

SK Type

+85°C Single-ended lead aluminum electrolytic capacitors for the rated voltage up to 450V

Moderate cost, rugged construction and reliable operation are important feature of improved SK TYPE capacitors. Substantially smaller sizes are reliable. A new electrolyte system is used to produce an extended operating temperature range for the rated voltage up to 450V, and in addition , a wider range of capacitance-voltage ratings is provided through the addition of 22mm diameter case sizes.

Diagram of Dimensions (Unit = mm)

PERFORMANCE CHARACTERISTICS

Feature

- . Working voltage range : 6.3 to 100V ! 160 to 450V
- . Operating temp. range : -40 to 85°C ! -25 to +85°C
- . Rate capacitance range : 0.1 to 22000uF ! 0.47 to 470uF
- . Capacitance tolerance : -20 to +20% ! -20 to +20% (@ 25°C)
- . DC leakage current (uA) : 0.01CV or 3uA ! 0.03CV+10uA (@ 25°C)

(Measurements shall be made after a 5 minute charge at rated working voltage)

- . Dissipation factor : at 120 Hz, 25°C

WV(V)	6.3	10	16	25	35	50	63	100	160-250	350-450
DF(%)	22	19	16	14	12	10	9	8	15	20

For capacitor whose capacitance exceeds 1000 uF, the value of DF(%) is increased by 2% for every addition of 1000 uF.

- . Load Life (2000hrs , at rated temperature , 85°C)
 - Capacitance change : within 20% of initial value
 - Dissipation factor : not exceed 200% of initial requirement
 - Leakage current : not exceed the initial requirement
- . Shelf Life (1000 hrs, no voltage applied, 85°C)
 - Capacitance change : within 20% of initial value
 - Dissipation factor : not exceed 200% of initial requirement
 - Leakage current : not exceed 200% OF initial requirement

Catalog Numbering

SK 016 M 1000 A 5 S - 1015

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: : : : : : : : : ...Case size

: : : : : : : : : ...Lead cut

: : : : : : : : : ...Rubber

: : : : : : : : : ...Pitch

: : : : : : : : : ...Package Code

: : : : : : : : : ...Capacitance. This expressed in microfarads

: : : : : : : : : ...Capacitance tolerance

: : : : : : : : : ...DC voltage rating. This is expressed in volt.

: : : : : : : : : ...YAGEO type number. This identifies the basic capacitor design

PERFORMANCE CHARACTERISTICS(continued)

1. General Characteristics.

1.1 Marking.

Capacitors shall be marked with YAGEO mark ; rated capacitance ; rated DC working voltage range. and the date code of manufacture. The cathode lead will be identified with minus signs (-) on the side of the case.

1.2 Operating Temperature Range.

These capacitors are designed to operate over a temperature range of -40°C to +85°C, for the rated voltage up to 100 V, while 160V to 450V operating temperature range within -25°C to +85°C.

1.2.1 At -40(-25)°C, capacitors shall retain at least 70% of their original 25°C measured capacitance. At +85°C. capacitance shall increase to no more than 120% of their original 25°C measured capacitance.

1.2.2 At -40(-25) °C, impedance shall increase to no more than the following table.

TEMPERATURE CHARACTERISTIC (@ 120Hz)								
Working Voltage (WV)	6.3	10	16	25	35-100	160-250	315-350	400-450
Impedance Z-25°C/ Z+20°C	8	6	5	3	3	7	10	15
Impedance Z-40°C/ Z+20°C	10	8	6	4	3	-	-	-

1.3 Vent Test (applies only to those capacitors with vents.)

During and after the applicable test below (1.3.1 or 1.3.2.) there shall be no explosion, flash, flame or expulsion of particles of the core or container. In addition, the case shall not be expelled from the core. If the capacitor under test is a multisection unit, this test shall apply to the input section only.

1.3.1 AC Test. Capacitors with DC Rating Over 100 Volts

The capacitor under test shall be connected to a 120 volt RMS 60Hz, 100 ampere service through a 30 ampere thermal breaker and a 0.5 ohm, low inductance, series resistor. The capacitor shall be connected to this circuit for 5 minutes after the initial setting of the breaker or until the breaker has opened 3 times. If the breaker opens, it shall be reset not sooner than 30 seconds nor longer than 60 seconds from the time it opened.

