolytic capacitors are polarized. Make sure that no reverse voltage or AC voltage is applied to the capacitors. Please use Bi-polar capacitors for a circuit that can possibly see reversed polarity. Even Bi-polar capacitors can not be used for ac voltage application.
- (3) Appropriate capacitors which comply with the life requirement of the products should be selected when designing the circuit.
- (4) For a circuit that repeats rapid charging/discharging of electricity, an appropriate capacitor that is capable of enduring such a condition must be used.
- (5) Aluminum case, cathode lead wire, anode lead wire and circuit pattern must be isolated.
- (6) The sleeve of capacitors is not recognized as an insulator, and therefore, the standard capacitor should not be used in a place where insulation function is needed. Please consult with us should you require a higher grade of insulating sleeve.
- (7) Capacitors may fail if they are used under the following conditions:
 - ① Damp conditions such as water, saltwater spray, or oil spray or fumes. High humidity or humidity condensation situations.

Application Guidelines For Aluminum Electrolytic Capacitors

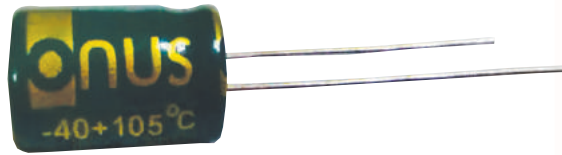


- ② In an atmosphere filled with toxic gasses (such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, etc.)
 - ③ Being exposed to direct sunlight, ozone, ultraviolet ray, or radiation.
 - ④ Being exposed to acidic or alkaline solutions.
 - ⑤ Under severe conditions where vibration and/or mechanical shock exceed the applicable ranges of the specification.
- (8) In designing a circuit, the following matters should be ensured in advance to the capacitor assembly on the P.C. board.
- ① Design the appropriate hole spacing to match the lead pitch of capacitors.
 - ② Do not locate any wiring and circuit patterns directly above the capacitor vent. Ensure enough free space above the capacitor vent.
 - ③ Do not design a circuit board so that heat generating components are placed near an aluminum electrolytic capacitor or reverse side of P.C. board (under the capacitor).
- (9) Electrical characteristics may vary depending on changes in temperature and frequency. Please consider this variation when you design circuits.
- (10) When you mount capacitors on the double-sided P.C boards, do not place capacitors on circuit patterns or over on unused holes.
- (11) When you install more than 2 capacitors in parallel, consider the balance of current flowing through the capacitors.
- (12) If more than 2 aluminum electrolytic capacitors are used in series, make sure the applied voltage will be lower than the rated voltage and that voltage will be applied to each capacitor equally using a balancing resistor in parallel with each capacitor.

2. Caution For Assembling Capacitors

- (1) Once a capacitor has been assembled in the set and power applied, even if a capacitor is discharged, an electric potential (restricting voltage) may exist between the terminals.
- (2) Electric potential between positive and negative terminal may exist as a result of returned electromotive force, so please discharge the capacitor using a 1K Ω resistor.

Application Guidelines For Aluminum Electrolytic Capacitors

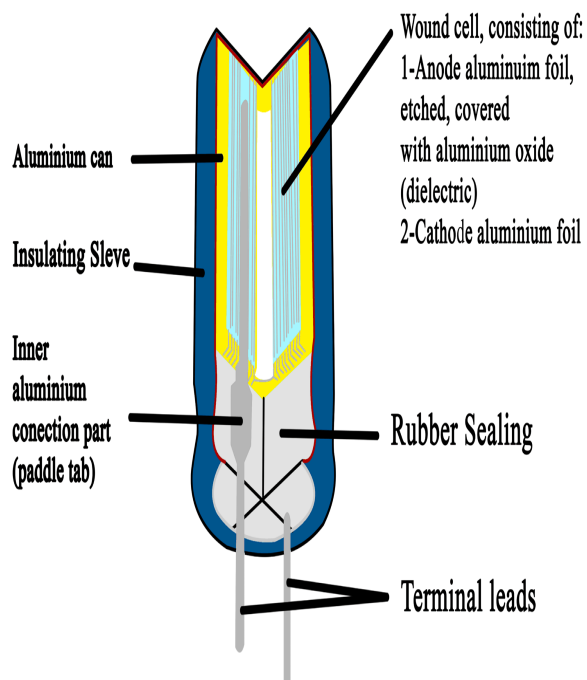


- (3) Leakage current of aluminum electrolytic capacitors may be increased during long storage time. In this case, the capacitors should be subject to voltage treatment a 1K Ω resistor before use.
- (4) Please confirm ratings (voltage and capacitance) and polarity before installing capacitors on the P.C. board.
- (5) Do not drop capacitors on the floors and damage, nor use a capacitor that was dropped.
- (6) Please confirm that lead spacing of the capacitor matches the hole spacing of the P.C. board prior to installation.
- (7) Please pay attention that the clinch force is not too strong when capacitors are placed and fixed by an automatic insertion machine.
- (8) Soldering
 - ① Soldering condition (temperature and times) must be confirmed to be within su'scon specification.
 - ② Soldering iron should never touch the capacitor body and do not dip capacitor body into melted solder.
 - ③ Please avoid contact between other components and the aluminum capacitor.
 - ④ Please avoid having flux adhere to any portion except the terminal.
- (9) After Soldering
 - ① Do not bend or twist the capacitor body after soldering on P.C. board.
 - ② Do not hit the capacitor and isolate capacitor from the P.C. board or other device when stacking P.C. boards in store.
- (10) Standard Aluminum Electrolytic Capacitors should be free from halogenated solvents during P.C. board cleaning after soldering.
- (11) Do not use halogenated adhesives and coating materials to fix aluminum electrolytic capacitors.

3. Caution For Assembling Capacitors

- (1) Do not directly touch terminal by hand.
- (2) Do not short between terminals with conductor near the capacitor.

Application Guidelines For Aluminum Electrolytic Capacitors



(3) Do not use conditions for assembling capacitors.

- ① Damp conditions such as water, saltwater spray, or oil spray or fumes. High humidity or humidity condensation situations.
- ② In an atmosphere filled with toxic gasses (such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, etc.)
- ③ Being exposed to direct sunlight, ozone, ultraviolet ray, or radiation.
- ④ Being exposed to acidic or alkaline solutions.
- ⑤ Under severe conditions where vibration and/or mechanical shock exceed the applicable ranges of the specification.

4. Maintenance Inspection

Please periodically inspect the capacitors that are installed in industrial equipment. Remarkable abnormality such as vent operation, leaking electrolyte etc. Capacitance, dielectric loss tangent, leakage current, and items specified in the specification.

- (1) If you see smoke due to operation of safety vent, turn off the main switch or pull out the plug from the outlet.
- (2) Do not bring your face near the capacitor when the pressure relief vent operates, because the gasses emitted from that are over 100°C. If the gas gets into your eyes, please flush your eyes immediately in pure water. If you breathe the gas, immediately wash out your mouth and throat with water. Do not ingest electrolyte. If your skin is exposed to electrolyte, please wash it away using soap and water.

6. Storage

- (1) It is recommended to keep capacitors between the ambient temperatures of 5°C to 35°C and a relative humidity of 75% or below.
- (2) Confirm that the environment does not have any of the following conditions:
 - ① Damp conditions such as water, saltwater spray, or oil spray or fumes. High humidity or humidity condensation situations.
 - ② In an atmosphere filled with toxic gasses (such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, etc.)
 - ③ Being exposed to direct sunlight, ozone, ultraviolet ray, or radiation.
 - ④ Being exposed to acidic or alkaline solutions.

