



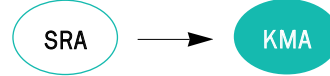
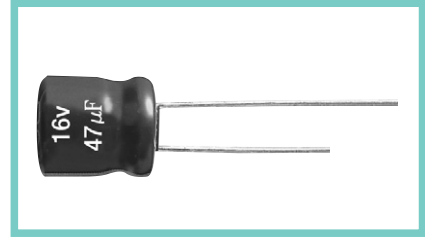
MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

KMA(HSA) Series

• 105°C 1,000Hrs assured.

- Height 7mm.
- Wide Temperature range.
- For CAR-Audio, Tuner
- RoHS compliant.

Solvent-proof



Wide temp.

SPECIFICATIONS

Item	Characteristics																		
Rated Voltage Range	4 ~ 63 V _{DC}																		
Operating Temperature Range	-55 ~ +105°C																		
Capacitance Tolerance	±20%(M) (at 20°C, 120Hz)																		
Leakage Current	I=0.01CV(µA) or 3µA, whichever is greater. Where, I:Max. Leakage current(µA), C:Nominal capacitance(µF), V:Rated voltage(V _{DC}) (at 20°C, 2 minutes)																		
Dissipation Factor(Tanδ)	<table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> </tr> <tr> <td>Tanδ(Max.)</td> <td>0.35</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.08</td> </tr> </table> (at 20°C, 120Hz)	Rated Voltage(V _{DC})	4	6.3	10	16	25	35	50	63	Tanδ(Max.)	0.35	0.22	0.19	0.16	0.14	0.12	0.10	0.08
Rated Voltage(V _{DC})	4	6.3	10	16	25	35	50	63											
Tanδ(Max.)	0.35	0.22	0.19	0.16	0.14	0.12	0.10	0.08											
Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>4</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25~63</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> </tr> </table> (at 120Hz)	Rated Voltage(V _{DC})	4	6.3	10	16	25~63	Z(-25°C)/Z(20°C)	4	4	3	2	2	Z(-40°C)/Z(20°C)	10	8	6	4	3
Rated Voltage(V _{DC})	4	6.3	10	16	25~63														
Z(-25°C)/Z(20°C)	4	4	3	2	2														
Z(-40°C)/Z(20°C)	10	8	6	4	3														
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 1,000 hours at 105°C. Capacitance change ≤ ±20% of the initial value(±25% for 4 V _{DC} ~16 V _{DC}) Tan δ ≤ 200% of the initial specified value Leakage current ≤ The initial specified value																		
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 105°C without voltage applied.The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurement Capacitance change ≤ ±20% of initial value(±25% for 4 V _{DC} ~16 V _{DC}) Tan δ ≤ 200% of initial specified value Leakage current ≤ The initial specified value																		
Others	Satisfied characteristics W of KS C 6421																		

RATINGS OF KMA Series

V _{DC} µF	4(0G)	6.3(0J)	10(1A)	16(1C)	25(1E)	35(1V)	50(1H)	63(1J)
0.1							4×7 1.3	4×7 1.3
0.15							4×7 2.0	4×7 2.0
0.22							4×7 2.9	4×7 2.9
0.33							4×7 3.5	4×7 4.4
0.47							4×7 5.0	4×7 7.9
0.68							4×7 7.1	4×7 9.2
1							4×7 10	4×7 11
1.5							4×7 12	4×7 13
2.2							4×7 15	4×7 17
3.3						4×7 17	4×7 18	5×7 21
4.7					4×7 19	4×7 20	5×7 23	6.3×7 26
6.8				4×7 20	5×7 23	5×7 24	6.3×7 28	6.3×7 31
10				4×7 25	5×7 28	5×7 30	6.3×7 34	8×7 41
15			4×7 28	5×7 31	6.3×7 35	6.3×7 37	6.3×7 41	8×7 50
22		4×7 31	5×7 35	5×7 39	6.3×7 43	6.3×7 47	6.3×7 52	
33	4×7 26	5×7 39	5×7 43	6.3×7 49	6.3×7 53	8×7 62	8×7 68	
47	4×7 34	5×7 47	6.3×7 53	6.3×7 59	8×7 68			
68	5×7 52	6.3×7 57	6.3×7 63	8×7 76				
100	5×7 61	6.3×7 71	6.3×7 80					
150	6.3×7 88	8×7 94	8×7 94					
220	8×7 110							

↑ Rated Ripple Current (mArms/105°C, 120Hz)
 ↑ Case Size ØD×L(mm)

DIMENSIONS OF KMA Series

unit (mm)