1.3.2 DC Test. Capacitors with DC Rating 100 Volts or Less

Both of the following tests shall be performed, but on separate test units.

1.3.2.1 Forward Bias Test.

The capacitor under test shall be connected to a DC power supply that has sufficient voltage to supply a constant direct current of 500 milliamperes with the positive terminal of the capacitor connected to the positive supply terminal and the negative capacitor terminal connected to the negative supply terminal. The constant current shall be maintained until (1) the capacitor vents, (2) 300 seconds have elapsed, or (3) the capacitor under test open circuits.

PERFORMANCE CHARACTERISTICS(continued)

1.3.2.2 Reverse Bias Test.

The capacitor under test shall be connected to a power supply with sufficient voltage to provide a constant direct current of 500 milliamperes when the positive capacitor terminal is connected to the negative supply terminal and the negative capacitor terminal to the positive supply terminal. The constant current shall be maintained until (1) the capacitor vents, (2)300 seconds have elapsed, or (3) The capacitor open circuits.

2. Mechanical Characteristics

2.1 Lead Pull test.

Capacitor leads shall withstand a steady pull of 1 Kg applied axially to the leads for 5 seconds.

3. Electrical Characteristics

3.1 Standard Test Conditions

Unless otherwise specified all tests shall be performed at, or referred to, an ambient temperature of 25°C and a relative humidity not greater than 50%.

3.2 Capacitance and Dissipation Factor

Measurements shall be made on a capacitance bridge capable of +/-2% accuracy on capacitance and dissipation factor measurements. Measurements shall be made at 120 Hz The RMS value of the AC measuring voltage shall not exceed 1.0 volt.

3.3 Leakage Current.

3.3.1 Pre-conditioning. Rated working voltage shall be applied to capacitors for a minimum period of 15 minutes duration at least 24 hours and not more than 48 hours before test.

3.3.2 Test. Measurements shall be made after a 5 minute charge at rated working voltage at 25°C with an application of a steady source of power. Such as a regular power supply, with a 1000 ohm resistance to limit the charging current, connected in series with each capacitor under test.

3.4 Surge Voltage

The surge DC rating is the maximum voltage to which the capacitor should be subjected under any conditions. This includes transients and peak ripple at the highest line voltage.

3.4.1 Capacitors, connected in series with 1000 ohm resistors, shall withstand the surge test voltage applied at the rated of 1/2 minute on, 5 1/2 minutes off, for 1000 successive test cycles at 25°C.(see the following table)

Rated Voltage	6.3	10	16	25	35	50	63	80	100	160	200	250	350	450
Surge Voltage	8	13	20	32	44	63	75	100	125	200	250	300	400	500

*PERFORMANCE CHARACTERISTICS(continued)***3.5 Humidity Test**

Capacitors shall be subjected to a temperature of $40 \pm 2^{\circ}\text{C}$ at a relative humidity of 90-95% for a period of 96 hours, then air dried for 1 hour. Following this conditioning, capacitors shall meet the specified requirements for dissipation factor and DC leakage current, and the capacitance value shall not change more than 10%.

4. Life And Reliability Test**4.1 Life Test.**

4.1.1 Rated voltage shall be applied to the capacitors for a period of 2000 hours at ambient temperature of $+85^{\circ}\text{C}$ for voltage up to 100V, and a period of 1000 hours for voltage over 160V.

4.1.2 Capacitors shall then be removed from the test chamber and return to room temperature.

4.1.3 The capacitance shall then be measured in accordance with section 3.2 It shall not decrease to less than 80% of the capacitance at 25°C , measured prior to the test, nor shall it increase to more than 120% of the original 25°C value.

4.1.4 The dissipation factor shall be measured in accordance with section 3.2 The dissipation factor shall not exceed 150% of the initial requirement.

4.1.5 At the conclusion of the test, the leakage current shall not exceed the initial DC leakage current requirement. Measurements shall be made in accordance with section 3.3

4.2 Shelf Test.

After storage for 1000 hours at 85°C with no voltage applied, the capacitance shall not decrease to less than 80% of the capacitance at 25°C and dissipation factor shall meet the initial requirements of section 4.1.4; the DC leakage current measured in accordance with section 3.3, shall not exceed 200% of the initial requirement for the capacitor.

GUIDE TO APPLICATION

1. Maximum Ripple Current

1.1 Maximum rms ripple current at 85°C 120 Hz is given in the table 1.

1.2 When capacitors are operated at temperatures other than 85°C, and frequency other than 120 Hz, the maximum rms ripple currents must be multiplied by the factors shown in below table.

