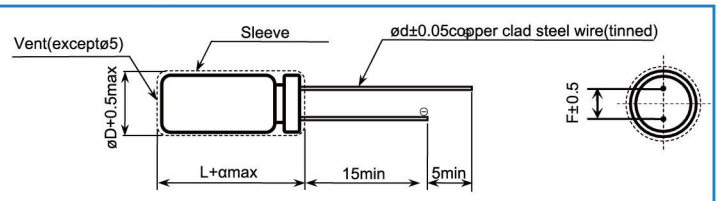
Koshin

KCH Miniature Aluminum Electrolytic Capacitors

105℃ High Voltage Capacitors , Series KCH.
Guaranteed 2000 –5000hours at 105℃ for charger.

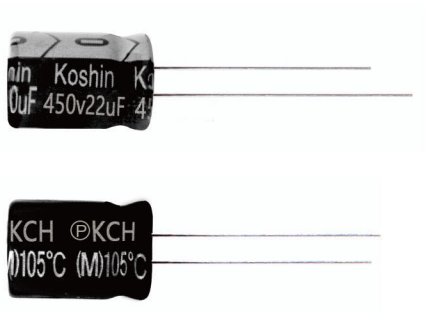
RoHS

Outline Drawing Unit: mm



øD	5	6.3	8	10	12.5	16	18	22	25
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0	10.0
ød	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8/1.0	1.0
α	1.5			1.5 for L16 max. 2.0 for L20 min.					

Photo



Marking color: white print on black sleeve

Specifications

No.	Item	Performance						
1	Temperature range(℃)	–40 to +105(400V ~ 550V)						
2	Leakage current (μA)	Less than 0.03CV or 3 whichever is larger (after one minutes)						
		C: Rated 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)	400	450	500	550	20°C	
		Tan δ (max)	0.22	0.19	0.16	0.14	120Hz	
		0.02 is added to each 1000uF increase over 1000uF.						
5	Low temperature characteristics	Rated voltage (V)		400	450	500	550	120Hz
		Impedance ratio(max)	$Z_{(-25℃)}/Z_{(+20℃)}$	3	3	3	3	
			$Z_{(-40℃)}/Z_{(+20℃)}$	6	6	6	6	
6	Endurance (105℃) (Applied ripple current)	Rated voltage (V) \ Size(Φ)		6.3	8	10	12.5	
		400		2000hours	2000hours	3000hours	3000hours	
		450		2000hours	3000hours	5000hours	5000hours	
		500		2000hours	3000hours	3000hours	5000hours	
		550		2000hours	2000hours	2000hours	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 ± 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						

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KCH Miniature Aluminum Electrolytic Capacitors

DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension:ΦDXL(mm)
Ripple Current: mA/rms at 120Hz,105℃
ESR: Ω at 120Hz

V.DC / Contents μF	400V											
	ΦDXL	mA	ESR(Ω)	*ΦD×L	mA	ESR(Ω)	ΦDXL	mA	ESR(Ω)	*ΦD×L	mA	ESR(Ω)
1	6.3X11	15	80									
2.2	6.3X9	21	36	8X9	29	36						
2.2	6.3X11	23	36	8X11.5	33	36						
3.3				8X9	36	24						
3.3	6.3X11	28	24	8X10.5	38	24						
4.7	6.3X12	34	16	8X9	43	16						
4.7	6.3X15	38	16	8X11.5	48	16						
4.7	7.3X11	36	16									
5.6	6.3X17	44	14	8X11.5	53	14						
6.8	6.3X14	44	12	8X10.5	55	12	10X10.5	63	12			
6.8				8X13	60	12	10X13	68	12			
7.5							10X10.5	66	11			
8.2				8X10.5	60	10						
8.2	6.3X17	53	10	8X11.5	64	10	10X10.5	69	10			
8.2				8X14	68	10	10X13	75	10			
10				8X12	70	8	10X10.5	76	8			
10	6.3X25	70	8	8X14	75	8	10X13	83	8			
10	7.3X15	60	8	8X16	80	8	10X16	91	8			
12	7.3X16	68	7	8X16	87	7	10X13	91	7			
15				8X16	98	5	10X13	102	5	12.5X15	123	5
15				8X18	103	5	10X16	111	5			
15				8X20	108	5						
18							10X14	115	5			
22				8X20	131	4	10X15	131	4	12.5X16	153	4
22				8X22	137	4	10X16	134	4	12.5X20	168	4
27							10X20	148	4			
31				8X40	215	3						
33							10X19	177	3	12.5X18	197	3
33							10X21	185	3	12.5X20	206	3
33										12.5X25	227	3
33										13X17	196	3
33							16X18	227	3			
47				12.5X20	246	2	16X20	283	2			
68				14.5X32	395	2	16X25	374	2			
82							16X30	445	1	18X20	400	1
100				12.5X42	500	1				18X31.5	540	11

