

KP Conductive Polymer Aluminum Solid Capacitors

+105°C, Small size, Low ESR, Series KP.

Features:

- 105°C、2000 hours assured
- Low ESR with small size
- RoHS Compliance

Applications

Suitable for DC-DC Converters, Voltage Regulators, Switching Power Supply, etc.

Photo

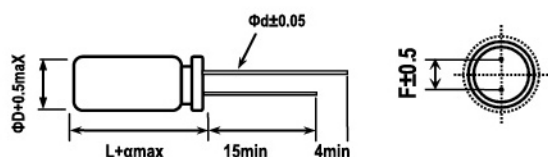


Marking color: Blue

Specifications

No.	Item	Performance	
1	Temperature range (°C)	-55 to +105	
2	Leakage current (μA)	Less than 0.2CV or 280 whichever is larger (after two minutes) C: Rated Capacitance(μF); V: Rated voltage(V) 20°C	
3	Capacitance tolerance (%)	±20 (20°C,120Hz)	
4	Tangent of the loss angle (Tanδ)	0.10	20°C,120Hz
5	ESR	See Standard Ratings	
6	Temperature Characteristics, Impedance Ratio	At -55°C 100KHz(Low Temperature)	$Z_{-55°C}/Z_{+20°C} \leq 1.25$
		At +105°C 100KHz(High Temperature)	$Z_{+105°C}/Z_{+20°C} \leq 1.25$
7	Endurance (+105°C 2000hours Rated voltage Applied)	Test time	2000hours
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
8	Humidity Test (+60°C 90% to 95% RH 1000 hours No applied voltage)	Test time	1000hours
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
9	Surge Voltage Test (At normal temperature, charge at surge voltage for 30 second and discharge via a 1KΩ protective resistor for 330 second. Repeat for 1000 cycles)	Test time	1000cycles
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
10	Applicable standards	JIS-C-5101-4	

Diagram of Dimensions

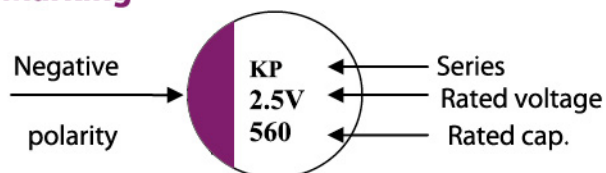


Lead Spacing and Diameter

Unit: mm

	5X5	5X8	6.3X5	6.3X7	6.3X8~
φD	2.0	2.0	2.5	2.5	2.5
F	2.0	2.0	2.5	2.5	2.5
φd	0.5	0.6	0.5	0.5	0.6
α	L < 8: α=1.0 / L ≥ 8: α=1.5				

Marking



Frequency Coefficient for Ripple Current

Frequency (Hz)	$120 \leq F < 1K$	$1K \leq F < 10K$	$10K \leq F < 100K$	$100K \leq F < 500K$
Coefficient	0.05	0.3	0.7	1

Dimension & Permissible Ripple Current

Dimension: $\Phi D \times L$ (mm)
Ripple Current: mA/rms at 100KHz, 105°C

V.DC Contents μF	2.5V			4V			6.3V		
	$\Phi D \times L$	ESR m Ω /100KHz 20°C	Ripple Current (mA/rms, 105°C)	$\Phi D \times L$	ESR m Ω /100KHz 20°C	Ripple Current (mA/rms, 105°C)	$\Phi D \times L$	ESR m Ω /100KHz 20°C	Ripple Current (mA/rms, 105°C)
220	5X5	35	2100	5X8	25	2450			
220	6.3X5	35	2300	6.3X7	25	2450	6.3X7	25	2450
270	6.3X5	30	2300	5X8	25	2450			2450
270	6.3X7	30	2400	6.3X7	25	2450	6.3X7	25	2450
330	5X8	25	2450	5X8	25	2450			
330	6.3X7	25	2450	6.3X7	25	2450	6.3X7	25	2450
390	6.3X7	25	2450	6.3X7	25	2450			
470	6.3X7	25	2450						
560	6.3X7	25	2450						

