

Snap-in Type

Discontinued

Series: U Type : TS



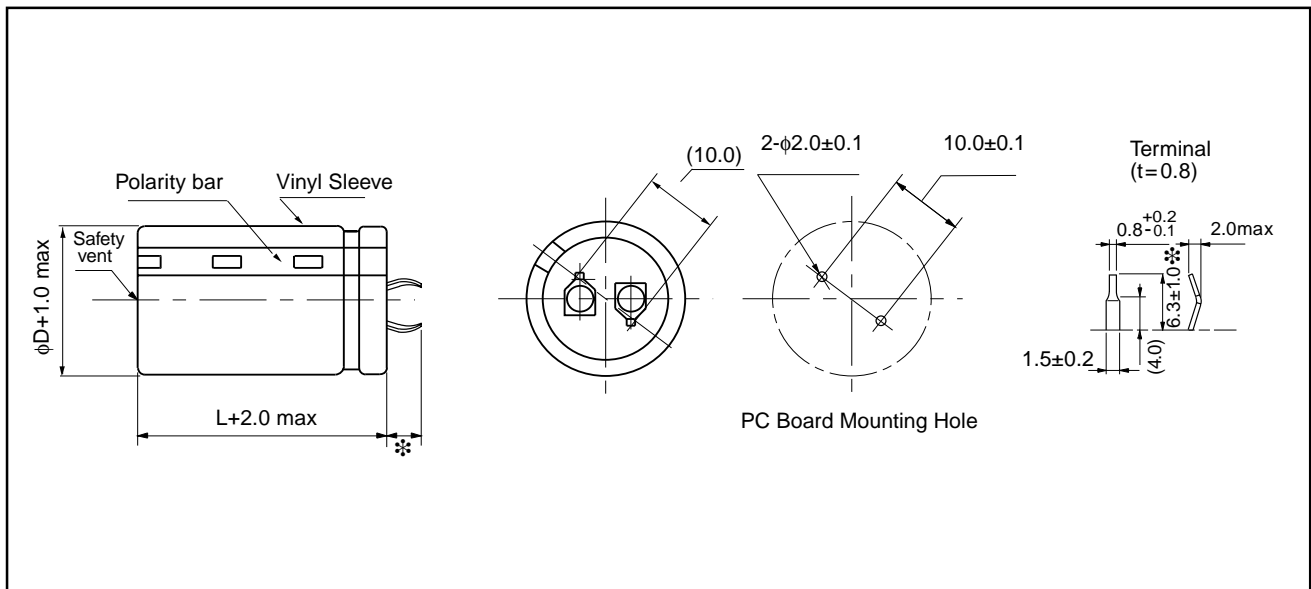
■ Features Endurance :85°C 2000 h

■ Specifications

Operating temp. range	-40 to +85°C	-25 to +85°C																													
Rated W.V. range	16 to 250 V .DC	315 to 450 V .DC																													
Nominal cap. range	120 to 33000 μF	33 to 330 μF																													
Capacitance tol.	±20 % (120Hz/+20°C)																														
DC leakage current	0.01CV(μA)(after 5min.) max. $C \times V \leq 100000 \mu F \times V (\leq 100V.DC)$ $3\sqrt[3]{CV}$ (μA)(after 5min.) max. $C \times V > 100000 \mu F \times V (\leq 100V.DC)$ 160 ~ 250V.DC	$3\sqrt[3]{CV}$ (μA)(after 5min) max. C : Capacitance (μF), V : W.V.(V.DC)																													
tan δ (120Hz / +20°C)	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">W.V.(V)</td> <td style="padding: 2px;">16</td> <td style="padding: 2px;">25</td> <td style="padding: 2px;">35</td> <td style="padding: 2px;">50, 63</td> <td style="padding: 2px;">80 ~ 450</td> </tr> <tr> <td style="padding: 2px;">tan δ</td> <td style="padding: 2px;">0.35</td> <td style="padding: 2px;">0.30</td> <td style="padding: 2px;">0.25</td> <td style="padding: 2px;">0.20</td> <td style="padding: 2px;">0.15</td> </tr> </table>	W.V.(V)	16	25	35	50, 63	80 ~ 450	tan δ	0.35	0.30	0.25	0.20	0.15	(max.)																	
	W.V.(V)	16	25	35	50, 63	80 ~ 450																									
tan δ	0.35	0.30	0.25	0.20	0.15																										
Frequency Correction Factor for ripple current	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Frequency (Hz)</td> <td style="padding: 2px;">50</td> <td style="padding: 2px;">60</td> <td style="padding: 2px;">100</td> <td style="padding: 2px;">120</td> <td style="padding: 2px;">500</td> <td style="padding: 2px;">1k</td> <td style="padding: 2px;">10k to 50k</td> </tr> <tr> <td style="padding: 2px;">C.F.</td> <td style="padding: 2px;">16 to 100V</td> <td style="padding: 2px;">0.93</td> <td style="padding: 2px;">0.95</td> <td style="padding: 2px;">0.99</td> <td style="padding: 2px;">1.00</td> <td style="padding: 2px;">1.05</td> <td style="padding: 2px;">1.08</td> </tr> <tr> <td></td> <td style="padding: 2px;">160 to 450V</td> <td style="padding: 2px;">0.75</td> <td style="padding: 2px;">0.80</td> <td style="padding: 2px;">0.95</td> <td style="padding: 2px;">1.00</td> <td style="padding: 2px;">1.20</td> <td style="padding: 2px;">1.25</td> </tr> </table>					Frequency (Hz)	50	60	100	120	500	1k	10k to 50k	C.F.	16 to 100V	0.93	0.95	0.99	1.00	1.05	1.08		160 to 450V	0.75	0.80	0.95	1.00	1.20	1.25	1.15	1.40
Frequency (Hz)	50	60	100	120	500	1k	10k to 50k																								