TAPING SPECIFICATION FOR AUTOMATIC INSERTION

● APPLICATIONS

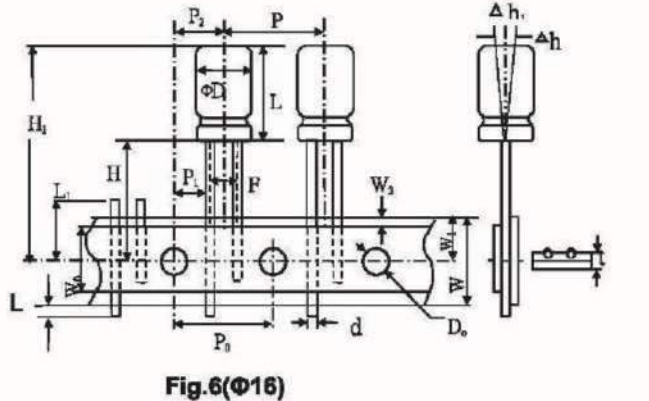
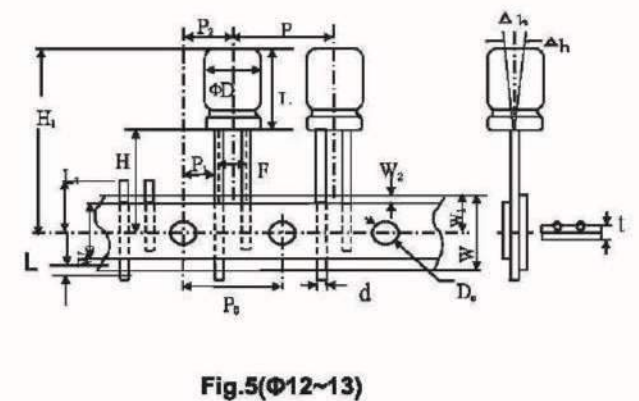
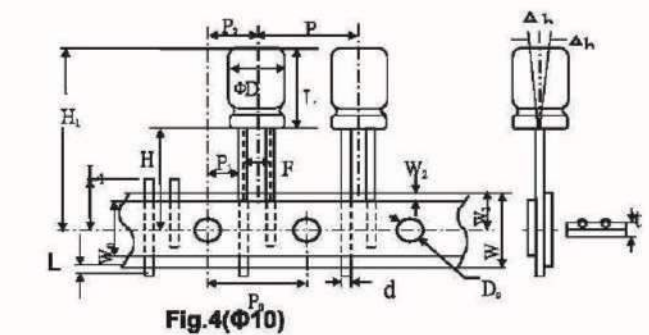
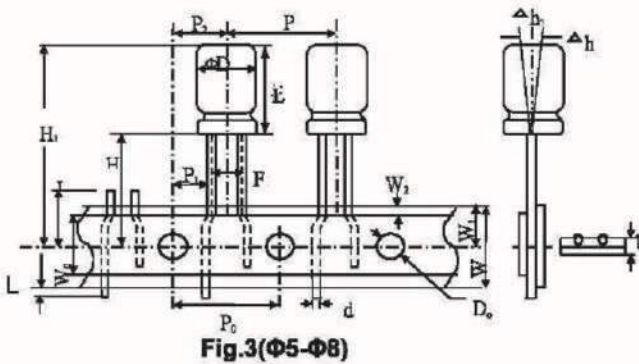
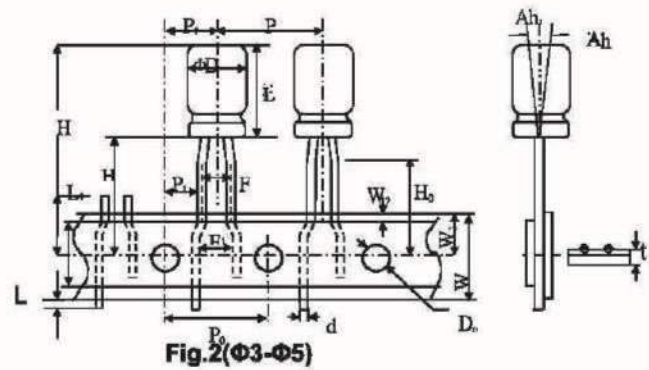
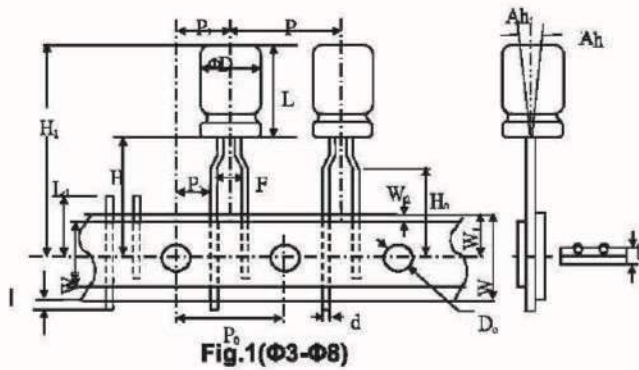
- These specifications include taped single-ended electrolytic capacitors with the body diameters from 4.0 to 16mm.
- Suitable to be used in automatic lead preparation and insertion machines.

● DESCRIPTION

- Body tape requirements are shown from Fig.1 to Fig.6
- Polarity of capacitors shall be oriented in one direction.
- Leader tapes shall not be provided before the first and after the last capacitor on tape.
- Up to 3 capacitor consecutively missing on tape is permitted but a designed quantity of capacitors shall be packed in each case.
- Removal faulty capacitors from the tape shall be by pulling out or by cutting off leads. Cut off leads remaining on tape shall not protrude more than 2.0 mm from tape edge.

● DIAGRAM OF TAPING DIMENSIONS

(Unit=mm)



● TAPING DIMENSIONS (mm)

Items	Symbol	Case Size									Tolerance	Remark (Page 129)	
		4×5	5×5 6.3×5 8×5	4×7	5×7 6.3×7 8×7	5×11	6.3×11	6×12	10×13	10×18			10×20
Lead Wire Diameter	d	0.45	0.45	0.45	0.5	0.5			0.6			±0.05	
Body Height	L	6		8		12	13	14	17	22	MAX		
Intervals of Bodies	P	12.7									±1.0		
Intervals of Punched Holes	P ₀	12.7									±0.2		
Distance between Holes and Lead Wire	P ₁	3.95									±0.7	Fig 1, Fig 4.	
		5.35	5.10	5.10	5.10	5.10	5.10	5.10				Fig 2	
			5.35			5.35							Fig 3
Distance between Holes and Body Center	P ₂	6.35									±1.0		
Distance between Lead and Lead	F	5.00									+0.8 -0.2	Fig 1, Fig 4.	
		2.5	2.5		2.5	2.5		2.5	3.5			Fig 2	
		2.0	2.0	2.5	3.5	2.0						Fig 3.	
Base Tape Width	W	18.0									±0.5		
Adhesive Tape Width	W ₀	12.5									min		
Deviation between Holes and Base Tape	W ₁	9.0									±0.5		
Deviation between Adhesive and Base Tape	W ₂	1.5									max		
Deviation between Body Bottom and Tape Center	H	17.5			18.5	20	18.5				±0.75	Fig 1, Fig 4.	
		17.5			18.5	18.5						Fig 2, Fig 3.	
Lead Wire Clinched Height	H ₀	16.0									±0.5		
Distance between Body Top and Tape Center	H ₁	27.5			32.5			33.0	36.0	41.0	max		
Punched Hole Diameter	D ₀	4.0									±0.3		
Lead Wire Protrusion	ℓ	1.0									max		
Length of not Good Lead Slit	L ₁	11.0									max		
Base and Adhesive Tape Thickness	t	0.7									±0.2		
Deviation of Body Alignment	Δh	0									±2.0		
Deviation of Body Alignment	Δh ₁	0									±1.0		

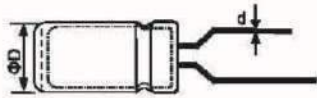
● TAPING DIMENSIONS

Items	Symbol	Case Size						Tolerance	Remark (Page 129)
		12,5×21	13×21	13×25	13×30	16×26	18×32		
Lead Wire Diameter	d	0.6			0.8			±0.05	
Body Height	L	23.0	23.0	27.0	32.0	28.0	34.0	38.0	max
Intervals of Bodies	P	15.0			30.0			±1.0	Fig 5, Fig 6.
Intervals of Punched Holes	P ₀	15.0						±0.2	
Distance between Holes and Lead Wire	P ₁	5.0			3.75			±0.7	
Distance between Holes and Bodies	P ₂	7.5						±1.0	
Distance between lead and lead	F	5.0			7.5			+0.8 -0.2	
Base Tape Width	W	18.0						±0.5	
Adhesive Tape Width	W ₀	12.5						min	
Deviation between Holes and Base Tape	W ₁	9.0						±0.5	
Deviation between Adhesive and Base Tape	W ₂	1.5						min	
Deviation between Body Bottom and Tape Center	H	18.5						±0.75	Fig 5, Fig 6.
Distance Between Body Top and Tape Center	H ₁	40.5	40.5	46.5	50.5	46.5	53.5	56.5	max
Punched Hole Diameter	D ₀	4.0						±0.3	
Lead Wire Protrusion	ℓ	1.0						max	
Length of not Good Idea Slit	L ₁	11.0						max	
Base and Adhesive Tape Thickness	t	0.7						±0.2	
Deviation of Body Alignment	Δh	0						±2.0	
Deviation of Body Alignment	Δh ₁	0						±1.0	

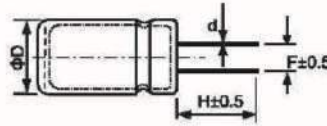
● LEAD CUTTING AND FORMING

With Terminals or Forms as below, Easier Inserting the Units into P.C.Board and Contributing to Higher Mounting Efficiency.

