

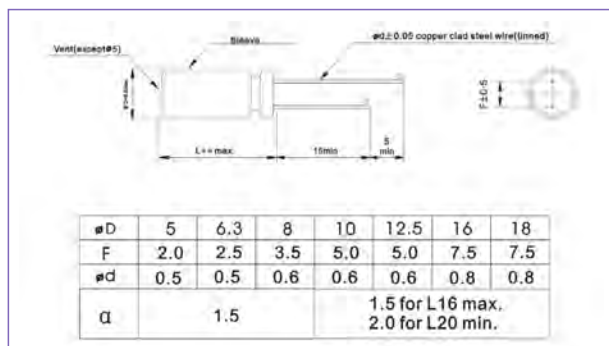
## KJH Miniature Aluminum Electrolytic Capacitors

### 105°C Use, High-Reliability, Low Impedance Capacitors, Series KJH.

The capacitor of this Series achieves high reliability under the environmental loading prevailing in a piece of equipment on which it is mounted  
Guarantees 5000 hours at 105°C (Φ5 to 6.3: 2000hours; Φ8 to 10: 3000 hours)

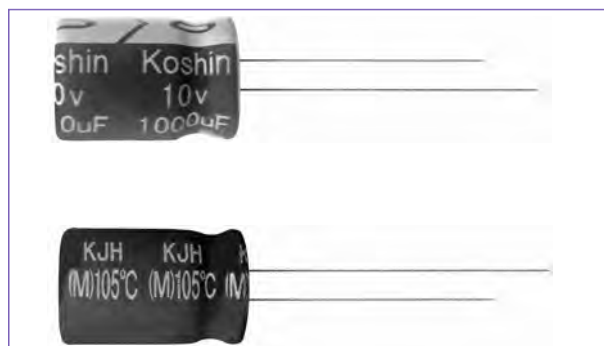
Outline Drawing

Unit: mm



Photo

ROSH



Marking color: black print on yellow sleeve

### Specifications

No.	Item	Performance									
1	Temperature range (°C)	-55 to +105									
2	Leakage current (μA)	Less than 0.01CV or 3 whichever is larger(after two minutes) 20°C									
3	Capacitance tolerance (%)	±20 (20°C, 120Hz)									
4	Tangent of the loss angle (Tan δ)	Rated voltage (V)	6.3	10	16	25	35	50	63	100	20°C
		Tan δ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.08	0.07	120Hz
0.02 is added to every 1000 μF increase over 1000 μF											
5	Low temperature characteristics	Rated voltage (V)	6.3	10	16	25	35	50	63	100	120Hz
		Impedance ratio (max)	Z <sub>(-25°C)</sub> / Z <sub>(+20°C)</sub>	2	2	2	2	2	2	2	
		Z <sub>(-55°C)</sub> / Z <sub>(+20°C)</sub>	3	3	3	3	3	3	3	3	
6	Endurance (105°C) (Applied ripple current)	Test time	5000hours (Φ5 to 6.3: 2000hours; Φ8 to 10: 3000 hours)								
		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								
8	Applicable standards	JIS-C-5102 and JIS-C-5141									

### Coefficient of Frequency for Ripple Current

Capacitance (μF)	Frequency (Hz)			
	120	1K	10K	100K
CAP ≤ 4.7	0.40	0.68	0.78	1.00
4.7 < CAP ≤ 47	0.50	0.76	0.87	1.00
47 < CAP ≤ 220	0.70	0.85	0.90	1.00
220 < CAP ≤ 1000	0.80	0.93	0.98	1.00
1000 < CAP	0.90	0.95	1.00	1.00

### Coefficient of Temperature for Ripple Current

Temperature(°C)	45	60	70	85	95	105
Coefficient	2.10	1.90	1.65	1.40	1.25	1.00

## KJH Miniature Aluminum Electrolytic Capacitors

Dimension:  $\Phi$  DXL(mm)

Ripple Current: mA/rms at 100KHz, 105°C

### DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\mu$ F	V.DC Item	6.3V			10V				
		$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C) 100KHz	$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C) 100KHz
			20°C	-10°C			20°C	-10°C	
47					5X11	2.10	5.50	111	
56					5X11	1.90	4.80	121	
68					5X11	1.30	3.90	154	
100		5X11	1.30	3.90	154	6.3X11	0.60	1.80	260
220		6.3X11	0.60	1.80	260	8X11.5	0.33	0.99	400
330		8X11.5	0.33	0.88	400	8X11.5	0.33	0.99	400
390		8X11.5	0.33	0.88	400	10X12.5	0.27	0.75	510
470		10X12.5	0.25	0.75	510	10X12.5	0.25	0.75	510
560		10X12.5	0.25	0.75	510	10X16	0.19	0.57	635
680		10X16	0.19	0.57	635	10X16	0.19	0.57	635
1000		10X20	0.14	0.42	860	10X20	0.14	0.37	860
1200		10X20	0.14	0.42	860	10X25	0.12	0.30	1030
2200		12.5X20	0.085	0.26	1250	12.5X25	0.070	0.21	1355
3300		12.5X25	0.070	0.21	1355	12.5X25	0.070	0.21	1355
4700		16X25	0.060	0.18	1770	16X31.5	0.048	0.14	2030