V.DC Contents μF	10V			16V			25V		
	$\Phi D \times L$	ESR m Ω /100KHz 20°C	Ripple Current (mA/rms, 105°C)	$\Phi D \times L$	ESR m Ω /100KHz 20°C	Ripple Current (mA/rms, 105°C)	$\Phi D \times L$	ESR m Ω /100KHz 20°C	Ripple Current (mA/rms, 105°C)
47	6.3X5	35	2100	6.3X5	35	2300	6.3X7	25	2450
68	6.3X5	35	2300	6.3X5	35	2300			
82	6.3X5	30	2300	6.3X5	35	2300			
100	6.3X5	30	2400	6.3X7	25	2450			
150	6.3X7	25	2450	6.3X7	25	2450			
180	6.3X7	25	2450	6.3X7	25				
220	6.3X7	25	2450		25				

KH Conductive Polymer Aluminum Solid Capacitors

+135 °C, High Ripple Current, Low ESR, Guaranteed (35v~100v), Series KH

Features:

- 135 °C、1000 hours assured
- Low ESR with large ripple current,
- RoHS Compliance

Applications

Suitable for Switching Power Supply,DC/DC Converter,PDP/LCD TV and digital equipment.

Photo

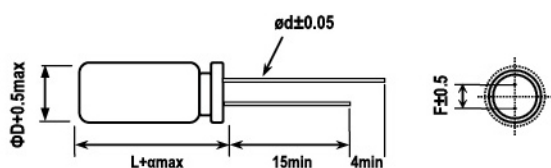


Marking color: Blue

Specifications

No.	Item	Performance	
1	Temperature range (°C)	-55 to +135	
2	Leakage current(μA)	Less than 0.2CV or 280 whichever is larger (after two minutes) C: Rated Capacitance(μF); V: Rated voltage(V) 20 °C	
3	Capacitance tolerance (%)	±20% (20°C,120Hz)	
4	Tangent of the loss angle (Tan δ)	0.12	20°C,120Hz
5	ESR	See Standard Ratings	20°C,100K-300KHz
6	Temperature Characteristics, Impedance Ratio	At -55°C 100KHz(Low Temperature)	$Z_{-55^{\circ}\text{C}}/Z_{+20^{\circ}\text{C}} \leq 1.25$
		At +135 °C 100KHz(High Temperature)	$Z_{+105^{\circ}\text{C}}/Z_{+20^{\circ}\text{C}} \leq 1.25$
7	Endurance (+135 °C 1000hours Rated voltage Applied)	Test time	1000hours
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
8	A Humidity Test (+60 °C 90% to 95% RH 2000 hours No applied voltage)	Test time	1000hours
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
9	Surge Voltage Test (At normal temperature, charge at surge voltage for 30 second and discharge via a 1KΩ protective resistor for 330 second. Repeat for 1000 cycles)	Test time	1000 cycles
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
10	Applicable standards	JIS-C-5101-4	

Diagram of Dimensions

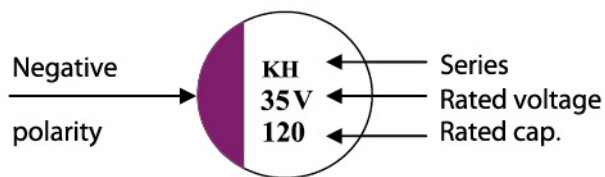


Lead Spacing and Diameter Unit: mm

ΦDxL	ΦD +0.5max	a	F±0.5	Φd±0.05
6.3X8	6.3	1.0	2.5	0.6
8X8	8.0	1.0	3.5	0.6
8X11.5	8.0	1.0	3.5	0.6
10X12.5	10.0	1.0	5.0	0.6

