

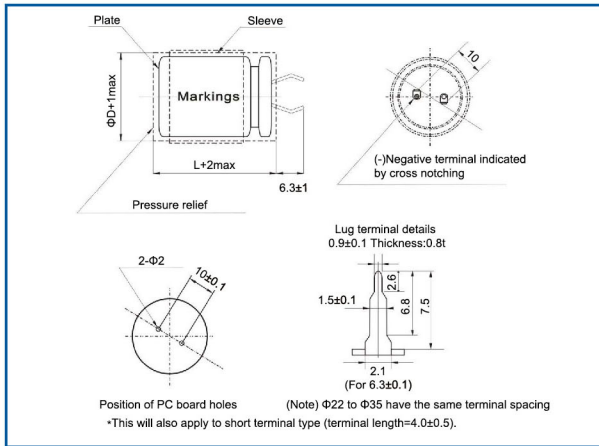
105°C, Standard Capacitors, Series K4J.

Longer life from K4J series Guarantees 3000 hours at 105°C
 Best fitted to switching power supplies
 Three size options for the same rating

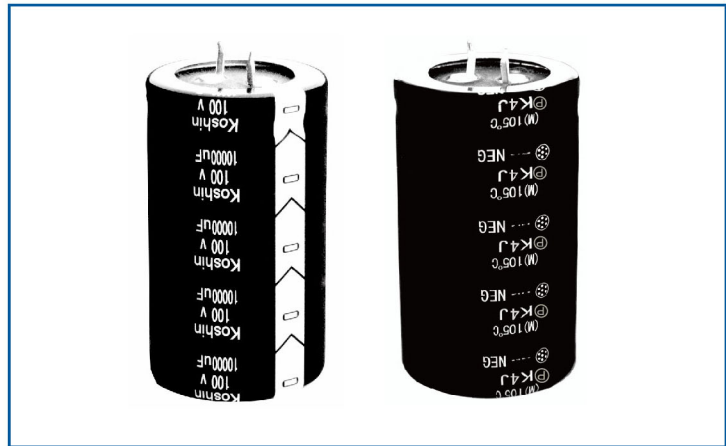


Outline Drawing

Unit: mm



Photo



Marking color: White print on black sleeve

Specifications

No.	Item	Performance									
1	Temperature range(°C)	-40 to +105 (10~100V)					-25 to +105 (160~500V)				
2	Leakage current (μA)	Less than 0.02CV or 3mA whichever is smaller (after 5 minutes),C: Capacitance(μ F), V: Rated voltage (V) 20°C									
3	Capacitance tolerance (%)	±20 (20°C,120Hz)									
4	Tangent of the loss angle (Tan δ)	Rated voltage (V)	10	16	25	35	50	63-100	160-200	250-500	20°C
		Tanδ(max)	0.45	0.35	0.30	0.25	0.20	0.15	0.15	0.15	
5	Low temperature characteristics	Rated voltage (V)	10	16	25	35	50,63	80,100	160,200	250-500	120Hz
		Impedance ratio(max)	Z(-25°C)/Z(+20°C)	4	4	3	3	2	2	3	
			Z(-25°C)/Z(+20°C)	15	15	10	8	6	5	6	-
6	Endurance (105°C) (Applied ripple current)	Test time	3000hours								
		Leakage current	The initial specified value or less								
		Percentage of capacitance change	Within ± 20% of initial value								
		Tangent of the loss angle	200% or less of the initial specified value								
7	Shelf life (105°C)	Test time	1000hours								
		Leakage current	The initial specified value or less								
		Percentage of capacitance change	Within ± 20% of initial value								
		Tangent of the loss angle	200% or less of the initial specified value								
		Pretreatment performed JIS-C-5102									
8	Applicable standards	JIS-C-5102 and JIS-C- 5141									

Coefficient of Frequency for Ripple Current

Frequency (Hz)	50-60	120	400	1K	10K	50K-100K
Capacitance(μF)						
CAP ≤ 100	0.80	1.00	1.23	1.36	1.48	1.53
100 < CAP ≤ 1000	0.80	1.00	1.16	1.25	1.35	1.38
1000 < CAP	0.80	1.00	1.11	1.17	1.25	1.28

Coefficient of Temperature for Ripple Current

Temperature(°C)	45	60	85	95	105
Coefficient	2.10	1.90	1.40	1.25	1.00

Dimension: Φ DXL(mm)