COMPENSATION FACTOR OF RIPPLE CURRENT VERSUS FREQUENCY

uF/Frequency	50	120	300	1K	10K-100K (Hz)
0.47 - 68	0.75	1	1.20	1.30	1.45
100 - 680	0.80	1	1.10	1.15	1.25
1000 - 22000	0.80	1	1.05	1.10	1.15

FACTOR OF RIPPLE CURRENT VS. TEMPERATURE

WV.	50	70	85 (°C)
FACTOR	1.30	1.15	1.00

2. Ripple voltage

Ripple voltage must not exceed the following:

The sum of the DC voltage plus the AC ripple voltage must not exceed the rated DC voltage. The DC voltage plus the peak AC voltage must not cause a voltage reversal more than 1.5 volts.

3. Insulating

General types of aluminum electrolytic capacitors are covered with a vinyl sleeve or the like. And this sleeve is used for marking. When the internal element or the container is needed to be insulated, capacitors specially designed for insulation requirement are recommended to be used.

4. Soldering

4-1 When soldering a printed circuit board with various components, too high soldering temperature or too long dipping times may cause secondary shrinking of the sleeve which unnecessarily exposes the container. Soldering is allowed to performed at less than 260°C for less than 10 seconds.

4-2 Soldering may melt or break the sleeve, if the sleeve is contacted with circuit patterns. To avoid this trouble, the capacitors are recommended to be slightly apart from the circuit boards.

GUIDE TO APPLICATION (continued)

5. Vent

The capacitors are provided with a pressure resistive controlled safety vent formed on the bottom of the container. The vent is designed to rupture in the event that higher internal pressure is developed by circuit malfunction or capacitor mis-use.

6. High Altitude

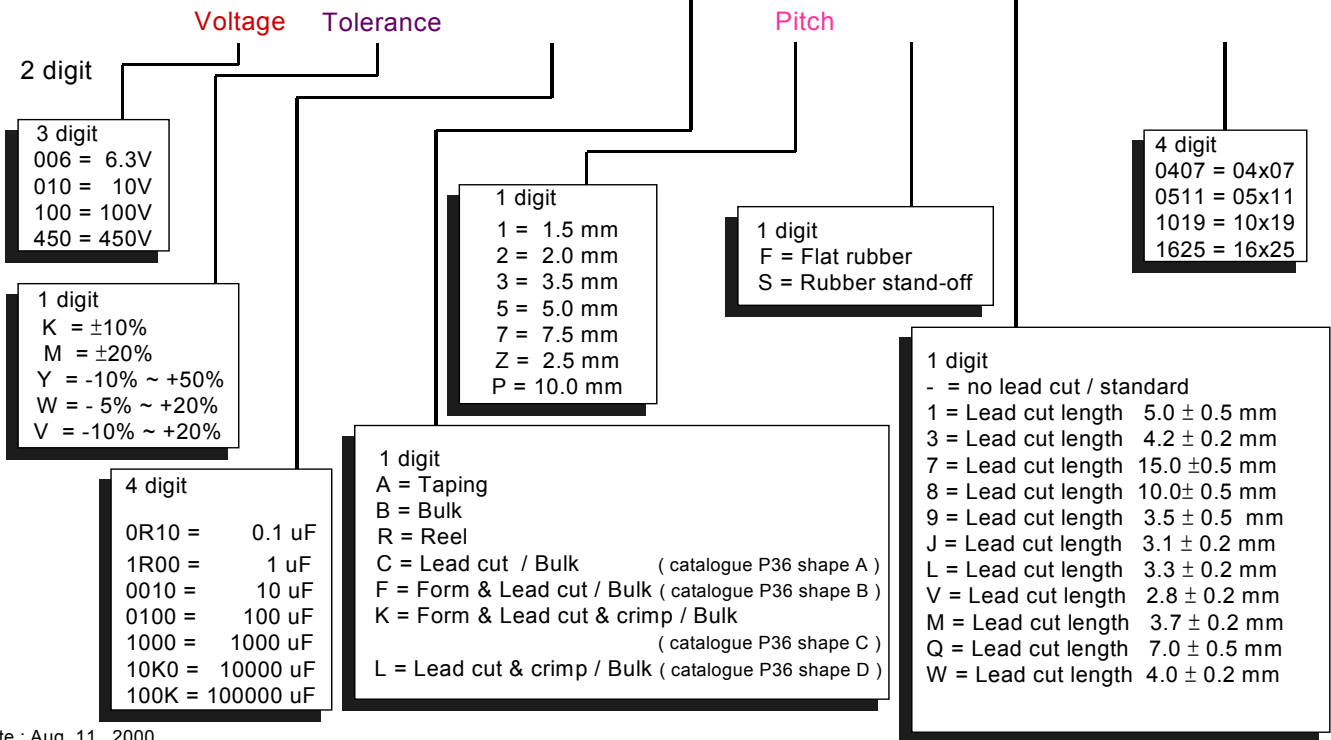
These capacitors are capable of withstanding in transit conditions where storage temperature may range from -40°C to +85°C and the altitude may reach 200,000 feet.