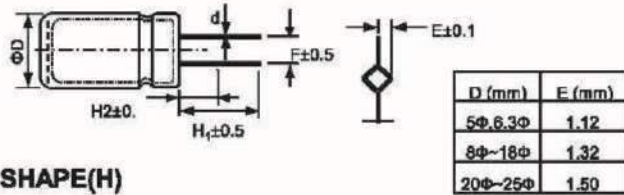
SHAPE(B)



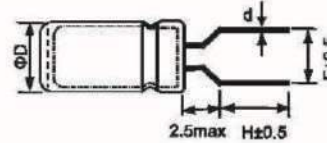
SHAPE(C)



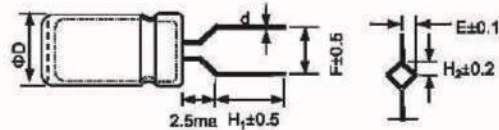
SHAPE(D)



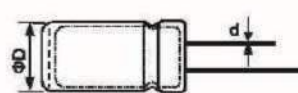
SHAPE(F)



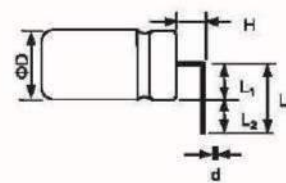
SHAPE(H)



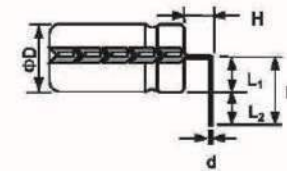
SHAPE(S)



SHAPE(L)



SHAPE(Z)



● SPECIFICATION INFORMATION

Shape NO	Cutting & Forming Methods	D ϕ	4 ϕ	5 ϕ	6.3 ϕ	8 ϕ	10 ϕ	12.5 ϕ	13 ϕ	16 ϕ	18 ϕ	22 ϕ
B	Forming Only	d	0.45	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
C	Lead Cut Only	F	1.5	2.0	2.5	3.5	5.0	5.0	5.0	7.5	7.5	10.0
		H	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
D	Lead Cut and Crimp	d	0.45	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
		F	-	-	-	-	5.0	5.0	5.0	7.5	7.5	10
		H ₁	-	-	-	-	5.0	5.0	5.0	5.0	5.0	5.0
		H ₂	-	-	-	-	1.8	1.8	1.8	1.8	1.8	1.8
F	Lead Cut and Form	d	-	-	-	-	0.6	0.6	0.6	0.8	0.8	0.8
		F	5.0	5.0	5.0	5.0	-	-	-	-	-	-
		H	4.0	5.0	5.0	5.0	-	-	-	-	-	-
H	Lead Cut, Crimp and Form	d	0.45	0.5	0.5	0.5	-	-	-	-	-	-
		F	5.0	5.0	5.0	5.0	-	-	-	-	-	-
		H ₁	4.0	5.0	5.0	5.0	-	-	-	-	-	-
		H ₂	1.8	1.8	1.8	1.8	-	-	-	-	-	-
S	Long Lead	d	0.45	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
L / Z	Lead Cutting and Bending	F	1.5	2.0	2.5	3.5	5	5	5	7.5	7.5	10
		L ₁	2.2	2.7	3.6	4.5	5.3	6.8	6.8	8.4	9.4	11.4
		L ₂	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
		d	0.45	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.8	0.8

Part Number System

Explanation of parts numbers

KM Series	10 μ F	$\pm 20\%$	50V	Bulk Package	105°C Rubber Bung	5 ϕ ×11L	PVC Sleeve	Black
KM	100	M	1H	BK	J	0511	V	BK
□□□	□□□	□	□□	□□	□	□□□□	□	
① Series Numbers ONUS-Y	② Capacitance	③ Capacitance Tolerance	④ Rated Voltage IV	⑤ Lead Configuration	⑥ Rubber Type	⑦ Case Size	⑧ Lead Wire and Sleeve Type	⑨ Color

① Series Numbers

We use 2or3 letters to represent the series numbers.

② Capacitance

(μ F)	0.1	0.47	1	4.7	10	47	100	470	1000	4700	10000
(Code)	0R1	R47	010	4R7	100	470	101	471	102	472	103

The unit of capacity value is μ F, which is represented by 3 numbers. The first 2 digits are valid digits, and the third number represents the number of 0 of the following. R represents the decimal point.

③ Capacitance Tolerance

J=-5% ~ +5%	K=-10% ~ +10%	M=-20% ~ +20%	V=-10% ~ +20%
-------------	---------------	---------------	---------------

④ Rated Voltage

(WV)	2.5	4	6.3	10	16	20	25	35	40	50	63	80	100
(Code)	0E	0G	0J	1A	1C	1D	1E	1V	1G	1H	1J	1K	2A
(WV)	160	200	220	250	330	350	400	420	450	500	525		
(Code)	2C	2D	2U	2E	2M	2V	2G	2P	2W	2H	2Y		

⑤ Lead configuration and package

BK = Bulk Package	TA = Formed Lead Taping
FC = Formed & Cut Lead	SA = Straight Lead Taping
CL = Cut Lead	BC = Bent & Cut Lead

⑥ Rubber Type

F = 85°C Rubber Bung	85° C	J = 105°C Rubber Bung	105° C
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⑦ Size

ΦD×L	3×5	4×5	4×7	5×5	5×7	5×11	6.3×7	6.3×8	6.3×12	8×7	8×9
Code	0305	0405	0407	0505	0507	0511	0607	0608	0612	0807	0809
ΦD×L	8×12	8×14	8×16	10×13	10×17	10×20	13×21	13×25	16×23	16×25	16×30
Code	0812	0814	0816	1013	1017	1020	1321	1325	1623	1625	1630
ΦD×L	18×25	18×30	18×35	22×40							
Code	1825	1830	1835	2240							

⑧ Lead Wire and Sleeve Type

V = PVC sleeve	E = PET sleeve
----------------	----------------

⑨ Color

Black = BK	Green&Gold = GN
Coffee = CE	Orange = OE
Blue&Gold = BD	Green = PG
Black&Gold = BG	Purple&Gold = GE
Coffee&Gold = CG	White&Gold = WG
Coffee&Silver = CS	Black&Silver = BS

Supplement Code(Optional)

For special control purposes

2.0MM=20	2.5MM=25
3.0MM=30	3.5MM=35
4.0MM=40	5.0MM=50
12MM =12	18 MM=18
20MM =2A	

SMD Series

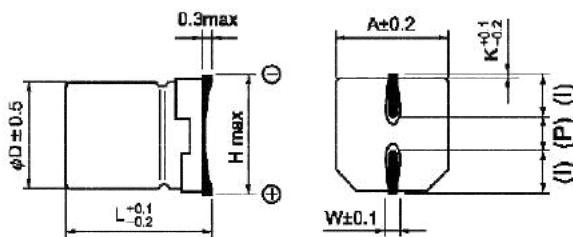
- For surface mounted and general-purpose use.
- Life guaranteed 2,000 hours/85°C.