C.F.	16 to 100V	0.93	0.95	0.99	1.00	1.05	1.08																								
	160 to 450V	0.75	0.80	0.95	1.00	1.20	1.25																								
Load life	After 2000hrs. application of DC rated working voltage with full rated ripple current at +85°C, the capacitor shall meet the following limits.																														
	Capacitance change	≤ ±20% of the initial measured value																													
	tan δ	≤ 150% of the initial specified value																													
	DC leakage current	≤ the initial specified value																													
Shelf life	After storage for 1000hrs. at +85°C with no voltage application, the capacitor shall meet the limits for load life.																														
Anti-solvent	Parts with rated voltage of 16 to 100V can withstand capacitor dipping (ultrasonic) and steam cleaning of printed circuit boards with Freon TE, Freon TES, Freon TP-35, or the equivalent if the cleanser temperature is 40°C or lower and the cleaning time is within 5 minutes.																														

■ Dimensions

(mm)



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■ Standard Products

W.V. (V)	Cap. (±20%) (μF)	Case size		Specification		Part No.
		Dia. (mm)	Length (mm)	Ripple current (120Hz) (+85°C) (A)	tan.δ (120Hz) (+20°C)	
16	4700	22	25	1.60	0.35	ECES1CU472D
	6800	22	31.5	1.80	0.35	ECES1CU682E
		25	25	1.80	0.35	ECES1CU682J
	10000	22	40	2.40	0.35	ECES1CU103G
		25	31.5	2.40	0.35	ECES1CU103K
		30	25	2.40	0.35	ECES1CU103Q
	15000	22	50	3.20	0.35	ECES1CU153H
		25	40	3.20	0.35	ECES1CU153M
		30	31.5	3.20	0.35	ECES1CU153R
	22000	25	50	3.60	0.35	ECES1CU223N
		30	40	3.60	0.35	ECES1CU223T
		35	31.5	3.60	0.35	ECES1CU223X
33000	30	50	4.40	0.35	ECES1CU333U	
	35	40	4.40	0.35	ECES1CU333Y	
25	3300	22	25	1.60	0.30	ECES1EU332D
	4700	22	31.5	1.80	0.30	ECES1EU472E
		25	25	1.80	0.30	ECES1EU472J
	6800	22	40	2.30	0.30	ECES1EU682G
		25	31.5	2.30	0.30	ECES1EU682K
		30	25	2.30	0.30	ECES1EU682Q
	10000	22	50	2.70	0.30	ECES1EU103H
		25	40	2.70	0.30	ECES1EU103M
		30	31.5	2.70	0.30	ECES1EU103R
	15000	25	50	3.40	0.30	ECES1EU153N
		30	40	3.40	0.30	ECES1EU153T
		35	31.5	3.40	0.30	ECES1EU153X
22000	30	50	4.20	0.30	ECES1EU223U	
	35	40	4.20	0.30	ECES1EU223Y	
35	2200	22	25	1.40	0.25	ECES1VU222D
	3300	22	31.5	1.70	0.25	ECES1VU332E
		25	25	1.70	0.25	ECES1VU332J
	4700	22	40	2.00	0.25	ECES1VU472G
		25	31.5	2.00	0.25	ECES1VU472K
		30	25	2.00	0.25	ECES1VU472Q
	6800	22	50	2.40	0.25	ECES1VU682H
		25	40	2.40	0.25	ECES1VU682M
		30	31.5	2.40	0.25	ECES1VU682R
	10000	25	50	3.00	0.25	ECES1VU103N
		30	40	3.00	0.25	ECES1VU103T
		35	31.5	3.00	0.25	ECES1VU103X
15000	30	50	3.70	0.25	ECES1VU153U	
	35	40	3.70	0.25	ECES1VU153Y	