7. Cleaning agents.

Halogenated hydrocarbon cleaning solvents are not recommended for use in cleaning capacitors supplied with exposed end seals. Where cleaning with a halogenated solvent is desired, capacitors should be ordered with a Epoxy-coated end seal.

YAGEO Radial-Type E/C Ordering Code

SK 063 M 0220 A 5 S - 1019



Date : Aug. 11 , 2000

YAGEO Radial-Type E/C Ordering Code (16 Digit)

1. For worldwide customers use only
 2. For standard specification use only

SK 063 M 0220 A 5 S - AK

Diameter	Code	Length	Code	SIZE	Code	SIZE	Code	Size	Code	Size	Code
03	3	05	A	0405	4A	1220	BL	2220	GL	2520	HL
04	4	07	B	0407	4B	1225	BN	2225	GN	2525	HN
05	5	09	C	0505	5A	1230	BQ	2230	GQ	2530	HQ
06	6	10	D	0507	5B	1235	BS	2235	GS	2535	HS
08	8	11	E	0511	5E	1240	BX	2240	GX	2540	HX
10	A	12	F	0605	6A	1320	CL	2245	GY	2545	HY
12	B	14	G	0607	6B	1325	CN	2250	GZ	2550	HZ
13	C	15	H	0611	6E	1330	CQ	3025	WN	3525	XN
16	D	16	J	0805	8A	1340	CX	3030	WQ	3530	XQ
18	E	19	K	0807	8B	1616	DJ	3035	WS	3535	XS
20	F	20	L	0809	8C	1625	DN	3040	WX	3540	XX
22	G	22	M	0811	8E	1632	DR	3045	WY	3545	XY
25	H	25	N	0814	8G	1636	DT	3050	WZ	3550	XZ
		27	P	0815	8H	1640	DX				
30	W	30	Q	0816	8J	1645	DY				
35	X	32	R	0820	8L	1815	EH				
		35	S	1012	AF	1820	EL				
40	Y	36	T	1015	AH	1825	EN				
45	Z	40	X	1016	AJ	1832	ER				
		45	Y	1019	AK	1836	ET				
		50	Z	1020	AL	1840	EY				
				1022	AM	2235	GS				
				1025	AN	2240	GX				
				1030	AQ	2245	GY				