• Specifications

Item	Performance Characteristics										
Operating Temperature range	-40 + 85°C										
Rated Voltage	4V ~ 100V										
Capacitance Range	0.1 ~ 1,500 μF										
Capacitance Tolerance	±20% (120 Hz, 20°C)										
Leakage Current	I ≤ 0.01CV or 3 μA, whichever is greater after 2 minutes application of rated voltage.										
Dissipation Factor (120 Hz, 20°C)	Rated voltage (V)		4	6.3	10	16	25	35	50	63	100
	Tan δ (max.)	3 φ	0.40	0.30	-	0.20	0.16	0.14	0.14	-	-
		4 φ ~ 6.3 φ	0.35	0.26	0.20	0.16	0.14	0.12	0.12	-	-
		8 φ ~ 10 φ	0.35	0.28	0.24	0.20	0.16	0.14	0.12	0.12	0.10
Temperature Characteristics (120 Hz)	Impedance Ratio / Stability at Low Temperature										
	Rated voltage (V)		4	6.3	10	16	25	35	50	63	100
	Z (-25°C) / Z (20°C)		7	4	3	2	2	2	2	2	2
	Z (-40°C) / Z (20°C)		15	8	6	4	4	3	3	3	3
Load Life	After 2,000 hours application of WV at 85°C, capacitor shall meet the characteristics mentioned below.										
	Capacitance change	Within ±20% of initial value (for Diameter ≤ 6.3mm/4~6.3V : 1000 hours ± 30%)									
	Tan δ	200% or less of initial specified value									
	Leakage current	Initial specified value or less									
Shelf Life	At 85°C, no voltage applied for 1,000 hours, the capacitor shall meet the limits as in load life. (With voltage treatment)										
Resistance to Soldering Heat	Capacitor placed on a 250°C hot plate for 30 seconds with their electrode terminals facing downward will fulfill the following conditions after being cooled to room temperature.										
	Capacitance change	Within ±10% of initial value									
	Tan δ	≤ Initial specified value									
	Leakage current	≤ Initial specified value									

• Case size table Unit: (mm)



D φ	L	A	H	I	W	P	K
3	5.4	3.3	3.3	1.5	0.55	0.8	0.35
4	5.4	4.3	5.5	1.8	0.65	1.0	0.35
5	5.4	5.3	6.5	2.2	0.65	1.5	0.35
6.3	5.4	6.6	7.8	2.6	0.65	2.1	0.35
6.3	7.7	6.6	7.8	2.6	0.65	2.1	0.35
8	6.2	8.3	9.5	3.4	0.65	2.2	0.35
8	10.2	8.3	10.0	3.4	0.90	3.1	0.70
10	10.2	10.3	12.0	3.5	0.90	4.6	0.70



• Dimensions

		D ϕ x L (mm)									
Cap (μ F)	WV(SV)	4 (5)		6.3 (8)		10 (13)		16 (20)		25 (32)	
4.7										4 x 5.4 ϕ	17
10										4 x 5.4	25
	ϕ							4 x 5.4 ϕ	24	5 x 5.4	29
22						4 x 5.4	30	4 x 5.4	30	5 x 5.4	38
	ϕ			4 x 5.4	27	5 x 5.4	36	5 x 5.4	40	6.3 x 5.4	49
33				4 x 5.4	30	4 x 5.4	32	5 x 5.4	43	5 x 5.4	46
	ϕ	4 x 5.4	29	5 x 5.4	38	5 x 5.4	44	6.3 x 5.4	55	6.3 x 5.4	60
47				4 x 5.4	36	5 x 5.4	47	5 x 5.4	50	6.3 x 5.4	60
	ϕ	4 x 5.4	35	5 x 5.4	46	6.3 x 5.4	60	6.3 x 5.4	65	8 x 6.2	100
100		5 x 5.4	60	6.3 x 5.4	70	6.3 x 5.4	80	6.3 x 5.4	90	8 x 6.2	150
	ϕ			5 x 5.4	71	8 x 6.2	130	8 x 6.2	140	6.3 x 7.7	145
220				6.3 x 5.4		6.3 x 7.7	175	6.3 x 7.7	165	10x 10.2	560
	ϕ	6.3 x 5.4	80	8 x 6.2	150	8 x 6.2	190	8 x 10.2	260	8 x 10.2	270
330		6.3 x 5.4	120	6.3 x 7.7	190			10 x 10.2	670	10 x 10.2	370
	ϕ	8 x 6.2	140	8 x 6.2	180	8 x 10.2	290	8 x 10.2	310	10 x 10.2	450
470		6.3 x 7.7	200			10 x 10.2	680	10 x 10.2	690	10 x 10.2	700
	ϕ	8 x 10.2	210	8 x 10.2	260	10 x 10.2	420	10 x 10.2	450		
1000		8 x 10.2	300	10 x 10.2	460	10 x 10.2	610				
1500		10 x 10.2	440	10 x 10.2	560					Case size	Ripple

Cap (μ F)	WV(SV)	35 (44)		50 (63)		63 (79)		100 (125)	
0.1				4 x 5.4 ϕ	3				
0.22				4 x 5.4 ϕ	4				
0.33				4 x 5.4 ϕ	5				
0.47				4 x 5.4 ϕ	6				
1				4 x 5.4 ϕ	9				
2.2	ϕ			4 x 5.4	13				
3.3	ϕ			4 x 5.4	17			8 x 6.2	41
4.7		4 x 5.4	19	5 x 5.4	21			8 x 10.2	60
	ϕ								
10		4 x 5.4	27	5 x 5.4	30				
	ϕ	5 x 5.4	31	6.3 x 5.4	36			8 x 10.2	85
22		5 x 5.4	39	6.3 x 5.4	48	8 x 10.2	75		
	ϕ	6.3 x 5.4	55	8 x 6.2	110	8 x 10.2	120	10 x 10.2	150
33		6.3 x 5.4	58	6.3 x 7.7	95				
	ϕ	8 x 6.2	120	8 x 6.2	130	8 x 10.2	140	10 x 10.2	180
47		6.3 x 5.4	70	6.3 x 7.7	105	8 x 10.2	170		
	ϕ	8 x 6.2	140	8 x 10.2	190	10 x 10.2	190		
100		6.3 x 7.7	160	8 x 10.2	270				
	ϕ	8 x 10.2	250	10 x 10.2	310	10 x 10.2	280		
220		8 x 10.2	320						
	ϕ	10 x 10.2	440	10 x 10.2	460				
330		10 x 10.2	540					Case size	Ripple

Size 3 x 5.4 available for symbol with "O" above

Ripple current (mA) at 85°C 120 Hz

Onus series

● 105°C Load life 5000 hours high temperature resistance and ripple current resistance, high reliability.

● 105°C 5,000



●SPECIFICATIONS

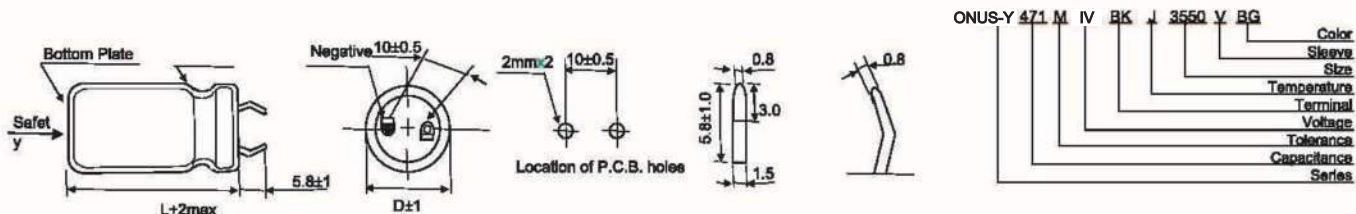
Items	Characteristics									
Capacitance Tolerance	±20%(120Hz, 20°C)									
Operating Temperature Range	-40~+105°C					-25~+105°C				
Rated Voltage Range	10~100V _{DC}					160~450V _{DC}				
Leakage Current	I ≤ 3 √ CV or 3000 (uA), which is greater. (After 5 minutes application of working voltage)									
Dissipation Factor (tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C									
	Rated Voltage(V)	10	16	25	35	50	63	80~100	160~400	420~450
	tan δ (MAX)	0.60	0.45	0.30	0.25	0.20	0.15	0.15	0.15	0.20
When the capacitance exceed 1,000uF, 0.01shall be added every 1,000uF increase										
Low Temperature Stability	Measurement Frequency:120Hz.									
	Rated Voltage(V)	10	16	25	35	50	63	80~100	160~400	420~450
	Impedance Ratio(MAX)	Z(-25°C)/Z(20°C)	4	4	3	3	2	2	2	4
	Z(-40°C)/Z(20°C)	15	15	10	8	6	6	5	-	-
Load Life	5000 hours, with application of working voltage at 105°C									
	Capacitance Change	Within ± 20% of Initial Value								
	tan δ	200% or less of Initial Specified Value								
	Leakage Current	Initial specified value or less								
Shelf Life	1000hours, no voltage applied, at 105°C · After Test : U _R to be applied for 30 minutes, 24 to 48 hours before measurement.									
	Capacitance Change	Within ± 15% of Initial Value								
	tan δ	200% or less of Initial Specified Value								
	Leakage Current	Initial Specified Value or less								
Standards	JIS C 5141 and JIS C 5102									