Low Impedance Type

$\mu$ F	V.DC Item	16V			25V				
		$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C) 100KHz	$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C) 100KHz
			20°C	-10°C			20°C	-10°C	
33		5X11	1.30	3.90	154	5X11	1.30	3.90	154
39		5X11	1.30	3.90	154	6.3X11	0.60	1.80	260
47		6.3X11	0.60	1.80	260	6.3X11	0.60	1.80	260
56		6.3X11	0.60	1.80	260	6.3X11	0.60	1.80	260
68		6.3X11	0.60	1.80	260	6.3X11	0.60	1.80	260
100		6.3X11	0.60	1.80	260	8X11.5	0.33	0.99	400
220		8X11.5	0.33	0.99	400	10X12.5	0.25	0.75	510
330		10X12.5	0.25	0.75	510	10X16	0.19	0.57	635
390		10X16	0.19	0.57	635	10X20	0.14	0.42	635
470		10X16	0.19	0.57	635	10X20	0.14	0.42	635
560		10X20	0.14	0.42	860	10X25	0.12	0.30	1030
680		10X20	0.14	0.42	860	12.5X20	0.085	0.26	1250
1000		12.5X20	0.085	0.26	1250	12.5X25	0.070	0.23	1355
1200		12.5X20	0.085	0.26	1250	12.5X25	0.070	0.21	1355
2200		12.5X25	0.070	0.21	1355	16X25	0.060	0.18	1770
3300		16X31.5	0.048	0.14	2030	16X35.5	0.044	0.13	2295
4700		16X35.5	0.044	0.13	2295	18X40	0.037	0.10	2740

## KJH Miniature Aluminum Electrolytic Capacitors

Dimension:  $\Phi$  DXL(mm)

Ripple Current: mA/rms at 100KHz, 105°C

### DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\mu$ F	V.DC Item	35V			50V				
		$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C) 100KHz	$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C) 100KHz
			20°C	-10°C			20°C	-10°C	
1					5X11	4.00	15.0	78	
2.2					5X11	4.00	12.0	88	
3.3					5X11	3.50	11.0	94	
4.7					5X11	3.00	9.00	100	
6.8					5X11	3.00	9.00	100	
10					5X11	2.00	6.00	124	
22	5X11	1.30	3.90	154	6.3X11	0.60	1.80	260	
33	6.3X11	0.60	1.80	260	6.3X11	0.60	1.80	260	
39	6.3X11	0.60	1.80	260	6.3X11	0.60	1.80	260	
47	6.3X11	0.60	1.80	260	8X11.5	0.33	0.99	400	
56	6.3X11	0.60	1.80	260	8X11.5	0.33	0.99	400	
68	6.3X11	0.60	1.80	260	8X11.5	0.33	0.99	400	
100	8X11.5	0.33	0.99	400	10X16	0.19	0.57	635	
220	10X16	0.19	0.57	635	10X25	0.12	0.30	1030	
330	10X20	0.12	0.42	860	12.5X20	0.085	0.26	1250	
390	10X25	0.12	0.30	1030	12.5X25	0.070	0.21	1355	
470	12.5X20	0.085	0.26	1250	12.5X25	0.070	0.21	1355	
560	12.5X20	0.085	0.26	1250	12.5X25	0.070	0.21	1355	
680	12.5X25	0.070	0.21	1355	16X25	0.060	0.18	1770	
1000	12.5X25	0.070	0.21	1355	16X25	0.060	0.18	1770	
1200	12.5X25	0.070	0.21	1355	16X31.5	0.048	0.14	2030	
2200	16X35.5	0.044	0.13	2295	18X40	0.037	0.10	2740	
3300	18X40	0.037	0.10	2740					

$\mu$ F	V.DC Item	63V			100V				
		$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C) 100KHz	$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C) 100KHz
			20°C	-10°C			20°C	-10°C	
1					5X11	7.00	25.0	66	
2.2					5X11	6.00	21.0	72	
3.3					5X11	5.00	18.0	78	
4.7					6.3X11	1.20	4.20	180	
6.8					6.3X11	1.20	4.20	180	
10	6.3X11	1.20	4.20	180	8X11.5	0.56	2.00	305	
22	6.3X11	1.20	4.20	180	8X11.5	0.56	2.00	308	
33	8X11.5	0.56	2.00	305	10X12.5	0.50	1.80	380	
39	8X11.5	0.56	2.00	305	10X16	0.32	1.10	500	
47	8X11.5	0.56	2.00	305	10X20	0.27	0.95	620	

## KJH Miniature Aluminum Electrolytic Capacitors

Dimension:  $\Phi$  DXL(mm)

Ripple Current: mA/rms at 100KHz, 105°C

### DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\mu$ F	V.DC Item	63V			100V				
		$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C)	$\Phi$ DXL	Impedance ( $\Omega$ , Max/100KHz)		Ripple Current (mA/rms, 105°C)
			20°C	-10°C	100KHz		20°C	-10°C	100KHz
56	10X12.5	0.50	1.80	380	10X20	0.27	0.95	620	
68	10X12.5	0.50	1.80	380	10X25	0.21	0.63	760	
100	10X20	0.27	0.95	620	12.5X20	0.16	0.56	890	
220	12.5X20	0.094	0.24	820	16X25	0.090	0.32	1440	
330	12.5X25	0.073	0.21	1100	16X31.5	0.060	0.17	1790	
390	12.5X25	0.073	0.21	1100	16X35.5	0.056	0.14	2065	
470	16X25	0.060	0.18	1770					
560	16X31.5	0.048	0.14	2030					
680	16X31.5	0.048	0.14	2030					
1000	18X35.5	0.041	0.11	2240					