KH Conductive Polymer Aluminum Solid Capacitors

Marking



Frequency Coefficient for Ripple Current

Frequency (Hz)	$120 \leq F < 1K$	$1K \leq F < 10K$	$10K \leq F < 100K$	$100K \leq F < 300K$
Coefficient	0.05	0.3	0.7	1

Dimension & Permissible Ripple Current

Dimension: $\varnothing D \times L$ (mm)
Ripple Current: mA/rms at 100KHz

V.DC Contents μF	35V				50V			
	$\varnothing D \times L$	ESR $m\Omega/100KHz$ 20 °C	Ripple Current (mA/rms, 105 °C < $T_x \leq 135$ °C)	Ripple Current (mA/rms, $T_x \leq 105$ °C)	$\varnothing D \times L$	ESR $m\Omega/100KHz$ 20 °C	Ripple Current (mA/rms, 105 °C < $T_x \leq 135$ °C)	Ripple Current (mA/rms, $T_x \leq 105$ °C)
10	6.3X8	45	754	2000	6.3X8	45	754	2000
15	6.3X8	45	754	2000	6.3X8	45	754	2000
22	6.3X8	45	754	2000				
22	8X8	35	981	2600	8X8	45	981	2600
33	8X8	35	981	2600	8X8	45	981	2600
33					8X11.5	45	1018	2700
39	8X8	35	981	2600	8X11.5	45	1018	2700
39	8X11.5	30	1124	2980	10X12.5	45	1094	2900
47	8X8	35	981	2600	10X12.5	45	1094	2900
47	8X11.5	30	1124	2980				
56	8X11.5	30	1124	2980	10X12.5	45	1094	2900
56	10X12.5	28	1433	3800				
68	8X11.5	30	1124	2980				
68	10X12.5	28	1433	3800				
82	8X11.5	30	1124	2980	10X12.5	45	1094	2900
82	10X12.5	28	1433	3800				
100	8X11.5	30	1124	2980				
100	10X12.5	28	1433	3800				
120	10X12.5	28	1433	3800				

KH Conductive Polymer Aluminum Solid Capacitors

Dimension & Permissible Ripple Current

Dimension: ϕ DxL(mm)
Ripple Current: mA/rms at 100KHz

V.DC Contents μ F	63V				80V			
	ϕ DxL	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <Tx \leq 135 °C)	Ripple Current (mA/rms, Tx \leq 105 °C)	ϕ DxL	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <Tx \leq 135 °C)	Ripple Current (mA/rms, Tx \leq 105 °C)
4.7					6.3X8	45	641	1700
10	6.3X8	45	641	1700	6.3X8	45	641	1700
15	8X8	45	716	1900	8X8	45	716	1900
22	8X11.5	45	1018	2700	8X11.5	45	1018	2700
22	10X12.5	45	1094	2900	10X12.5	45	1094	2900
33	10X12.5	45	1094	2900	10X12.5	45	1094	2900
39	10X12.5	45	1094	2900	10X12.5	45	1094	2900
47	10X12.5	45	1094	2900	10X12.5	45	1094	2900
56	10X12.5	45	1094	2900				
82	10X12.5	45	1094	2900				



KW Conductive Polymer Aluminum Solid Capacitors

+125 °C, High Ripple Current, Low ESR, Series KW.

Features:

- 125 °C、2000 hours assured
- Low ESR with large ripple current,
- RoHS Compliance

Photo



Marking color: Blue

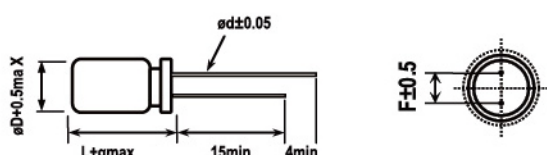
Applications

Suitable for Switching Power Supply, DC/DC Converter, PDP /LCD TV and digital equipment.

