

KPG Large Capacitance Miniature Aluminum Electrolytic Capacitors

High-Reliability High-Ripple Capacitors, Series KPG.

High-Reliability High-Ripple Capacitors

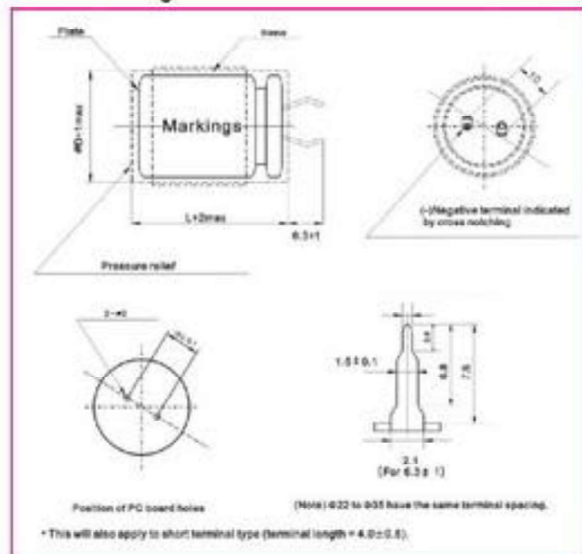
Guarantees 2000 hours at 105°C

RoHS

Outline Drawing

Unit:mm

Photo



Marking color: White print on black sleeve

Specifications

No.	Item	Performance						
1	Temperature range (°C)	-25 to +105						
2	Leakage current (μ A)	Less than 0.02CV or 3mA whichever is smaller(after five minutes), C: Capacitance(μ F),V: Rated voltage (V) 20℃						
3	Capacitance tolerance (%)	±20 (20℃, 120Hz)						
4	Tangent of the loss angle (Tan δ)	Rated voltage (V)	160	200	250	350	400	20℃, 120Hz
		Tan δ (max)	0.10	0.10	0.15	0.15	0.15	
		0.15 for capacitors with Φ35 and WV equal to or less 200						
5	Low temperature characteristics	Percentage of capacitance change (%)	-25℃		Within ±30% of the value at 20℃			120Hz
		Impedance ratio (max)	$Z_{(-25℃)}/Z_{(+25℃)}$		4			
6	Endurance (105℃) (Applied ripple current)	Test time	2000hours					
		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℃)	Test time	1000hours					
		Leakage current	The initial specified value or less					
		Percentage of capacitance change	Within ±15% of initial value					
		Tangent of the loss angle	150% or less of the initial specified value					
8	Applicable standards	JIS-C-5102 and JIS-C-5141						

Coefficient of Frequency for Ripple Current

Rated Voltage (V)	Frequency (Hz)				
	50	120	1K	10K	30K
160 to 250	0.87	1.00	1.10	1.18	1.20
350 to 400	0.80	1.00	1.14	1.19	1.20

KPG Large Capacitance Miniature Aluminum Electrolytic Capacitors

Dimension: Φ DXL(mm)

Ripple Current: A/rms at 120Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μF	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
180									22X25	1.08						
270	22X25	1.16							22X30	1.30	25X25	1.35				
330	22X30	1.43							22X35	1.41	25X30	1.47				
390	22X35	1.52	25X25	1.55					22X40	1.50			30X25	1.56		
470	22X40	1.62	25X30	1.73					22X45	1.58	25X35	1.65				
560			25X35	1.81	30X25	1.82			22X50	1.68	25X40	1.80	30X30	1.82		
680	22X50	1.81	25X40	1.98	30X30	1.98					25X50	1.87	30X35	1.99	35X30	2.07
820			25X45	2.04	30X35	2.14	35X30	2.40					30X40	2.12	35X35	2.22
1000					30X40	2.22	35X35	2.53					30X50	2.22	35X40	2.42
1200					30X45	2.46									35X50	2.70
1500							35X40	2.97								
1800							35X50	3.10								

V.DC Contents μF	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
68									22X25	0.56						
100									22X30	0.70	25X25	0.70				
120	22X25	0.94							22X35	0.73						
150									22X40	0.79	25X30	0.82	30X25	0.82		
180	22X30	1.10	25X25	1.15					22X45	0.81	25X35	0.89	30X30	0.90		
220	22X35	1.13	25X30	1.30	30X25	1.30			22X50	0.93	25X40	0.97				
270	22X40	1.20									25X50	1.01	30X35	1.05	35X30	1.01
330	22X45	1.26	25X35	1.41	30X30	1.36							30X45	1.16	35X35	1.16
390	22X50	1.37	25X40	1.52									30X50	1.26	35X40	1.26
470			25X45	1.59	30X35	1.57	35X30	1.56							35X45	1.35
560					30X40	1.76									35X50	1.51
680							35X35	1.82								
820					30X50	1.87	35X40	1.98								
1000							35X45	2.10								

V.DC Contents μF	400V							
	Φ DXL	A	Φ DXL	A	Φ DXL	A	Φ DXL	A
56	22X25	0.47						
68	22X30	0.56						
100	22X35	0.84	25X30	0.70				
120	22X40	0.70	25X35	0.73				
150	22X50	0.78	25X40	0.82	30X30	0.83		
180			25X45	0.87	30X35	0.86	35X30	0.91
220			25X50	0.94	30X40	0.95		
270					30X45	1.11	35X35	1.13
330							35X40	1.26
470							35X50	1.50

Koshin

KPH Large Capacitance Miniature Aluminum Electrolytic Capacitors

105°C Use, High-Reliability, Low Impedance and Long Life Capacitors, Series KPH.