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W.V. (V)	Cap. (±20%) (μF)	Case size		Specification		Part No.	
		Dia. (mm)	Length (mm)	Ripple current (120Hz) (+85°C) (A)	tan.δ (120Hz) (+20°C)		
50	1500	22	25	1.20	0.20	ECES1HU152D	
		22	31.5	1.40	0.20	ECES1HU222E	
	2200	25	25	1.40	0.20	ECES1HU222J	
		22	40	1.70	0.20	ECES1HU332G	
		25	31.5	1.70	0.20	ECES1HU332K	
	3300	30	25	1.70	0.20	ECES1HU332Q	
		4700	22	50	2.10	0.20	ECES1HU472H
			25	40	2.10	0.20	ECES1HU472M
	30		31.5	2.10	0.20	ECES1HU472R	
	6800	25	50	2.60	0.20	ECES1HU682N	
		30	40	2.60	0.20	ECES1HU682T	
		35	31.5	2.60	0.20	ECES1HU682X	
10000	30	50	3.40	0.20	ECES1HU103U		
	35	40	3.40	0.20	ECES1HU103Y		
63	1000	22	25	1.20	0.20	ECES1JU102D	
		22	31.5	1.30	0.20	ECES1JU152E	
	1500	25	25	1.30	0.20	ECES1JU152J	
		22	40	1.50	0.20	ECES1JU222G	
		25	31.5	1.50	0.20	ECES1JU222K	
	2200	30	25	1.50	0.20	ECES1JU222Q	
		3300	22	50	1.90	0.20	ECES1JU332H
			25	40	1.90	0.20	ECES1JU332M
	30		31.5	1.90	0.20	ECES1JU332R	
	4700	25	50	2.30	0.20	ECES1JU472N	
		30	40	2.30	0.20	ECES1JU472T	
		35	31.5	2.30	0.20	ECES1JU472X	
	6800	30	50	3.00	0.20	ECES1JU682U	
		35	40	3.00	0.20	ECES1JU682Y	
	80	680	22	25	1.00	0.15	ECES1JU681D
22			31.5	1.20	0.15	ECES1JU102E	
1000		25	25	1.20	0.15	ECES1JU102J	
		1500	22	40	1.40	0.15	ECES1JU152G
			25	31.5	1.40	0.15	ECES1JU152K
30			25	1.40	0.15	ECES1JU152Q	
2200		22	50	1.70	0.15	ECES1JU222H	
		25	40	1.70	0.15	ECES1JU222M	
		30	31.5	1.70	0.15	ECES1JU222R	
3300		25	50	2.10	0.15	ECES1JU332N	
		30	40	2.10	0.15	ECES1JU332T	
		35	31.5	2.10	0.15	ECES1JU332X	
4700		30	50	2.60	0.15	ECES1JU472U	
		35	40	2.60	0.15	ECES1JU472Y	