Specifications

No.	Item	Performance	
1	Temperature range (°C)	-55 to +125	
2	Leakage current (μA)	Less than 0.2CV or 280 whichever is larger (after two minutes) C: Rated Capacitance(μF); V: Rated voltage(V) 20 °C	
3	Capacitance tolerance (%)	±20 (20 °C, 120Hz)	
4	Tangent of the loss angle (Tanδ)	0.12	20 °C, 120Hz
5	ESR	See Standard Ratings	
6	Temperature Characteristics, ESR Ratio	At -55 °C 100KHz(Low Temperature)	$Z_{-55°C}/Z_{+20°C} \leq 1.25$
		At +125 °C 100KHz(High Temperature)	$Z_{+125°C}/Z_{+20°C} \leq 1.25$
7	Endurance (+125 °C 2000hours Rated voltage Applied)	Test time	2000hours
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
8	Humidity Test (+60 °C 90% to 95% RH 1000 hours No applied voltage)	Test time	1000hours
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
9	Surge Voltage Test (At normal temperature, charge at surge voltage for 30 second and discharge via a 1KΩ protective resistor for 330 second. Repeat for 1000cycles)	Test time	1000 cycles
		Leakage current	The initial specified value or less
		Percentage of capacitance change	Within ±20% of initial value
		ESR	150% or less of the initial specified value
		Tangent of the loss angle	150% or less of the initial specified value
10	Applicable standards	JIS-C-5101-4	

Diagram of Dimensions



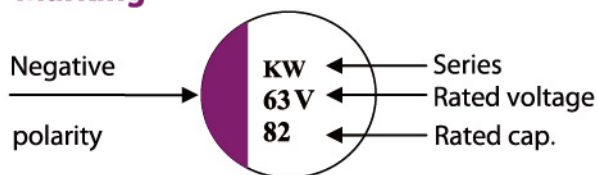
Lead Spacing and Diameter

Unit: mm

	6.3	8	10
ϕD	6.3	8	10
F	2.5	3.5	5.0
ϕd	0.6	0.6	0.6
α	$\alpha=1.5$		

KW Conductive Polymer Aluminum Solid Capacitors

Marking



Frequency Coefficient for Ripple Current

Frequency (Hz)	$120 \leq F < 1K$	$1K \leq F < 10K$	$10K \leq F < 100K$	$100K \leq F < 500K$
Coefficient	0.05	0.3	0.7	1

Dimension & Permissible Ripple Current

Dimension: $\Phi D \times L$ (mm)
Ripple Current: mA/rms at 100KHz

VDC Contents μF	4V				6.3V			
	$\Phi D \times L$	ESR m Ω /100KHz 20 $^{\circ}C$	Ripple Current (mA/rms, 105 $^{\circ}C$ <T \leq 125 $^{\circ}C$)	Ripple Current (mA/rms, T \leq 105 $^{\circ}C$)	$\Phi D \times L$	ESR m Ω /100KHz 20 $^{\circ}C$	Ripple Current (mA/rms, 105 $^{\circ}C$ <T \leq 125 $^{\circ}C$)	Ripple Current (mA/rms, T \leq 105 $^{\circ}C$)
100	6.3X8	16	1270	3800	6.3X8	16	1270	3800
220	6.3X8	16	1270	3800	6.3X8	16	1270	3800
330	6.3X8	16	1270	3800	6.3X8	16	1270	3800
470	6.3X8	16	1270	3800	6.3X8	16	1270	3800
560	6.3X8	16	1270	3800	8X8	14	1330	4200
680	8X8	14	1330	4200	8X8	14	1330	4200
820	8X8	14	1330	4200	8X8	14	1330	4200
1000	8X11.5	14	1455	4600	8X11.5	14	1455	4600
1200	8X11.5	14	1455	4600	8X11.5	14	1455	4600
1500	10X12.5	14	1680	5320	10X12.5	14	1680	5320
1800	10X12.5	14	1680	5320	10X12.5	14	1680	5320
2200	10X12.5	14	1680	5320				



