

# KM Series

SAMXON®

+105°C, Standard(標準品)

## FEATURES

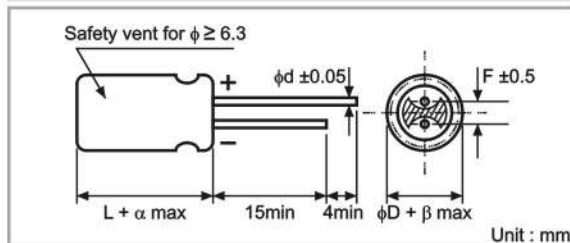
1. Rated working voltage range 6.3 to 100V DC/160 to 450V DC at operation temperature range -40 to +105°C/-25 to +105°C.
2. This series is for communication equipments, switching power supply, industrial measuring instruments, automotive electric products, etc.



## SPECIFICATIONS

Item	Performance Characteristics	
Operating Temperature Range	-40 to +105°C	-25 to +105°C
Rated Working Voltage Range	6.3 to 100V	160 to 450V
Nominal Capacitance Range	0.1 to 33000µF	
Capacitance Tolerance	±20% (120Hz, +20°C)	
Leakage Current	I ≤ 0.01CV or 3(µA) whichever is greater after 2 minutes application of rated working voltage at +20°C	
Dissipation Factor tan δ (120Hz, +20°C)	Working Voltage (V)	6.3    10    16    25    35    50    63    100
	tan δ (max.)	0.26   0.22   0.18   0.16   0.14   0.12   0.10   0.08
	Working Voltage (V)	160    200    220    250    350    400    420    450
	tan δ (max.)	0.20   0.20   0.20   0.20   0.24   0.24   0.24   0.24
For capacitance value > 1000µF, add 0.02 per another 1000µF		
Low Temperature Characteristics	Impedance ratio max. at 120Hz	
	Working Voltage (V)	6.3    10    16    25    35    50    63    100
	Z-25°C / Z+20°C	5    4    3    2    2    2    2    2
	Z-40°C / Z+20°C	10    8    6    4    3    3    3    3
Working Voltage (V)	160    200    220    250    350    400    420    450	
Z-25°C / Z+20°C	3    3    3    4    4    6    6    15	
For capacitance value > 1000µF, Add 0.5 per another 1000µF for Z-25°C / Z+20°C Add 1.0 per another 1000µF for Z-40°C / Z+20°C		
High Temperature Loading	Test conditions	Post test requirements at +20°C
	Duration : $\phi D \leq 8 \geq 10$ Load life 1000h 2000h Ambient temp. : +105°C Applied voltage : DC voltage with maximum permissible ripple current specified at +105°C (Sum of the DC voltage and super-imposed peak AC voltage for maximum permissible ripple current should be equal to rated DC working voltage).	Leakage current : ≤ Initial specified value Cap. change : within ±20% of initial measured value tan δ : ≤ 200% of initial specified value
Shelf Life	Test conditions	Post test requirements at +20°C
	Duration : 1000 hours Ambient temp. : +105°C Applied voltage : (None)	Same limits for high temperature loading.
Others	JIS C - 5101 (IEC 60384)	

## CASE SIZE TABLE



	φD	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	12.5
φd			0.5		0.6		0.8			1.0
α			(L < 20) 1.5			(L ≥ 20) 2.0				
β			(D < 20) 0.5			(D ≥ 20) 1.0				

## RIPPLE CURRENT MULTIPLIER

Temperature Coefficient					Frequency Coefficient									
Temperature(°C)	~ 55	60	70	85	105	Rated Voltage(V)	Cap(µF)	Freq.(Hz)	50	120	300	1K	10K~	
Factor	2.23	2.17	2.00	1.75	1.00	6.3 ~ 100		~ 47	0.75	1.00	1.35	1.57	2.00	
								100 ~ 470	0.80	1.00	1.23	1.34	1.50	
								≥ 560	0.85	1.00	1.10	1.13	1.15	
						160 ~ 450		0.47 ~ 220	0.80	1.00	1.25	1.40	1.60	
								≥ 270	0.90	1.00	1.10	1.13	1.15	