●Frequency Coefficient for Permissible Ripple Current

Frequency(Hz)	50	120	1K	10K	50K
10~100 WV	0.90	1.00	1.05	1.10	1.15
160~250 WV	0.80	1.00	1.15	1.45	1.50
315~450 WV	0.76	1.00	1.14	1.40	1.42

Onus series

● DIMENSIONS (mm)



● STANDARD RATINGS

D×L(mm); R.C.: (A rms) at 105°C, 120Hz

Cap (uF)	WV(V) (Code) Item	10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
		D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.
2200								22x25	1.11	22x35	1.32
										22x40	1.51
2700										25x30	1.48
										30x25	1.51
3300								22x30	1.42	25x35	1.71
								25x25	1.41	30x30	1.72
										35x25	1.74
3900						22x25	1.32	22x35	1.58	22x50	1.91
								25x30	1.59	25x40	1.89
4700						22x30	1.51	22x40	1.78	30x35	2.12
						25x25	1.52	30x25	1.78	35x30	2.16
5600				22x25	1.45	22x35	1.71	25x35	1.98	25x50	2.39
								30x30	1.99	30x40	2.39
								35x25	2.03	35x35	2.41
6800				22x30	1.67	22x40	1.92	22x50	2.26	30x50	2.79
				25x25	1.66	25x30	1.88	25x40	2.25	35x40	2.79
						30x25	1.90				
8200						22x35	1.88	25x35	2.15	25x50	2.57
								30x30	2.16	30x35	2.51
								35x25	2.19	35x30	2.56
10000		22x30	1.65	22x40	2.12	22x50	2.45	30x40	2.87		
		25x25	1.63	25x30	2.08	25x40	2.44	35x35	2.88		
				30x25	2.12						
12000		22x35	1.84	25x35	2.38	25x50	2.78	30x50	3.32		
		25x30	1.85	30x30	2.37	30x35	2.71	35x40	3.31		
		30x25	1.88	35x25	2.41	35x30	2.76				
15000		22x40	2.11	22x50	2.74	30x40	3.14				
		25x35	2.15	25x40	2.72	35x35	3.16				
18000		22x50	2.45	25x50	3.12	30x50	3.63				
		25x40	2.42	30x35	3.03	35x40	3.62				
		30x30	2.38	35x30	3.09						
		35x25	2.41								
22000		30x35	2.72	30x40	3.47						
		35x30	2.78	35x35	3.49						
27000		25x50	3.12	30x50	4.07						
		30x40	3.14	35x40	4.05						
33000		35x35	3.48								
39000		30x50	3.98								
		35x40	3.95								

Onus series

● STANDARD RATINGS

D×L(mm); R.C.: (A rms) at 105°C, 120Hz

Cap (μ F)	WV(V) (Code) Item	63 (1J)		80 (1K)		100 (2A)		160 (2C)		200 (2D)	
		D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.
330										22x25	1.22
390								22x25	1.32	22x30	1.38
470										22x35	1.55
560						22x30	0.99	22x30	1.66	22x40	1.73
						25x25	0.98	25x25	1.67	30x25	1.77
680				22x25	0.97	22x35	1.12	22x35	1.87	22x45	1.82
								25x30	1.89	25x35	1.86
								30x25	1.95	30x30	1.97
820				22x30	1.12	22x40	1.26	22x40	2.09	25x50	2.17
						25x30	1.24			25x40	2.09
						30x25	1.25			30x35	2.21
1000		22x25	1.00	22x35	1.26	25x35	1.41	22x45	2.37	25x45	2.35
				25x25	1.24	30x30	1.42	22x50	2.41	25x50	2.39
						35x25	1.44	25x35	2.38	30x40	2.53
								30x30	2.39	35x30	2.60
1200		22x30	1.16	22x40	1.42	22x50	1.60	25x40	2.67	30x45	2.85
		25x25	1.15	25x30	1.4	25x40	1.59	25x45	2.71	30x45	2.87
				30x25	1.41	30x35	1.61	30x35	2.68	35x35	2.88
								30x40	2.76		
								35x30	2.85		
1500		22x35	1.32	25x35	1.62	25x50	1.86	25x50	3.09	35x40	3.34
						30x40	1.87	30x45	3.16		
						35x30	1.85	35x35	3.21		
1800		22x40	1.49	22x50	1.84	35x35	2.06	30x50	3.53	35x45	3.74
		25x30	1.46	25x40	1.83			35x40	3.64		
		30x25	1.48	30x30	1.79						
2200		25x35	1.67	25x50	2.10	30x50	2.40	35x45	4.14		
		30x30	1.68	30x35	2.06	35x40	2.39				
		35x25	1.70	35x25	2.09						
2700		22x50	1.92	30x40	2.35						
		25x40	1.91	35x35	2.36						
		30x35	1.93								
3300		25x50	2.2	30x50	2.75						
		35x30	2.18	35x40	2.73						
3900		30x40	2.41								
		35x35	2.43								
4700		30x50	2.79								
		35x40	2.78								

Onus series

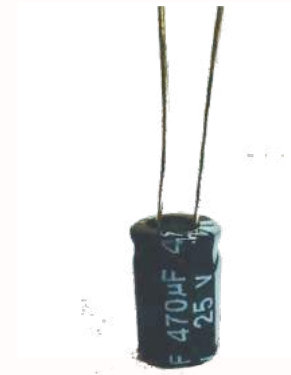
● STANDARD RATINGS

D×L(mm); R.C.: (A rms) at 105°C 120Hz

Cap (uF)	WV(V) (Code) Item	250 (2E)		350 (2V)		400 (2G)		450 (2W)	
		D×L	R.C.	D×L	R.C.	D×L	R.C.	D×L	R.C.
82								22x25	0.60
100						22x25	0.66	22x30	0.69
120						22x30	0.75	22x35	0.76
150				22x30	0.84	22x35	0.85	22x40	0.88
						25x25	0.86	22x45	0.90
								25x30	0.89
180				25x25	0.94	22x40	0.96	22x50	1.01
						25x30	0.97	25x40	1.02
						30x25	1.21	30x30	1.03
220		22x25	1.01	22x35	1.05	22x45	1.09	25x45	1.16
				22x40	1.06	25x35	1.12	30x35	1.17
				25x30	1.07	35x25	1.21	35x30	1.23
270		22x30	1.20	22x45	1.21	22x50	1.24	25x50	1.31
				25x35	1.24	25x40	1.26	30x40	1.33
				30x30	1.27	25x45	1.29	35x35	1.38
				35x25	1.34	30x30	1.27		
330		25x25	1.32	22x50	1.37	25x50	1.44	30x45	1.51
				25x40	1.39	30x35	1.43		
				30x35	1.42	35x30	1.51		
390		22x35	1.44	25x45	1.55	30x40	1.61	30x50	1.67
		25x30	1.43	30x40	1.59	35x35	1.66	35x40	1.73
		30x25	1.50	35x30	1.65			35x45	1.76
470		22x40	1.62	25x50	1.73	30x45	1.83	35x50	1.98
				30x45	1.81	30x50	1.85		
				35x35	1.82	35x40	1.89		
560		22x45	1.81	30x50	2.01	35x45	2.13		
		22x50	1.84	35x40	2.06				
		25x35	1.78						
		30x30	1.83						
680		35x25	1.90						
		25x40	2.01	35x45	2.34				
		25x45	2.04						
		30x35	2.06						
820		35x30	2.14						
		25x50	2.28						
		30x40	2.33						
1000		30x45	2.38						
		35x35	2.37						
		30x50	2.68						
		35x40	2.71						

Onus series

- Used in communication equipments, switching power supply, etc.
- Load life 2000 hours at 105°C
- RoHS Compliant