Series KPH Miniature Capacitors

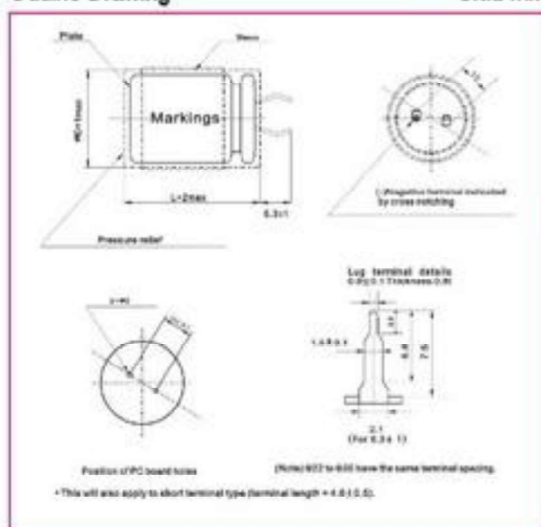
Best for Power Supply

Guarantees 5000 hours at 105°C

RoHS

Outline Drawing

Unit: mm



Photo



Marking color: White print on black sleeve

Specifications

No.	Item	Performance									
1	Temperature range (°C)	-40 to +105(10V~100V)					-25 to +105(160V~450V)				
2	Leakage current (μ A)	Less than 0.02CV or 3mA whichever is smaller (after five 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	63-400	450	20°C, 120Hz	
		Tan δ (max)	0.55	0.40	0.30	0.25	0.20	0.15	0.15		
5	Low temperature characteristics	Rated voltage(V)	10-16	25	35	50-63	80-100	200-400	450	120Hz	
		Impedance ratio (max)	$Z_{(25^{\circ}\text{C})}/Z_{(+20^{\circ}\text{C})}$	4	3	3	2	2	4		8
			$Z_{(-40^{\circ}\text{C})}/Z_{(+20^{\circ}\text{C})}$	15	10	8	6	5	-		-
6	Endurance(105°C) (Applied ripple current)	Test time	5000hours								
		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							The rated voltage shall be applied 30 minutes before measurements	
		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								
8	Applicable standards	JIS-C-5102 and JIS-C-5141									

Coefficient of Frequency for Ripple Current

Rated Voltage (V)	Frequency (Hz)	50	120	300	1K	10K	100K
10-50		0.95	1.00	1.03	1.05	1.08	1.08
63-100		0.92	1.00	1.07	1.13	1.19	1.20
160-250		0.81	1.00	1.17	1.32	1.45	1.50
350-450		0.77	1.00	1.16	1.30	1.41	1.43

High-Reliability Type

KPH Large Capacitance Miniature Aluminum Electrolytic Capacitors

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
5600	22X25	1.10							22X25	1.44						
6800	22X25	1.30							22X30	1.66	25X25	1.66				
8200									22X35	1.87						
10000	22X30	1.85	25X25	1.64					22X40	2.12	25X30	2.07	30X25	2.11		
12000	22X35	1.85	25X30	1.85	30X25	1.89					25X35	2.37	30X30	2.37	35X25	2.42
15000	22X40	2.12	25X35	2.12					22X50	2.74	25X40	2.71				
18000	22X50	2.45	25X40	2.43	30X30	2.37	35X25	2.42			25X50	3.11	30X35	3.02	35X30	3.09
22000					30X35	2.73	35X30	2.79					30X40	3.46	35X35	3.49
27000			25X50	3.11	30X40	3.13							30X50	4.07	35X40	4.04
33000							35X35	3.49								
39000					30X50	3.99	35X40	3.96							35X50	5.16
47000							35X50	4.62								

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
2200									22X25	1.10						
3300									22X30	1.42	25X25	1.41				
3900	22X25	1.31							22X35	1.58	25X30	1.58				
4700	22X30	1.51	25X25	1.51					22X40	1.78			30X25	1.77		
5600	22X35	1.70									25X35	1.98	30X30	1.98	35X25	2.03
6800	22X40	1.92	25X30	1.87	30X25	1.90			22X50	2.26	25X40	2.24				
8200			25X35	2.14	30X30	2.15	35X25	2.19			25X50	2.57	30X35	2.50	35X30	2.55
10000	22X50	2.45	25X40	2.43									30X40	2.86	35X35	2.88
12000			25X50	2.78	30X35	2.70	35X30	2.76					30X50	3.32	35X40	3.30
15000					30X40	3.13	35X35	3.16								
18000					30X50	3.64	35X40	3.61							35X50	4.29
27000							35X50	4.70								

KPH Large Capacitance Miniature Aluminum Electrolytic Capacitors

Dimension: Φ DXL(mm)