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DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension:ΦDXL(mm)
Ripple Current: mA/rms at 120Hz,105℃
ESR: Ω at 120Hz

V.DC / Contents μF	450V											
	ΦDXL	mA	ESR(Ω)	*ΦD×L	mA	ESR(Ω)	ΦDXL	mA	ESR(Ω)	*ΦD×L	mA	ESR(Ω)
2.2	6.3X9.5	21	36	8X12	33	36						
3.3				8X10.5	38	24						
4.7	6.3X17	40	16									
4.7	6.3X20	43	16	8X11.5	48	16	10X13	57	16			
5.6				8X11.5	53	14						
5.6				8X16	60	14						
6.8				8X11.5	58	11	10X13	68	11			
6.8				8X17	68	11						
8.2							10X10.5	69	10			
8.2				8X11.5	64	10	10X13	75	10			
8.2	6.3X25	64	10	8X15	70	10	10X15	80	10			
10				8X17	82	8	10X13	83	8			
10				8X20	88	8	10X16	91	8			
12				8X17	90	7	10X16	99	7			
15							10X16	111	5	12.5X16	126	5
18							10X18	128	5	13X16	141	5
22										13X17	160	4
22							10X16	134	4	12.5X20	168	4
22							10X20	148	4	12.5X18	178	4
27										12.5X25	185	3
27										13X20	190	3
33							10X19	177	3	13X20	210	3
33										13X27	240	3
39				8X60	293	2						
47							16X22	295	2	18X18	290	2
47							16X25	311	2	18X25	333	2
56										18X20	331	2
68							16X30	405	2	18X25	400	2
82							16X35	476	1	18X20	400	1
120										18X35	615	1
120										18X40	653	1
150										18X45	770	1

DIMENSION & PERMISSIBLE RIPPLE CURRENT

Dimension:ΦDXL(mm)
Ripple Current: mA/rms at 120Hz,105℃
ESR: Ω at 120Hz

V.DC / Contents μF	500V											
	ΦDXL	mA	ESR(Ω)	*ΦD×L	mA	ESR(Ω)	ΦDXL	mA	ESR(Ω)	*ΦD×L	mA	ESR(Ω)
3.9				8X11.5	44	20						
4.7				8X11.5	48	16	10X13	57	16			
6.8							10X13	68	11			
8.2				8X17	74	10						
10							10X16	91	8	13X16	103	8
15										13X17	132	5
22										13X21	175	4

V.DC / Contents μF	550V											
	ΦDXL	mA	ESR(Ω)	*ΦD×L	mA	ESR(Ω)	ΦDXL	mA	ESR(Ω)	*ΦD×L	mA	ESR(Ω)
2.2				8X11.5	33	36						
3.3				8X16	46	24						
4.7				8X16	55	16	10X12	57	61			
5.6				8X20	66	14						
6.8							10X14	70	11			
8.2							10X16	82	10			
10							10X18	95	8			
10							10X25	110	8			
12							10X18	104	7			
15										13X16	129	5

Coefficient of Frequency for Ripple Current

Rated voltage (V)	Frequency (Hz) / Capacitance(μF)	50*60	120	1K	10K	100K
400 to 550	1 to 150	0.80	1.00	1.30	1.40	1.60

Coefficient of Temperature for Ripple Current

Temperature(℃) / Rated voltage (V)	70 or less	85	105
400 to 550	1.80	1.40	1.00