● SPECIFICATIONS

Performance Characteristics																																														
Operating Temperature Range	-40to+105°C																																													
Rated Voltage Range	6.3to100VDC																																													
Capacitance Range	0.1to4700 µ F																																													
Capacitance Tolerance	±20% (100Hz or 120Hz , +20°C)																																													
Leakage Current (+20°C ,)	$I \leq 0.01CV$ or $5(\mu A)$ After 1 minutes, whichever is greater measured with rated working voltage applied																																													
Dissipation Factor (tg δ)	$I \leq 0.03CV + 10(\mu A)$ After 1 minutes, whichever is greater measured with rated working voltage applied																																													
D.F(%)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Working Voltage (VDC)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">D.F(%)</td> <td>22</td> <td>20</td> <td>18</td> <td>14</td> <td>14</td> <td>12</td> <td>12</td> <td>10</td> <td>14</td> <td>14</td> <td>14</td> <td>15</td> <td>15</td> <td>17</td> </tr> </tbody> </table>	Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	D.F(%)	22	20	18	14	14	12	12	10	14	14	14	15	15	17															
Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450																																
D.F(%)	22	20	18	14	14	12	12	10	14	14	14	15	15	17																																
Low Temperature Characteristics (120Hz)	Impedance ratio ,max <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Working Voltage(VDC)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Z - 25°C / Z+20 °C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>5</td> <td>6</td> <td>15</td> </tr> <tr> <td style="text-align: center;">Z - 40°C / Z+20 °C</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> capacitance > 1000 µ F , and 0.5% per another 1000 µ F for Z-25°C/Z+20°C , add 1% per another 1000 µ F for Z-40°C/Z+20°C	Working Voltage(VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	Z - 25°C / Z+20 °C	4	3	2	2	2	2	2	2	2	2	3	5	6	15	Z - 40°C / Z+20 °C	8	6	4	3	3	3	3	3	-	-	-	-	-	-
Working Voltage(VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450																																
Z - 25°C / Z+20 °C	4	3	2	2	2	2	2	2	2	2	3	5	6	15																																
Z - 40°C / Z+20 °C	8	6	4	3	3	3	3	3	-	-	-	-	-	-																																
Load Life	Test conditions Duration time: 2000hours Ambient temperature: +105°C Applied voltage: Rated Working Voltage(DVC) Applied voltage: Rated Working Voltage(mA) After test requirements: Resumde 16 hours at normal temperature Capacitance change: ≤20% of the initial measured value Dissipation Factor: ≤200% of the initial specified value Leakage Current: ≤The initial specified value																																													
Shelf Life	Test conditions Duration time: 500hours Ambient temperature: +105°C Applied voltage: None After test requirements: Resumed 16 hours at normal temperature Capacitance change: ≤20% of the initial measured value Dissipation Factor: ≤200% of the initial specified value Leakage Current: ≤200% of the initial specified value																																													

Onus series

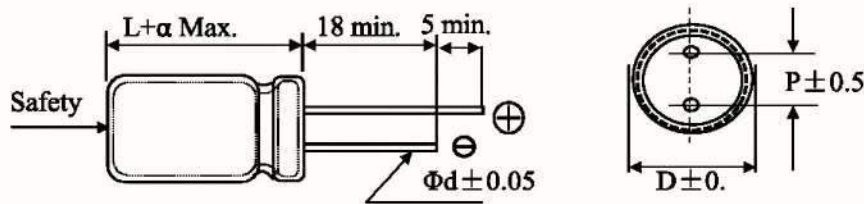
● Multiplier for ripple current vs frequency

(μF) / Hz	60(50)	120	400	1K	10K	50K~100K
≤ 10	0.8	1	1.30	1.30	1.65	1.70
10~100	0.8	1	1.23	1.23	1.48	1.53
100~1000	0.8	1	1.16	1.16	1.35	1.38
>1000	0.8	1	1.11	1.11	1.25	1.28

● Multiplier for ripple current vs temperature

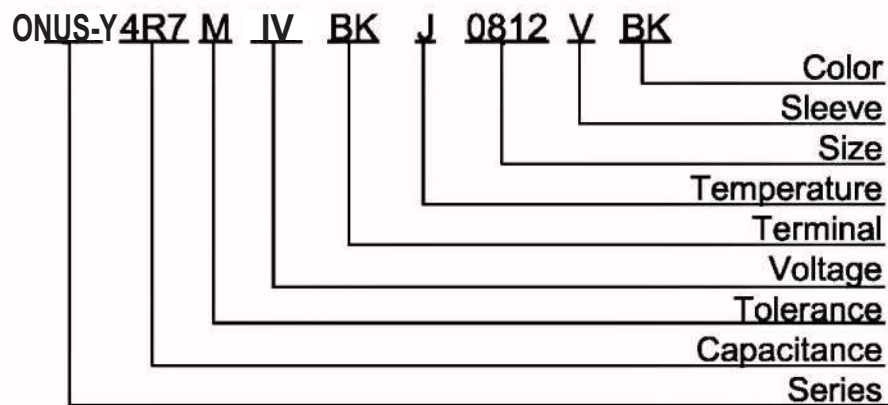
	45	60	70	85	105
	2.10	1.90	1.40	1.25	1.00

● DIMENSIONS(mm)



D Φ	5	6.3	8	10	13	16	18	22
F	2	2.5	3.5	5.0	5.0	7.5	7.5	10
d Φ	0.5		0.6			0.8		

● PART NUMBER SYSTEM



STANDARD RATINGS

WV (vdc)	Cap (uF)	Case size φD X L(mm)	tanδ	Ripple current (mA _{rms} /105°C · 120HZ)
6.3V (0J)	100	5×11	0.24	94
	220	5×11	0.24	140
	330	5×11	0.24	190
	470	6.3×12	0.24	230
	680	6.3×12	0.24	320
	1000	8×12	0.24	380
	2200	10×17	0.26	710
	3300	10×20	0.28	840
	4700	13×21	0.30	1090
	6800	13×25	0.34	1350
10V (1A)	47	5×11	0.20	68
	100	5×11	0.20	100
	220	6.3×12	0.20	170
	330	6.3×12	0.20	200
	470	6.3×12	0.20	250
	680	8×12	0.20	360
	1000	8×12	0.20	460
	2200	10×20	0.22	760
	3300	13×21	0.24	1000
	4700	13×25	0.26	1260
	6800	16×25	0.30	1570
	10000	16×35	0.38	1890
16V (1C)	10	5×11	0.18	34
	47	5×11	0.18	75
	100	5×11	0.18	110
	220	6.3×12	0.18	180
	330	6.3×12	0.18	260
	470	8×12	0.18	310
	680	10×13	0.18	420
	1000	10×17	0.18	560
	1500	10×20	0.18	720
	2200	13×21	0.20	920
	3300	13×25	0.22	1170
	4700	16×25	0.24	1480
6800	16×30	0.28	1780	
25V (1E)	10	5×11	0.14	36
	22	5×11	0.14	54
	33	5×11	0.14	67
	47	5×11	0.14	80
	100	6.3×12	0.14	130
	220	8×12	0.14	230

WV (vdc)	Cap (uF)	Case size φD X L(mm)	tanδ	Ripple current (mA _{rms} /105°C · 120HZ)
25V (1E)	330	8×12	0.14	310
	470	10×13	0.14	380
	680	10×17	0.14	520
	1000	10×20	0.14	680
	2200	13×21	0.16	1090
	3300	16×25	0.18	1400
	4700	16×30	0.20	1710
	6800	18×35	0.24	2040
	35V (1V)	10	5×11	0.12
22		5×11	0.12	61
33		5×11	0.12	75
47		6.3×12	0.12	90
100		8×12	0.12	150
220		10×13	0.12	270
330		10×13	0.12	350
470		10×17	0.12	460
680		10×20	0.12	635
1000		13×21	0.12	810
2200		13×25	0.14	1260
3300		16×30	0.16	1610
4700	16×35	0.18	1910	
50V (1H)	0.10	5×11	0.10	1.3
	0.22	5×11	0.10	2.9
	0.33	5×11	0.10	4.3
	0.47	5×11	0.10	6.2
	1.0	5×11	0.10	13
	2.2	5×11	0.10	20
	3.3	5×11	0.10	25
	4.7	5×11	0.10	30
	10	5×11	0.10	40
	22	5×11	0.10	65
	33	6.3×12	0.10	90
	47	6.3×12	0.10	110
	100	8×12	0.10	180
	220	10×12	0.10	330
	330	10×17	0.10	410
	470	10×20	0.10	530
	1000	13×25	0.10	950
	2200	16×35	0.12	1470
3300	18×35	0.14	1770	
4700	22×50	0.16	2100	