KM

Miniature Aluminum Electrolytic Capacitors

**+105°C, Standard(標準品)**

**DIMENSIONS**

Voltage (Code)		6.3V (0J)		10V (1A)		16V (1C)		25V (1E)	
Cap.(μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
0.1	104								
0.15	154								
0.22	224								
0.33	334								
0.47	474								
1	105								
2.2	225								
3.3	335								
4.7	475							5 x 11	26
10	106					5 x 11	35	5 x 11	38
22	226			5 x 11	49	5 x 11	54	5 x 11	57
33	336	5 x 11	54	5 x 11	60	5 x 11	64	5 x 11	75
47	476	5 x 11	65	5 x 11	70	5 x 11	80	5 x 11	84
68	686	5 x 11	70	5 x 11	75	5 x 11	90	5 x 11	92
100	107	5 x 11	95	5 x 11	105	5 x 11	125	6.3 x 11	159
220	227	5 x 11	153	6.3 x 11	193	6.3 x 11	213	8 x 12	285
330	337	6.3 x 11	216	6.3 x 11	239	8 x 12	315	8 x 12	340
470	477	6.3 x 11	258	6.3 x 11	285	8 x 12	366	10 x 12.5	471
680	687	8 x 12	365	10 x 12.5	472	10 x 12.5	480	10 x 16	620
1000	108	8 x 12	443	10 x 12.5	571	10 x 16	680	10 x 20	821
2200	228	10 x 20	817	10 x 20	886	12.5 x 20	1108	12.5 x 25	1297
3300	338	10 x 20	1032	12.5 x 20	1205	12.5 x 25	1389	16 x 25	1646
4700	478	12.5 x 20	1280	12.5 x 25	1492	16 x 25	1740	16 x 30	2012
6800	688	12.5 x 25	1554	16 x 25	1824	16 x 30	2081	16 x 40	2452
10000	109	16 x 25	1897	16 x 30	1980	16 x 40	2527	18 x 35	2500
15000	159	16 x 35	2344	16 x 40	2180	18 x 35	2600		
22000	229	18 x 40	2500	18 x 35	2268				
33000	339	18 x 35	2400						
		18 x 40	2555						

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size φD x L(mm)

Voltage (Code)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
Cap.(μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
0.1	104			5 x 11	1				
0.15	154			5 x 11	1.5				
0.22	224			5 x 11	3				
0.33	334			5 x 11	4				
0.47	474			5 x 11	7			5 x 11	10
1	105			5 x 11	13			5 x 11	16
2.2	225			5 x 11	20			5 x 11	23
3.3	335			5 x 11	30			5 x 11	34
4.7	475	5 x 11	28	5 x 11	37	5 x 11	40	5 x 11	40
10	106	5 x 11	41	5 x 11	54	5 x 11	59	6.3 x 11	61
22	226	5 x 11	67	5 x 11	79	6.3 x 11	87	8 x 12	110
33	336	5 x 11	80	6.3 x 11	115	6.3 x 11	122	8 x 12	144
47	476	5 x 11	101	6.3 x 11	133	6.3 x 11	146	10 x 12.5	199
		6.3 x 11	120						
68	686					8 x 12	155	10 x 12.5	220
100	107	6.3 x 11	168	8 x 12	229	10 x 12.5	251	10 x 20	349
220	227	8 x 12	294	10 x 16	509	10 x 20	504	12.5 x 25	662
330	337	10 x 12.5	419	10 x 20	650	12.5 x 20	688	12.5 x 25	800
470	477	10 x 16	547	12.5 x 20	801	12.5 x 25	897	16 x 30	1072
680	687	10 x 20	682	12.5 x 20	923	12.5 x 25	1160	18 x 35	1125
1000	108	12.5 x 20	1023	12.5 x 25	1287	16 x 30	1568	18 x 40	2020
2200	228	16 x 25	1497	16 x 35	1884	18 x 40	1890		
3300	338	16 x 30	1808	18 x 40	2300				
4700	478	18 x 35	2335						
6800	688	18 x 40	2400						

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size φD x L(mm)

