

TUK/TSK Series

Key Features

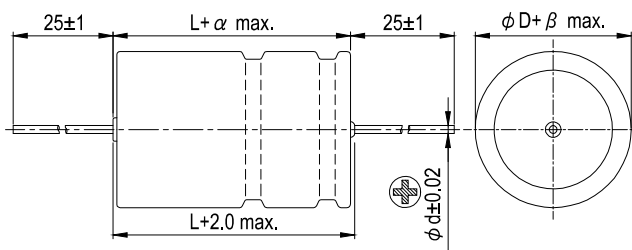
- High vibration resistance
- High ripple current capability
- Low ESR
- Useful life 5,000 hours at 125°C
- Shelf life up to 15 years at a storage temperature of 30°C
- RoHS compliance

Specifications

Rated Voltage V_R	25 ~ 100 V _{DC}	
Surge Voltage V_S	1.15 · V_R	
Rated Capacitance C_R	220 ~ 10,000 μ F at 100 Hz, 20°C	
Capacitance Tolerance	-10% ~ +30%	
Leakage Current I_{leak} (at 20°C)	$I_{leak} \leq 0.006\mu A \cdot CV + 4\mu A$ C = Rated capacitance in μ F, V = Rated DC working voltage in V After 5 minutes	
Useful Life 125°C: $V_R, I_{AC,R}$ 140°C: $V_R, 0.6 \cdot I_{AC,R}$	5,000 Hrs 2,000 Hrs	Requirements: Cap.: Within $\pm 30\%$ of initial value ESR: Within 300% of specified value I_{leak} : Within initial specified limit
Voltage Endurance Test 125°C: V_R	2,000 Hrs	Requirements: Cap.: Within $\pm 10\%$ of initial value ESR: Within 130% of specified value I_{leak} : Within initial specified limit
Vibration Resistance	The wires of the Axial-Lead capacitor should be mounted at a distance of (6 \pm 1) mm from its body, which is additionally clamped. Soldering star capacitors should be mounted in a upright position and its terminals should be firmly soldered to the PCB and body additionally clamped. Vibration test according to IEC 60068-2-6, test Fc: Frequency range 10 Hz ~ 2 KHz, max. displacement amplitude 1.5 mm, max. acceleration 20 g, in total 6 hours(3*2 hours).	
Detail Specification Sectional Specification	Similar to CECC 30301-802 IEC 60384-4	