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W.V. (V)	Cap. (±20%) (μF)	Case size		Specification		Part No.
		Dia. (mm)	Length (mm)	Ripple current (120Hz) (+85°C) (A)	tan.δ (120Hz) (+20°C)	
100	470	22	25	1.00	0.15	ECES2AU471D
	680	22	31.5	1.10	0.15	ECES2AU681E
		25	25	1.10	0.15	ECES2AU681J
	1000	22	40	1.20	0.15	ECES2AU102G
		25	31.5	1.20	0.15	ECES2AU102K
		30	25	1.20	0.15	ECES2AU102Q
	1500	22	50	1.50	0.15	ECES2AU152H
		25	40	1.50	0.15	ECES2AU152M
		30	31.5	1.50	0.15	ECES2AU152R
	2200	25	50	1.80	0.15	ECES2AU222N
		30	40	1.80	0.15	ECES2AU222T
		35	31.5	1.80	0.15	ECES2AU222X
3300	30	50	2.40	0.15	ECES2AU332U	
	35	40	2.40	0.15	ECES2AU332Y	
160	180	22	25	0.65	0.15	ECES2CU181D
	270	22	31.5	0.87	0.15	ECES2CU271E
		25	25	0.87	0.15	ECES2CU271J
	390	22	40	1.10	0.15	ECES2CU391G
		25	31.5	1.10	0.15	ECES2CU391K
		30	25	1.10	0.15	ECES2CU391Q
	560	22	50	1.30	0.15	ECES2CU561H
		25	40	1.30	0.15	ECES2CU561M
		30	31.5	1.30	0.15	ECES2CU561R
	820	25	50	1.50	0.15	ECES2CU821N
		30	40	1.50	0.15	ECES2CU821T
		35	31.5	1.50	0.15	ECES2CU821X
1200	30	50	1.80	0.15	ECES2CU122U	
	35	40	1.80	0.15	ECES2CU122Y	
200	150	22	25	0.65	0.15	ECES2DU151D
	220	22	31.5	0.87	0.15	ECES2DU221E
		25	25	0.87	0.15	ECES2DU221J
	330	22	35	1.10	0.15	ECES2DU331F
		25	31.5	1.10	0.15	ECES2DU331K
		30	25	1.10	0.15	ECES2DU331Q
	390	22	40	1.20	0.15	ECES2DU391G
		25	35	1.20	0.15	ECES2DU391L
	470	22	50	1.30	0.15	ECES2DU471H
		25	40	1.30	0.15	ECES2DU471M
		30	31.5	1.30	0.15	ECES2DU471R
		35	25	1.30	0.15	ECES2DU471W
	680	25	50	1.50	0.15	ECES2DU681N
		30	40	1.50	0.15	ECES2DU681T
		35	31.5	1.50	0.15	ECES2DU681X
	820	25	50	1.65	0.15	ECES2DU821N
		35	35	1.65	0.15	ECES2DU821V

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W.V. (V)	Cap. (±20%) (μF)	Case size		Specification		Part No.	
		Dia. (mm)	Length (mm)	Ripple current (120Hz) (+85°C) (A)	tan.δ (120Hz) (+20°C)		
200	1000	30	50	1.80	0.15	ECES2DU102U	
		35	40	1.80	0.15	ECES2DU102Y	
250	120	22	25	0.45	0.15	ECES2EU121D	
		25	25	0.65	0.15	ECES2EU151E	
	150	22	31.5	0.65	0.15	ECES2EU151E	
		25	25	0.65	0.15	ECES2EU151J	
		30	25	0.87	0.15	ECES2EU221F	
	180	22	31.5	0.71	0.15	ECES2EU181E	
		220	22	35	0.87	0.15	ECES2EU221F
			25	31.5	0.87	0.15	ECES2EU221K
	270	220	30	25	0.87	0.15	ECES2EU221Q
			22	40	0.96	0.15	ECES2EU271G
			25	35	0.96	0.15	ECES2EU271L
	330	270	30	25	0.96	0.15	ECES2EU271Q
			22	50	1.10	0.15	ECES2EU331H
			25	40	1.10	0.15	ECES2EU331M
			30	31.5	1.10	0.15	ECES2EU331R
	390	330	35	25	1.10	0.15	ECES2EU331W
			22	50	1.20	0.15	ECES2EU391H
			25	40	1.20	0.15	ECES2EU391M
			470	25	50	1.30	0.15
	30	35		1.30	0.15	ECES2EU471S	
35	31.5	1.30		0.15	ECES2EU471X		
560	470	25	50	1.42	0.15	ECES2EU561N	
		30	40	1.42	0.15	ECES2EU561T	
680	560	30	50	1.50	0.15	ECES2EU681U	
		35	40	1.50	0.15	ECES2EU681Y	
820	680	30	50	1.65	0.15	ECES2EU821U	
350	56	22	25	0.25	0.15	ECES2VU560D	
		22	25	0.28	0.15	ECES2VU680D	
	68	22	25	0.28	0.15	ECES2VU680D	
		22	31.5	0.35	0.15	ECES2VU820E	
	82	25	25	0.35	0.15	ECES2VU820J	
		22	31.5	0.39	0.15	ECES2VU101E	
	100	220	22	35	0.47	0.15	ECES2VU121F
			25	31.5	0.47	0.15	ECES2VU121K
			30	25	0.47	0.15	ECES2VU121Q
	120	220	22	35	0.47	0.15	ECES2VU121F
			25	31.5	0.47	0.15	ECES2VU121K
			30	25	0.47	0.15	ECES2VU121Q
	150	220	22	40	0.50	0.15	ECES2VU151G
			25	35	0.50	0.15	ECES2VU151L
			30	25	0.50	0.15	ECES2VU151Q
	180	220	22	40	0.50	0.15	ECES2VU151G
			25	35	0.50	0.15	ECES2VU151L
	180	220	25	40	0.60	0.15	ECES2VU181M
			30	31.5	0.60	0.15	ECES2VU181R
	220	220	22	50	0.66	0.15	ECES2VU221H
25			50	0.66	0.15	ECES2VU221N	
30			35	0.66	0.15	ECES2VU221S	
35			25	0.66	0.15	ECES2VU221W	
270	220	25	50	0.75	0.15	ECES2VU271N	
		30	40	0.75	0.15	ECES2VU271T	