STANDARD RATINGS

WV (vdc)	Cap (uF)	Case size φD X L(mm)	tanδ	Ripple current (mA _{rms} /105°C · 120HZ)
63V (1J)	10	5×11	0.10	46
	22	6.3×12	0.10	71
	33	6.3×12	0.10	100
	47	8×12	0.10	120
	100	10×13	0.10	215
	220	10×17	0.10	335
	330	10×20	0.10	510
	470	13×21	0.10	640
	1000	16×25	0.10	930
	2200	18×35	0.12	1250
100V (1K)	0.10	5×11	0.10	1.5
	0.22	5×11	0.10	3.4
	0.33	5×11	0.10	5.0
	0.47	5×11	0.10	7.1
	1.0	5×11	0.10	15
	2.2	5×11	0.10	21
	3.3	5×11	0.10	29
	4.7	5×11	0.10	62
	10	6.3×12	0.10	54
	22	8×12	0.10	93
	33	8×12	0.10	130
	47	10×13	0.10	165
	100	10×20	0.10	265
	220	13×25	0.10	440
330	16×25	0.10	540	
470	16×30	0.10	715	
1000	18×40	0.10	985	
160V (2C)	2.2	6.3×12	0.14	26
	3.3	6.3×12	0.14	32
	4.7	6.3×12	0.14	38
	10	8×12	0.14	65
	22	10×17	0.14	108
	33	10×20	0.14	165
	47	13×21	0.14	205
	68	13×25	0.14	265
	100	13×25	0.14	318
	220	16×30	0.14	568
330	18×35	0.14	710	
470	18×40	0.14	870	
250V (2E)	1.0	6.3×12	0.14	16
	2.2	6.3×12	0.14	22

WV (vdc)	Cap (uF)	Case size φD X L(mm)	tanδ	Ripple current (mA _{rms} /105°C · 120HZ)
250V (2E)	3.3	8×12	0.14	34
	4.7	8×12	0.14	48
	10	10×17	0.14	84
	22	10×20	0.14	128
	33	13×21	0.14	185
	47	13×25	0.14	245
	100	16×30	0.14	400
	220	18×35	0.14	660
	330	18×40	0.14	730
	400V (2G)	1.0	8×12	0.15
2.2		8×12	0.15	30
3.3		8×12	0.15	35
4.7		8×14	0.15	52
5.6		10×14	0.15	70
6.8		10×14	0.15	82
10		10×17	0.15	98
15		13×18	0.15	150
22		13×21	0.15	192
33		16×20	0.15	258
47		16×25	0.15	305
68		16×30	0.15	465
82		18×25	0.15	474
100		18×30	0.15	532
120		18×35	0.15	588
150	18×40	0.15	668	
450V (2W)	1.0	8×12	0.17	18
	2.2	8×12	0.17	25
	3.3	8×14	0.17	36
	4.7	10×14	0.17	55
	5.6	10×17	0.17	70
	6.8	10×20	0.17	80
	10	10×20	0.17	90
	15	13×21	0.17	125
	22	13×25	0.17	168
	33	16×25	0.17	215
	47	16×30	0.17	344
	68	18×30	0.17	455
	82	18×30	0.17	472
	100	18×35	0.17	530
	120	18×40	0.17	582
150	22×40	0.17	700	

Onus series

- Load life:105°C 8,000 hours.
- 105°C high-temperature resistance,high ripple current and long life.
- Suitable for LED lighting driver and the electronic ballast.
- Rohs Compliance.



●SPECIFICATIONS

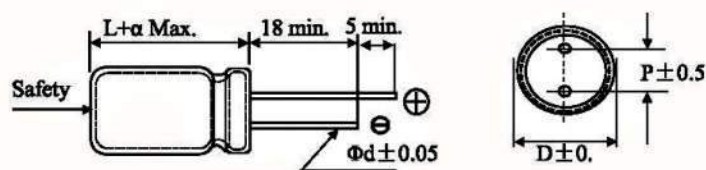
Items	Characteristics									
Capacitance Tolerance	±20%(120Hz, 20°C)									
Operating Temperature Range	-40~+105°C									
Rated Voltage Range	6.3~100V									
Leakage Current	I ≤ 0.01 CV or 3 (uA) (After 2 minutes application of DC working voltage, at 20°C)									
Dissipation Factor (tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C									
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	
	tan δ (MAX)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	
	When nominal capacitance exceeds 1000uF, add 0.02 to the value above for each 1000uF increase. (20°C、120Hz)									
Low Temperature Stability	Measurement Frequency: 120Hz.									
Impedance Ratio (MAX)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	
	Z (-25°C) / Z (20°C)	4	3	3	3	3	3	2	2	
	Z (-40°C) / Z (20°C)	8	6	4	4	3	3	3	3	
Load Life	After application of the rated voltage at 105°C 10000 hours ,the capacitors shall meet the requirement below ,									
	Size		ΦD ≤ 6.3		ΦD = 8,10		ΦD ≥ 13			
	Voltage	6.3~10WV		4000 hours		6000 hours		8000 hours		
		16~100WV		5000 hours		7000 hours		10000 hours		
	Capacitance Change			Within ± 25% of Initial Value						
	tan δ			200% or less of Initial Specified Value						
Leakage Current			Initial Specified Value or less							
Shelf Life(105°C)	1000hours, no voltage applied, at 105°C . After Test: U _R to be applied for 30 minutes, 24 to 48 hours before measurement.									
	Capacitance Change			Within ± 20% of Initial Value						
	tan δ			200% or less of Initial Specified Value						
	Leakage Current			Initial Specified Value or less						

●Frequency Coefficient for Permissible Ripple Current

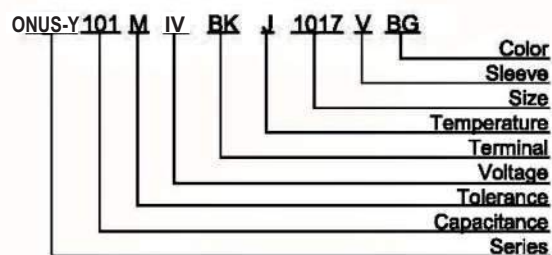
Capacitance(uF)	Frequency(Hz)				
	50	120	300	1K	100K
≤ 33	0.5	0.55	0.7	0.90	1.00
47~330	0.60	0.70	0.85	0.95	1.00
470~1000	0.65	0.75	0.90	0.98	1.00
1200~18000	0.70	0.80	0.95	1.00	1.00

Onus series

● DIMENSIONS(mm)



● PART NUMBER SYSTEM



ΦD	5	6.3	8	10	13	16	18	α	(L<16)1.0
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5		(L≥16)2.0
Φd	0.5	0.5	0.5	0.6	0.6	0.8	0.8		

● STANDARD RATINGS

D×L(mm); R.C.: (mA rms)at 105°C,100KHz; IMP: (Ω max) at 20°C, -10°C 100KHz.

Cap (uF)	WV(V) (Code)	6.3 (8)				10 (13)				
		Item	D×L	IMP		R.C.	D×L	IMP		R.C.
				20°C	-10°C			20°C	-10°C	
100						5×11	0.580	2.300	215	
150		5×11	0.570	2.300	210	5×11	0.580	2.300	230	
220		6.3×12	0.250	0.900	320	6.3×12	0.220	0.870	340	
330		6.3×12	0.210	0.870	340	6.3×12	0.220	0.870	380	
470		8×12	0.150	0.580	345	8×12	0.130	0.520	640	
680		8×12	0.130	0.520	645	8×16	0.086	0.350	845	
	10×13					0.080	0.320	865		
820		10×13	0.080	0.320	865	10×17	0.070	0.280	1015	
1000		8×16	0.085	0.350	870	8×20	0.068	0.270	1050	
	10×17					0.060	0.240	1215		
1200		8×20	0.071	0.260	1050	10×20	0.045	0.180	1410	
	10×17	0.062	0.240	1215						
1500		10×20	0.045	0.180	1410	10×25	0.041	0.170	1610	
	13×17					0.049	0.160	1450		
1800		13×17	0.048	0.160	1460	13×21	0.039	0.150	1710	
2200		10×25	0.042	0.170	1650	10×30	0.030	0.120	1920	
	13×21					0.035	0.120	1910		
	16×15					0.042	0.120	1900		
2700		10×30	0.030	0.120	1900	18×15	0.042	0.110	2220	
	16×15	0.041	0.120	1945						
3300		13×21	0.034	0.120	1900	13×25	0.026	0.089	2230	
3900		13×25	0.026	0.088	2240	13×30	0.023	0.078	2660	
	18×15	0.042	0.110	2210	16×22	0.026	0.078	2540		
4700		13×30	0.023	0.078	2650	13×35	0.020	0.065	2890	
5600		13×35	0.020	0.065	2890	13×40	0.016	0.055	3360	
	16X22	0.026	0.077	2540	16×26	0.020	0.060	2940		
					18×20	0.025	0.066	2870		
6800		13×40	0.016	0.055	3350	16×32	0.016	0.050	3460	
	16×26	0.020	0.060	2940						
	18×20	0.025	0.066	2870	18×25					0.018
8200		16×32	0.016	0.050	3450	16×36	0.015	0.044	3610	
	18×32					0.015	0.040	4180		
10000		16×36	0.014	0.044	3620	16×40	0.013	0.038	4090	
	18×25	0.018	0.049	3150	18×35	0.012	0.038	4150		

Onus series

● **STANDARD RATINGS** D×L(mm); R.C.: (mA rms) at 105°C, 100KHz; IMP: (Ω max) at 20°C, -10°C 100KHz.