Ripple Current: A/rms at 120Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μF	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
1000									22X25	1.00						
1200									22X30	1.15	25X25	1.15				
1500	22X25	1.02							22X35	1.32						
1800	22X30	1.17	25X25	1.17					22X40	1.49	25X30	1.45	30X25	1.48		
2200	22X35	1.33									25X35	1.67	30X30	1.66	35X25	1.71
2700	22X40	1.51	25X30	1.47	30X25	1.50			22X50	1.92	25X40	1.90	30X35	1.93		
3300	22X45	1.70	25X35	1.70	30X30	1.70	35X25	1.74			25X50	2.20			35X30	2.18
3900	22X50	1.91	25X40	1.89									30X40	2.41	35X35	2.43
4700					30X35	2.11	35X30	2.16					30X50	2.80	35X40	2.78
5600			25X50	2.38	30X40	2.39	35X35	2.41								
6800					30X50	2.79	35X40	2.78							35X50	3.55
10000							35X50	3.57								

V.DC Contents μF	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
390									22X25	0.78						
560									22X30	0.99	25X25	0.98				
680	22X25	0.97							22X35	1.12						
820	22X30	1.12							22X40	1.26	25X30	1.23	30X25	1.25		
1000	22X35	1.27	25X25	1.23							25X35	1.41	30X30	1.42	35X25	1.45
1200	22X40	1.42	25X30	1.39	30X25	1.41			22X50	1.60	25X40	1.59	30X35	1.61		
1500			25X35	1.62							25X50	1.86	30X40	1.87	35X30	1.85
1800	22X50	1.84	25X40	1.82	30X30	1.78	35X25	1.82							35X35	2.07
2200			25X50	2.11	30X35	2.05	35X30	2.09					30X50	2.40	35X40	2.39
2700					30X40	2.35	35X35	2.37							35X50	2.81
3300					30X50	2.75	35X40	2.73								
4700							35X50	3.46								

KPH Large Capacitance Miniature Aluminum Electrolytic Capacitors

Dimension: Φ DXL(mm)

Ripple Current: A/rms at 120Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

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
180									22X25	0.63						
220																
270									22X30	0.81	25X25	0.81				
330	22X25	0.98							22X35	0.92	25X30	0.92	30X25	0.94		
390	22X30	1.10	25X25	1.09					22X40	1.02						
470	22X30	1.21	25X25	1.19					22X50	1.17	25X35	1.15	30X30	1.15	35X25	1.22
560	22X35	1.40	25X30	1.40	30X25	1.40					25X40	1.28	30X35	1.30	35X30	1.47
680	22X40	1.62	25X35	1.61	30X25	1.54					25X50	1.48	30X40	1.49	35X35	1.65
820	22X45	1.86	25X40	1.86	30X30	1.79	35X25	1.79								
1000			25X45	2.15	30X35	2.09	35X25	1.98					30X50	1.91	35X40	1.90
1200					30X35	2.09	35X30	2.29							35X50	2.21
1500					30X35	2.29	35X35	2.72								
1800					30X45	1.80	35X40	3.09								

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
68									22X25	0.39						
82									22X30	0.49						
100									22X35	0.55	25X25	0.49				
120									22X40	0.63	25X30	0.55	30X25	0.56		
150	22X25	0.57									25X35	0.60			35X25	0.69
180	22X30	0.66							22X50	0.73	25X40	0.72	30X30	0.71		
220	22X35	0.75									25X50	0.93	30X35	0.82	35X30	0.83
270	22X40	0.85			30X25	0.85							30X40	0.94	35X35	1.04
330			25X35	0.96	30X30	0.96	35X25	1.02					30X50	1.19	35X40	1.19
390	22X50	1.08	25X40	1.07												
470			25X50	1.22	30X35	1.19	35X30	1.22							35X50	1.38
560					30X40	1.35	35X35	1.36								
680					30X50	1.58	35X40	1.57								
1000							35X50	2.02								

KPH Large Capacitance Miniature Aluminum Electrolytic Capacitors

Dimension: Φ DXL(mm)

Ripple Current: A/rms at 120Hz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μF	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
39									22X25	0.37						
47									22X30	0.41						
56	22X25	0.34							22X30	0.44	25X25	0.47				
68	22X30	0.44	25X25	0.40					22X35	0.50	25X30	0.53				
82	22X35	0.50							22X40	0.56	25X30	0.55	30X25	0.57		
100			25X30	0.50	30X25	0.51			22X45	0.64	25X35	0.63	30X30	0.64		
120	22X40	0.57	25X35	0.58			35X25	0.61	22X50	0.72	25X40	0.71	30X30	0.71	35X25	0.71
150	22X50	0.67	25X40	0.66	30X30	0.65					25X45	0.81	30X35	0.81	35X30	0.83
180					30X35	0.74	35X30	0.83			25X50	0.91	30X40	0.92	35X35	0.93
220			25X50	0.84	30X40	0.84	35X35	0.94					30X45	1.05	35X40	1.07
270					30X50	1.10	35X40	1.09							35X45	1.22
330															35X50	1.39
390							35X50	1.26								