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		Dia. (mm)	Length (mm)	Ripple current (120Hz) (+85°C) (A)	tan.δ (120Hz) (+20°C)	
200	1000	30	50	1.80	0.15	ECES2DU102U
		35	40	1.80	0.15	ECES2DU102Y
250	120	22	25	0.45	0.15	ECES2EU121D
		22	31.5	0.65	0.15	ECES2EU151E
	150	25	25	0.65	0.15	ECES2EU151J
		22	31.5	0.71	0.15	ECES2EU181E
		220	22	35	0.87	0.15
	25		31.5	0.87	0.15	ECES2EU221K
	30		25	0.87	0.15	ECES2EU221Q
	270	22	40	0.96	0.15	ECES2EU271G
		25	35	0.96	0.15	ECES2EU271L
		30	25	0.96	0.15	ECES2EU271Q
	330	22	50	1.10	0.15	ECES2EU331H
		25	40	1.10	0.15	ECES2EU331M
		30	31.5	1.10	0.15	ECES2EU331R
		35	25	1.10	0.15	ECES2EU331W
	390	22	50	1.20	0.15	ECES2EU391H
		25	40	1.20	0.15	ECES2EU391M
	470	25	50	1.30	0.15	ECES2EU471N
		30	35	1.30	0.15	ECES2EU471S
		35	31.5	1.30	0.15	ECES2EU471X
	560	25	50	1.42	0.15	ECES2EU561N
30		40	1.42	0.15	ECES2EU561T	
680	30	50	1.50	0.15	ECES2EU681U	
	35	40	1.50	0.15	ECES2EU681Y	
820	30	50	1.65	0.15	ECES2EU821U	
350	56	22	25	0.25	0.15	ECES2VU560D
	68	22	25	0.28	0.15	ECES2VU680D
	82	22	31.5	0.35	0.15	ECES2VU820E
		25	25	0.35	0.15	ECES2VU820J
	100	22	31.5	0.39	0.15	ECES2VU101E
	120	22	35	0.47	0.15	ECES2VU121F
		25	31.5	0.47	0.15	ECES2VU121K
		30	25	0.47	0.15	ECES2VU121Q
	150	22	40	0.50	0.15	ECES2VU151G
		25	35	0.50	0.15	ECES2VU151L
		30	25	0.50	0.15	ECES2VU151Q
	180	25	40	0.60	0.15	ECES2VU181M
		30	31.5	0.60	0.15	ECES2VU181R
	220	22	50	0.66	0.15	ECES2VU221H
		25	50	0.66	0.15	ECES2VU221N
		30	35	0.66	0.15	ECES2VU221S
		35	25	0.66	0.15	ECES2VU221W
270	25	50	0.75	0.15	ECES2VU271N	
	30	40	0.75	0.15	ECES2VU271T	

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W.V. (V)	Cap. (±20%) (μF)	Case size		Specification		Part No.
		Dia. (mm)	Length (mm)	Ripple current (120Hz) (+85°C) (A)	tan.δ (120Hz) (+20°C)	
450	150	30	35	0.70	0.15	ECES2WU151S
		35	25	0.70	0.15	ECES2WU151W
	180	25	50	0.77	0.15	ECES2WU181N
		30	40	0.77	0.15	ECES2WU181T
		35	31.5	0.77	0.15	ECES2WU181X
	220	30	50	0.92	0.15	ECES2WU221U
		35	35	0.92	0.15	ECES2WU221V
	270	30	50	1.02	0.15	ECES2WU271U
		35	40	1.02	0.15	ECES2WU271Y

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