KW Conductive Polymer Aluminum Solid Capacitors

Dimension & Permissible Ripple Current

Dimension: $\Phi \times L$ (mm)
Ripple Current: mA/rms at 100KHz

V.DC Contents μF	10V				16V			
	$\Phi \times L$	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <T \leq 125 °C)	Ripple Current (mA/rms, T \leq 105 °C)	$\Phi \times L$	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <T \leq 125 °C)	Ripple Current (mA/rms, T \leq 105 °C)
100	6.3X8	18	1270	3800	6.3X8	18	1270	3800
220	6.3X8	18	1270	3800	6.3X8	18	1270	3800
330	6.3X8	18	1270	3800	8X8	14	1455	4600
390	6.3X8	18	1270	3800	8X11.5	14	1455	4600
470	8X8	14	1330	4200	8X11.5	14	1455	4600
	8X11.5	14	1455	4600	10X12.5	14	1680	5320
560	8X11.5	14	1455	4600	10X12.5	14	1680	5320
680	8X11.5	14	1455	4600				
	10X12.5	14	1680	5320	10X12.5	14	1680	5320
820	10X12.5	14	1680	5320	10X12.5	14	1680	5320
1000	10X12.5	14	1680	5320				

V.DC Contents μF	25V				35V			
	$\Phi \times L$	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <T \leq 125 °C)	Ripple Current (mA/rms, T \leq 105 °C)	$\Phi \times L$	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <T \leq 125 °C)	Ripple Current (mA/rms, T \leq 105 °C)
56	6.3X8	40	793	2380	6.3X8	60	767	2300
82	6.3X8	40	793	2380	8X8	30	833	2500
100	6.3X8	40	793	2380	8X8	30	833	2500
100	8X8	40	840	2520	8X11.5	30	1066	3200
150	8X8	20	1066	3200	8X11.5	30	1066	3200
180	8X11.5	20	1416	4250	10X12.5	28	1266	3800
220	8X11.5	20	1416	4250	10X12.5	28	1266	3800
330	10X12.5	20	1533	4600				



Dimension & Permissible Ripple Current

Dimension: ϕ DXL(mm)
Ripple Current: mA/rms at 100KHz

V.DC Contents μ F	50V				63V			
	ϕ DxL	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <Tx \leq 125 °C)	Ripple Current (mA/rms, Tx \leq 105 °C)	ϕ DxL	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <Tx \leq 125 °C)	Ripple Current (mA/rms, Tx \leq 105 °C)
10	6.3X8	45	1150	2000	6.3X8	45	980	1700
15	6.3X8	45	1150	2000	6.3X8	45	980	1700
22	6.3X8	45	1150	2000	8X8	45	1500	2600
33	8X8	45	1500	2600	8X11.5	45	1550	2700
39	8X8	45	1500	2600	8X11.5	45	1670	2700
47	8X8	45	1550	2700	10X12.5	45	1670	2900
47	8X11.5	45	1670	2900				
56	8X8	45	1550	2700	10X12.5	45	1670	2900
56	8X11.5	45	1670	2900				
68	10X12.5	45	1670	2900	10X12.5	45	1670	2900
82	10X12.5	45	1670	2900	10X12.5	45	1670	2900
100	10X12.5	45	1670	2900				
150	10X12.5	45	1670	2900				

V.DC Contents μ F	80V				100V			
	ϕ DxL	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <Tx \leq 125 °C)	Ripple Current (mA/rms, Tx \leq 105 °C)	ϕ DxL	ESR m Ω /100KHz 20 °C	Ripple Current (mA/rms, 105 °C <Tx \leq 125 °C)	Ripple Current (mA/rms, Tx \leq 105 °C)
4.7	6.3X8	45	980	1700	8X8	45	980	1700
10	6.3X8	45	980	1700	8X8	45	980	1700
10					8X11.5	45	1090	1900
15	8X8	45	1090	1900	10X12.5	45	1550	2700
22	8X11.5	45	1550	2700	10X12.5	45	1670	2900
33	10X12.5	45	1670	2900				
39	10X12.5	45	1670	2900				
47	10X12.5	45	1670	2900				