**DIMENSIONS**

Voltage (Code)		160V (2C)		200V (2D)		220V (2N)		250V (2E)	
Cap.(μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
0.47	474							6.3 x 11	8
1	105							6.3 x 11	17
2.2	225							6.3 x 11	27
3.3	335			6.3 x 11	30	6.3 x 11	30	6.3 x 11	35
4.7	475	6.3 x 11	41	6.3 x 11	40	8 x 12	40	8 x 12	45
10	106	8 x 12	60	10 x 12.5	72	10 x 12.5	70	10 x 12.5	75
22	226	10 x 16	110	10 x 20	125	10 x 20	125	10 x 20	130
33	336	10 x 20	156	10 x 20	165	12.5 x 20	165	12.5 x 20	184
47	476	10 x 20	195	12.5 x 20	220	12.5 x 20	220	12.5 x 25	238
68	686	12.5 x 20	250	12.5 x 25	250	12.5 x 25	245	16 x 25	270
82	826	12.5 x 25	310	10 x 30	320	12.5 x 30	280	16 x 30	380
100	107	12.5 x 25	360	16 x 25	386	16 x 25	335	16 x 30	422
150	157	12.5 x 30	380	12.5 x 30	496	16 x 30	365	18 x 30	440
180	187	12.5 x 35	420	12.5 x 35	560	16 x 35	500	18 x 35	469
220	227	16 x 30	680	16 x 35	580	16 x 40	615	18 x 35	485
				12.5 x 40	640				
270	277	16 x 30	728	16 x 30	696				
330	337	18 x 35	830	16 x 35	808				
				18 x 30	808				
390	397	18 x 35	850	16 x 40	904				
				18 x 35	904				
470	477	18 x 40	880	18 x 40	1016				
560	567	18 x 45	925	18 x 45	1112				

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size φD x L(mm)

Voltage (Code)		350V (2V)		400V (2G)		420V (2M)		450V (2W)	
Cap.(μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
0.47	474	6.3 x 11	8						
1	105	6.3 x 11	18	6.3 x 11	19	6.3 x 11	15	6.3 x 11	16
2.2	225	6.3 x 11	25	8 x 12	30	8 x 12	29	10 x 12.5	28
3.3	335	8 x 12	40	10 x 12.5	41	10 x 12.5	40	10 x 12.5	33
4.7	475	10 x 12.5	50	10 x 16	52	10 x 16	52	10 x 16	42
10	106	10 x 20	80	10 x 20	86	10 x 20	85	12.5 x 20	84
18	186	12.5 x 20	100	12.5 x 20	105	12.5 x 25	124	10 x 30	108
22	226	12.5 x 20	150	12.5 x 25	163	10 x 30	160	16 x 25	151
						12.5 x 25	140		
27	276	12.5 x 25	177	10 x 30	192	12.5 x 25	170	12.5 x 30	164
33	336	16 x 25	200	16 x 25	222	16 x 25	200	12.5 x 30	224
								16 x 30	257
39	396	16 x 25	258	16 x 25	251	12.5 x 30	248	12.5 x 35	256
47	476	16 x 25	265	12.5 x 30	266	12.5 x 35	288	12.5 x 40	304
				16 x 30	290	16 x 35	270	16 x 35	254
56	566	16 x 30	280	12.5 x 35	336	12.5 x 40	344	16 x 30	352
68	686	16 x 30	288	12.5 x 40	384	16 x 30	408	18 x 35	392
82	826	18 x 30	372	18 x 30	280	16 x 35	456	16x40/18x30	440
100	107	18 x 35	460	16 x 30	310	16 x 40	488	18 x 35	470
				18 x 35	464	18 x 30	488	18 x 40	520
120	127			18 x 30	536	18 x 35	528	18 x 40	592
150	157			18 x 35	616	18 x 40	568	18 x 45	640
180	187			18 x 40	704				
220	227			18 x 45	800				

Maximum Allowable Ripple Current (mA rms) at 105°C 120Hz

Case Size φD x L(mm)

**KM**

**Miniature Aluminum Electrolytic Capacitors**