Product Dimensions

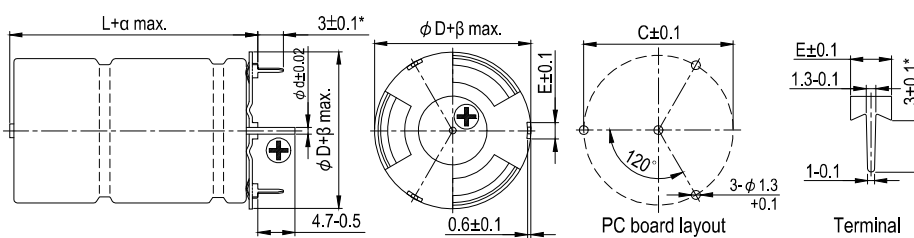
TUK Series



Unit: mm

ϕD	16	18	21
ϕd	1.0		
α	0.5		
β	0.5		

TSK Series



Unit: mm

ϕD	16	18	21
C	16.5	18.5	21.5
E	3.1		3.6
ϕd	1.0		
α	2.5		
β	1.2		



Characteristics and Permissible Ripple Current

Working Voltage (V _{DC})	Capacitance 100 Hz, 20°C (μF)	φ D×L (mm)	ESR _{max} 100 Hz, 20°C (Ω)	ESR _{max} 10k Hz, 20°C (Ω)	Imp. _{max} 100k Hz, 20°C (Ω)	I _{AC, R} 10k Hz, 125°C (A _{rms})	I _{AC, R} 10k Hz, 140°C (A _{rms})	Axial-lead Part Number	Soldering star Part Number
25	2,400	18 × 25	0.078	0.055	0.054	3.6	2.2	TUK242Q1EAL-1825	TSK242Q1ESS-1825
	2,500	16 × 30	0.084	0.061	0.059	3.2	1.9	TUK252Q1EAL-1630	TSK252Q1ESS-1630
	3,300	18 × 30	0.058	0.041	0.040	4.5	2.7	TUK332Q1EAL-1830	TSK332Q1ESS-1830
	3,600	16 × 39	0.059	0.043	0.042	4.3	2.6	TUK362Q1EAL-1639	TSK362Q1ESS-1639
	4,700	18 × 39	0.041	0.029	0.029	6.0	3.6	TUK472Q1EAL-1839	TSK472Q1ESS-1839
	7,200	21 × 39	0.030	0.022	0.022	6.8	4.1	TUK722Q1EAL-2139	TSK722Q1ESS-2139
	10,000	21 × 49	0.023	0.017	0.016	8.6	5.2	TUK103Q1EAL-2149	TSK103Q1ESS-2149
40	1,400	16 × 30	0.096	0.060	0.058	3.2	1.9	TUK142Q1GAL-1630	TSK142Q1GSS-1630
	1,800	16 × 35	0.076	0.048	0.046	3.8	2.3	TUK182Q1GAL-1635	TSK182Q1GSS-1635
	1,800	18 × 30	0.068	0.041	0.040	4.5	2.7	TUK182Q1GAL-1830	TSK182Q1GSS-1830
	2,000	16 × 39	0.068	0.043	0.041	4.3	2.6	TUK202Q1GAL-1639	TSK202Q1GSS-1639
	2,600	18 × 39	0.048	0.029	0.028	6.0	3.6	TUK262Q1GAL-1839	TSK262Q1GSS-1839
	3,900	21 × 39	0.035	0.022	0.022	6.8	4.1	TUK392Q1GAL-2139	TSK392Q1GSS-2139
	5,100	21 × 49	0.027	0.017	0.017	8.6	5.2	TUK512Q1GAL-2149	TSK512Q1GSS-2149
63	620	16 × 25	0.158	0.088	0.082	2.5	1.5	TUK621Q1JAL-1625	TSK621Q1JSS-1625
	750	18 × 25	0.120	0.058	0.056	3.5	2.1	TUK751Q1JAL-1825	TSK751Q1JSS-1825
	820	16 × 30	0.120	0.062	0.060	3.1	1.9	TUK821Q1JAL-1630	TSK821Q1JSS-1630
	1,000	16 × 35	0.098	0.051	0.049	3.7	2.2	TUK102Q1JAL-1635	TSK102Q1JSS-1635
	1,000	18 × 30	0.090	0.044	0.043	4.3	2.6	TUK102Q1JAL-1830	TSK102Q1JSS-1830
	1,200	16 × 39	0.082	0.043	0.042	4.2	2.5	TUK122Q1JAL-1639	TSK122Q1JSS-1639
	1,300	18 × 35	0.070	0.034	0.033	5.2	3.1	TUK132Q1JAL-1835	TSK132Q1JSS-1835
	1,400	21 × 30	0.068	0.034	0.033	4.9	2.9	TUK142Q1JAL-2130	TSK142Q1JSS-2130
	1,500	18 × 39	0.061	0.030	0.029	5.9	3.5	TUK152Q1JAL-1839	TSK152Q1JSS-1839
	1,800	21 × 35	0.053	0.037	0.026	5.9	3.5	TUK182Q1JAL-2135	TSK182Q1JSS-2135
	2,000	21 × 39	0.048	0.024	0.023	6.6	4.0	TUK202Q1JAL-2139	TSK202Q1JSS-2139
	2,700	21 × 49	0.036	0.019	0.018	8.4	5.0	TUK272Q1JAL-2149	TSK272Q1JSS-2149
75	500	16 × 30	0.180	0.088	0.085	2.6	1.6	TUK501Q1RAL-1630	TSK501Q1RSS-1630
	700	18 × 30	0.138	0.071	0.069	2.8	1.7	TUK701Q1RAL-1830	TSK701Q1RSS-1830
	750	16 × 39	0.122	0.060	0.058	3.5	2.1	TUK751Q1RAL-1639	TSK751Q1RSS-1639
	1,000	18 × 39	0.097	0.050	0.049	3.8	2.3	TUK102Q1RAL-1839	TSK102Q1RSS-1839
	1,500	21 × 39	0.062	0.031	0.030	5.6	3.4	TUK152Q1RAL-2139	TSK152Q1RSS-2139
	2,000	21 × 49	0.047	0.023	0.023	7.1	4.3	TUK202Q1RAL-2149	TSK202Q1RSS-2149
100	220	16 × 30	0.350	0.160	0.157	2.0	1.2	TUK221Q2AAL-1630	TSK221Q2ASS-1630
	470	18 × 39	0.170	0.075	0.073	3.7	2.2	TUK471Q2AAL-1839	TSK471Q2ASS-1839
	680	21 × 39	0.120	0.058	0.056	4.6	2.8	TUK681Q2AAL-2139	TSK681Q2ASS-2139
	1,000	21 × 49	0.085	0.044	0.043	6.1	3.7	TUK102Q2AAL-2149	TSK102Q2ASS-2149

Part Numbering System

TUK series 1,400 μF -10% ~ +30% 40V Axial-lead 16 φ × 30L Pb-free Terminal

TUK **142** **Q** **1G** **AL** - **1630**

Series name Capacitance Capacitance tolerance Rated voltage Lead forming Sealing type Case size Terminal and Sleeve Type

Note: Please refer to "Part Numbering System" section on page 1 for more details.