Ripple Current: A/rms at 120Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	10V								16V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
4700	22X25	1.50							22X25	1.70						
6800	22X25	1.80	25X25	1.80					22X30	2.30	25X25	2.30	30X25	2.30		
8200	22X25								22X30	2.50						
10000	22X30	2.40	25X25	2.40	30X25	2.40			22X35	3.00	25X30	3.00	30X25	3.00		
12000	22X30	2.90							22X35	3.20	25X30	3.20	30X25	3.20		
15000	22X35	3.20	25X30	3.20	30X25	3.20			22X50	4.30	25X40	4.30	30X35	4.30	35X30	4.30
18000	22X35	3.50	25X30	3.50					22X50	4.70	25X45	4.70	30X35	4.70	35X30	4.70
22000	22X40	4.10	25X35	4.10	30X30	4.10	35X25	4.10			25X50	5.60	30X40	5.60	35X30	5.60
27000	22X45	4.80	25X35	4.80	30X30	4.80	35X25	4.80			25X50	6.20	30X45	6.20	35X35	6.20
33000			25X45	5.70	30X35	5.70	35X30	5.70					30X45	7.20	35X35	7.20
39000			25X50	6.50	30X40	6.50	35X30	6.50					30X50	8.20	35X40	8.20
47000					30X45	7.60	35X35	7.60							35X45	9.40
56000					30X50	8.70	35X40	8.70							35X50	10.0
68000							35X50	10.5								

V.DC Contents μ F	25V								35V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
1500									22X20	1.26						
2200									22X25	1.40	25X25	1.40				
3300	22X20	1.48	25X25	1.48					22X30	1.90	25X25	1.90	30X25	1.90		
3900									22X30	2.23						
4700	22X25	1.92	25X25	1.92					22X35	2.42	25X30	2.42	30X25	2.42		
5600	22X30	2.25							22X35	2.89	25X30	2.89	30X25	2.89		
6800	22X30	2.60	25X25	2.60	30X25	2.60			22X40	3.24	25X35	3.24	30X30	3.24	35X25	3.24
8200	22X35	3.04	25X30	3.04	30X25	3.04			22X50	3.70	25X40	3.70	30X30	3.70	35X25	3.70
10000	22X40	3.50	25X35	3.50	30X30	3.50	35X25	3.50			25X45	4.20	30X35	4.20	35X30	4.20
12000	22X45	4.02	25X40	4.02	30X30	4.02	35X25	4.02			25X50	4.80	30X40	4.80	35X35	4.80
15000			25X45	4.70	30X35	4.70	35X30	4.70					30X45	5.70	35X35	5.70
18000			25X50	5.40	30X40	5.40	35X35	5.40							35X40	6.60
22000					30X45	6.40	35X35	6.40							35X50	8.00
27000							35X45	7.70								
33000							35X50	8.90								



Dimension: Φ DXL(mm)

Ripple Current: A/rms at 120Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC μ F	50V								63V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
680									22X20	0.95						
1000	22X20	0.84							22X25	1.20	25X25	1.20				
1200									22X25	1.30						
1500	22X30	1.40	25X25	1.40					22X30	1.60	25X25	1.60	30X25	1.60		
1800	22X30	1.54							22X30	1.80	25X25	1.80				
2200	22X30	1.70	25X25	1.70	30X25	1.70			22X35	2.10	25X30	2.10	30X25	2.10		
2700	22X35	2.00	25X30	2.00					22X40	2.50	25X35	2.50	30X25	2.50		
3300	22X35	2.24	25X30	2.24	30X25	2.24			22X50	3.00	25X40	3.00	30X30	3.00	35X25	3.00
3900	22X40	2.54	25X35	2.54	30X30	2.54					25X45	3.40	30X35	3.40	35X30	3.40
4700	22X45	2.95	25X40	2.95	30X30	2.95	35X25	2.95			25X50	3.90	30X40	3.90	35X30	3.90
5600	22X50	3.40	25X45	3.40	30X40	3.40	35X30	3.40					30X45	4.50	35X35	4.50
6800			25X50	4.10	30X40	4.10	35X30	4.10					30X50	5.20	35X40	5.20
8200					30X45	4.70									35X45	6.00
10000					30X50	5.50	35X40	5.50							35X50	6.90
12000							35X45	6.30								
15000							35X50	7.30								

V.DC μ F	80V								100V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
370									22X20	0.66						
470	22X20	0.78							22X25	0.86	25X25	0.86				
560											25X25	1.00				
680	22X25	1.00	25X25	1.00					22X30	1.10	25X25	1.10	30X25	1.10		
820	22X30	1.20							22X30	1.24	25X25	1.24				
1000	22X35	1.40	25X30	1.40	30X25	1.40			22X35	1.45	25X30	1.45	30X25			
1200	22X35	1.50	25X30	1.50					22X40	1.65	25X35	1.65	30X30	1.65		
1500	22X40	1.88	25X35	1.88	30X30	1.88			22X45	1.98	25X40	1.98	30X30	1.98	35X25	1.98
1800	22X45	2.10	25X40	2.10	30X30	2.10					25X40	2.52	30X35	2.52	35X30	2.52
2200	22X50	2.50	25X45	2.50	30X35	2.50	35X30	2.50			25X50	3.03	30X40	3.03	35X30	3.03
2700			25X50	2.90	30X40	2.90	35X35	2.90					30X45	4.10	35X35	4.10
3300					30X50	3.60	35X40	3.60							35X45	4.59
3900					30X50	3.90	35X40	3.90							35X45	4.98
4700					30X50	4.30	35X40	4.30							35X50	5.43
5600							35X45	5.10								
6800							35X50	5.70								



DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension: Φ DXL(mm)
Ripple Current: A/rms at 120Hz, 105°C

V.DC Contents μ F	160V								200V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
100									22X20	0.38						
150									22X25	0.54	22X25	0.54				
220	22X25	0.65							22X30	0.92	25X25	0.92	30X25	0.92		
270	22X25	0.74							22X30	1.03	25X25	1.03				
330	22X30	0.98	25X25	0.98	30X25	0.98			22X35	1.21	25X30	1.21	30X25	1.21		
390	22X35	1.10	25X30	1.10					22X40	1.39	25X35	1.39	30X30	1.39		
470	22X35	1.21	25X30	1.21					22X45	1.62	25X40	1.62	30X30	1.62	35X25	1.62
560	22X40	1.41	25X35	1.41	30X30	1.40			22X50	1.85	25X40	1.85	30X35	1.85		
680	22X45	1.64	25X40	1.64	30X35	1.64	35X30	1.64			25X50	2.04	30X35	2.04		
820			25X45	1.85	30X35	1.85	35X30	1.85					30X40	2.34	35X35	2.34
1000			25X50	2.15	30X40	2.15							30X50	2.70	35X40	2.70
1200					30X45	2.46							30X50	3.00	35X40	3.00
1500					30X50	2.80	35X40	2.80							35X50	3.43
1800							35X40	3.13							35X50	4.10
2200							35X50	3.39								

V.DC Contents μ F	250V								350V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
56									22X25	0.37						
68	22X20	0.27									25X25	0.43				
82									22X30	0.47						
100	22X25	0.44	25X25	0.44					22X35	0.53	25X30	0.54	30X25	0.57		
120									22X40	0.60	25X35	0.61				
150	22X30	0.60	25X25	0.60	30X25	0.60							30X30	0.72	35X25	0.72
180	22X30	0.69	25X25	0.69					22X50	0.78	25X40	0.78	30X35	0.78		
220	22X35	1.00	25X30	1.00	30X25	1.00					25X50	0.89	30X40	0.89	35X30	0.89
270	22X40	1.16			30X30	1.16									35X35	1.10
330	22X45	1.28	25X35	1.28	30X30	1.28	35X25	1.28					30X50	1.20	35X40	1.20
390	22X45	1.48	25X35	1.48	30X30	1.48										
470			25X45	1.76	30X35	1.76	35X30	1.76							35X50	1.60
560			25X50	1.93	30X40	1.93	35X30	1.93								
680					30X45	2.22	35X35	2.22								
820					30X50	2.48	35X40	2.48								
1000							35X45	2.80								
1200							35X50	3.17								



Dimension: Φ DXL(mm)
Ripple Current: A/rms at 120Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	400V								450V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
33	22X20	0.39							22X20	0.40						
47	22X20	0.56	25X25	0.56					22X25	0.60	22X25	0.60				
56	22X25	0.68							22X30	0.70	25X25	0.70				
68	22X30	0.72	25X25	0.72	30X25	0.72			22X35	0.80	25X30	0.80	30X25	0.80		
82	22X35	0.82							22X35	0.80			30X25	0.80		
100	22X35	0.82	25X30	0.82	30X25	0.82			22X40	0.90	25X30	0.90	30X30	0.90		
120	22X35	0.90	25X30	0.90	30X25	0.90			22X45	1.00	25X40	1.00	30X30	1.39		
150	22X45	0.98	25X40	0.98	30X30	0.98			22X50	1.05	25X40	1.05	30X35	1.52		
180			25X45	1.14	30X35	1.14	35X30	1.14			25X50	1.14	30X40	1.14	35X30	1.14
220			25X50	1.21	30X40	1.21	35X30	1.21					30X45	1.24	35X35	1.24
270					30X45	1.40	35X35	1.40					30X50	1.48	35X40	1.48
330					30X50	1.57	35X40	1.57							35X45	1.64
390							35X45	1.74							35X50	1.86
470							35X50	1.98								
560							35X50	2.23								

V.DC Contents μ F	500V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
39	25X30	0.35						
47	25X35	0.41						
56	25X40	0.47						
68	25X45	0.54						
82			25X40	0.62				
100			25X45	0.67				
120			25X50	0.77			35X30	0.72
150					30X40	0.85		
180					30X50	1.01		
220							35X45	1.12
270							35X50	1.29