Cap (μ F)	WV(V) (Code)	16 (20)				25 (32)			
		D×L	IMP		R.C.	D×L	IMP		R.C.
			20°C	-10°C			20°C	-10°C	
47						5×11	0.570	2.300	200
56		5×11	0.570	2.300	220	5×11	0.570	2.300	240
100		6.3×12	0.210	0.820	310	6.3×12	0.210	0.870	340
120		6.3×12	0.210	0.870	340				
220		8×12	0.190	0.850	510	8×12	0.120	0.520	650
330		8×12	0.120	0.520	650	8×16	0.087	0.350	850
	10×13					0.081	0.320	870	
470		8×16	0.086	0.350	840	8×20	0.070	0.270	1050
		10×13	0.080	0.320	865	10×17	0.060	0.240	1210
680		8×20	0.069	0.270	1060	10×20	0.045	0.180	1410
		10×17	0.060	0.240	1210	13×17	0.049	0.160	1460
820		10×20	0.052	0.220	1310	10×25	0.041	0.170	1660
1000		10×20	0.045	0.180	1410	10×30	0.030	0.120	1920
		13×17	0.050	0.160	1450	13×21	0.034	0.120	1910
						16×15	0.042	0.120	1940
1200		10×25	0.043	0.170	1650	18×15	0.043	0.110	2220
1500		10×30	0.030	0.120	1920	13×25	0.026	0.089	2240
		13×21	0.035	0.120	1910				
		16×15	0.042	0.120	1940				
1800		13×25	0.028	0.095	2140	13×30	0.024	0.078	2660
						16×22	0.026	0.078	2540
2200		13×25	0.026	0.089	2240	13×35	0.020	0.065	2890
		18×15	0.042	0.110	2220	18×20	0.025	0.066	2870
2700		13×30	0.023	0.077	2650	13×40	0.016	0.056	3360
		16×22	0.026	0.078	2540	16×26	0.021	0.060	2940
3300		13×35	0.020	0.066	2890	16×32	0.016	0.050	3460
						18×25	0.018	0.048	3150
3900		13×40	0.016	0.056	3350	18×25	0.014	0.043	3620
		16×26	0.021	0.060	2930				
		16×22	0.025	0.067	2860				
4700		16×32	0.016	0.050	3450	16×40	0.012	0.038	4090
		18×25	0.018	0.049	3150	18×35	0.013	0.038	4230
5600		16×35	0.015	0.044	3620	18×35	0.011	0.032	4290
		18×32	0.015	0.040	4180				
6800		16×40	0.012	0.038	4080				
8200		18×35	0.014	0.038	4230				
10000		18×40	0.011	0.032	4290				

Onus series

●STANDARD RATINGS

D×L(mm); R.C.: (mA rms) at 105°C, 100KHz; IMP: (Ω max) at 20°C, -10°C 100KHz.

Cap (μ F)	WV(V) (Code)	35 (44)				50 (63)			
		D×L	IMP		R.C	D×L	IMP		R.C.
			20°C	-10°C			20°C	-10°C	
22					5×11	0.700	2.800	180	
33		5×11	0.560	2.300	220				
47		6.3×12	0.350	1.400	280	6.3×12	0.380	1.500	220
56		6.3×12	0.210	0.860	340	6.3×12	0.300	1.200	300
100		8×12	0.150	0.560	510	8×12	0.160	0.670	560
120						8×16	0.120	0.480	740
150		8×12	0.130	0.520	650	10×13	0.120	0.480	770
180						8×20	0.090	0.360	920
220		8×16	0.086	0.350	850	10×17	0.083	0.340	1050
		10×13	0.080	0.320	865				
270		8×20	0.070	0.260	1060	10×20	0.060	0.240	1230
						13×17	0.062	0.200	1250
330		10×17	0.060	0.240	1210	10×25	0.053	0.220	1450
470		10×20	0.045	0.180	1410	10×30	0.043	0.170	1695
		13×17	0.048	0.150	1460	13×21	0.044	0.150	1670
						16×15	0.054	0.170	1695
560		10×25	0.041	0.160	1650	13×25	0.033	0.110	1950
						18×15	0.053	0.150	1940
680		10×30	0.030	0.120	1920	13×30	0.030	0.100	2320
		13×21	0.033	0.132	1910				
		16×15	0.041	0.143	1950				
820						13×35	0.023	0.081	2520
						16×22	0.033	0.100	2220
1000		13×25	0.028	0.088	2230	13×40	0.020	0.069	2930
		18×15	0.040	0.110	2220	16×26	0.025	0.075	2555
						18×20	0.036	0.097	2490
1200		13×30	0.023	0.078	2660	16×32	0.021	0.066	3020
		16×22	0.026	0.078	2530	18×25	0.025	0.070	2750
1500		13×35	0.020	0.065	2880	16×36	0.018	0.056	3150
1800		13×40	0.016	0.056	3350	16×40	0.016	0.048	3720
		16×26	0.020	0.060	2940				
		18×20	0.025	0.066	2870	18×32	0.021	0.057	3640
2200		16×32	0.016	0.050	3500	18×35	0.017	0.046	3690
		18×25	0.019	0.049	3140				
2700		16×36	0.015	0.044	3620	18×40	0.014	0.038	3810
		18×32	0.014	0.040	4180				
3300		16×40	0.013	0.038	4090				
		18×35	0.014	0.038	4230				
3900		18×40	0.012	0.033	4290				

Onus series

● **STANDARD RATINGS** D×L(mm); R.C.: (mA rms) at 105°C, 100KHz; IMP: (Ωmax) at 20°C, -10°C 100KHz.

Cap (uF)	WV(V) (Code)	63 (1J)				100 (2A)			
		D×L	IMP		R.C.	D×L	IMP		R.C.
			20°C	-10°C			20°C	-10°C	
6.8						5×11	2.200	9.200	56
15		5×11	2.200	9.200	56	6.3×12	1.200	5.000	120
27						8×12	0.620	2.800	235
33		6.3×12	1.200	5.000	120				
39						8×16	0.450	2.100	310
47		8×12	0.680	3.100	190	10×13	0.430	1.800	290
56		8×12	0.620	2.800	235	8×20	0.320	1.600	365
68						10×17	0.300	1.500	358
82		8×16	0.450	2.100	310	10×20	0.210	0.940	470
		10×13	0.430	1.800	300	13×17	0.230	1.100	468
100		10×17	0.350	1.800	320	10×25	0.200	0.840	536
120		8×20	0.330	1.600	362	10×30	0.150	0.710	666
		10×17	0.300	1.500	357	13×21	0.160	0.640	690
150						16×15	0.140	0.660	795
180		10×20	0.200	0.940	470	13×25	0.120	0.450	790
		13×17	0.230	1.100	465	18×15	0.120	0.500	930
220		10×25	0.200	0.840	531	13×30	0.100	0.420	905
						16×22	0.090	0.370	1050
270		10×30	0.150	0.700	663	13×35	0.082	0.350	1060
		13×21	0.160	0.640	690				
		16×15	0.130	0.650	795				
330		13×25	0.120	0.450	790	13×40	0.070	0.300	1190
						18×20	0.080	0.300	1250
390		18×15	0.120	0.500	920	16×32	0.053	0.200	1570
						18×25	0.056	0.210	1490
470		13×30	0.100	0.420	910	16×36	0.045	0.170	1790
		16×22	0.090	0.380	1040	18×32	0.047	0.170	1640
560		13×35	0.082	0.350	1050	16×40	0.040	0.150	2030
		16×26	0.073	0.270	1250				
680		13×40	0.070	0.300	1190	18×35	0.040	0.150	1790
		18×20	0.080	0.300	1240				
820		16×32	0.053	0.200	1580	18×40	0.036	0.130	2340
		18×25	0.057	0.210	1490				
1000		16×36	0.045	0.170	1790				
		18×32	0.047	0.170	1640				
1200		16×40	0.039	0.150	2020				
		18×35	0.040	0.150	1790				
1500		18×40	0.035	0.130	2340				



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