Date : MAR.23 , 2001

Table 1-1 SK Type, Standard Ratings and Catalog Number

Catalog Number	Capacitance (uF)	Rated Voltage (V.DC)	Size (mm)	Leakage Current (uA)	Dissipation Factor (Tan δ)	Ripple 120 Hz (mA)
			D X L			
SK006M0033B2F-0511	33	6.3	5X11	3	0.22	55
SK006M0047B2F-0511	47	6.3	5X11	3	0.22	75
SK006M0100B2F-0511	100	6.3	5X11	6	0.22	130
SK006M0220B2F-0511	220	6.3	5X11	14	0.22	240
SK006M0220BZF-0611	220	6.3	6X11	14	0.22	240
SK006M0330BZF-0611	330	6.3	6X11	21	0.22	300
SK006M0330B3F-0811	330	6.3	8X11	21	0.22	300
SK006M0470B3F-0811	470	6.3	8X11	30	0.22	380
SK006M1000B5S-1012	1000	6.3	10X12	63	0.22	580
SK006M2200B5S-1019	2200	6.3	10X19	139	0.24	1050
SK006M2200B5S-1320	2200	6.3	13X20	139	0.24	1050
SK006M3300B5S-1019	3300	6.3	10X19	208	0.26	1250
SK006M3300B5S-1320	3300	6.3	13X20	208	0.26	1250
SK006M4700B5S-1325	4700	6.3	13X25	296	0.28	1700
SK006M4700B7F-1625	47000	6.3	16X25	296	0.28	1700
SK006M6800B5S-1325	6800	6.3	13X25	428	0.32	1900
SK006M6800B7F-1625	6800	6.3	16X25	428	0.32	1900
SK006M10K0B7F-1625	10000	6.3	16X25	630	0.40	2250
SK006M10K0B7F-1632	10000	6.3	16X32	630	0.40	2250
SK006M15K0B7F-1636	15000	6.3	16X36	945	0.50	2680
SK006M15K0B7F-1836	15000	6.3	18X36	945	0.50	2680
SK006M22K0B7F-1840	22000	6.3	18X40	1386	0.64	3200
SK010M0022B2F-0511	22	10	5X11	3	0.19	75
SK010M0033B2F-0511	33	10	5X11	3	0.19	80
SK010M0047B2F-0511	47	10	5X11	5	0.19	95
SK010M0100B2F-0511	100	10	5X11	10	0.19	180
SK010M0220BZF-0611	220	10	6X11	22	0.19	250
SK010M0330B3F-0811	330	10	8X11	33	0.19	330
SK010M0470B3F-0811	470	10	8X11	47	0.19	330
SK010M1000B5S-1012	1000	10	10X12	100	0.19	630
SK010M1000B5S-1015	1000	10	10X15	100	0.19	630
SK010M2200B5S-1019	2200	10	10X19	220	0.21	1100
SK010M2200B5S-1320	2200	10	13X20	220	0.21	1100
SK010M3300B5S-1320	3300	10	13X20	330	0.23	1400
SK010M3300B5S-1325	3300	10	13X25	330	0.23	1400
SK010M4700B5S-1325	4700	10	13X25	470	0.25	1800
SK010M4700B7F-1625	4700	10	16X25	470	0.25	1800
SK010M6800B7F-1625	6800	10	16X25	680	0.29	2150
SK010M6800B7F-1632	6800	10	16X32	680	0.29	2150
SK010M10K0B7F-1636	10000	10	16X36	1000	0.37	2500

SK010M10K0B7F-1836	10000	10	18X36	1000	0.37	2500
SK010M15K0B7F-1836	15000	10	18X36	1500	0.47	2950

Table 1-2 SK Type, Standard Ratings and Catalog Number

Catalog Number	Capacitance	Rated Voltage	Size (mm)	Leakage Current	Dissipation Factor	Ripple
	(μ F)	(V.DC)	D X L	(μ A)	($\text{Tan } \delta$)	120 Hz (mA)
SK016M0010B2F-0511	10	16	5X11	3	0.16	40
SK016M0022B2F-0511	22	16	5X11	4	0.16	75
SK016M0033B2F-0511	33	16	5X11	5	0.16	110
SK016M0047B2F-0511	47	16	5X11	8	0.16	130
SK016M0100B2F-0511	100	16	5X11	16	0.16	180
SK016M0100BZF-0611	100	16	6X11	16	0.16	180
SK016M0220BZF-0611	220	16	6X11	35	0.16	300
SK016M0220B3F-0811	220	16	8X11	35	0.16	300
SK016M0330B3F-0811	330	16	8X11	53	0.16	360
SK016M0470B3F-0811	470	16	8X11	75	0.16	470
SK016M0470B5S-1012	470	16	10X12	75	0.16	470
SK016M1000B5S-1015	1000	16	10X15	160	0.16	790
SK016M1000B5S-1019	1000	16	10X19	160	0.16	790
SK016M2200B5S-1320	2200	16	13X20	352	0.18	1350
SK016M2200B5S-1325	2200	16	13X25	352	0.18	1350
SK016M3300B5S-1325	3300	16	13X25	528	0.20	1700
SK016M3300B7F-1625	3300	16	16X25	528	0.20	1700
SK016M4700B7F-1625	4700	16	16X25	752	0.22	2100
SK016M4700B7F-1632	4700	16	16X32	752	0.22	2100
SK016M6800B7F-1636	6800	16	16X36	1088	0.26	2500
SK016M6800B7F-1836	6800	16	18X36	1088	0.26	2500
SK016M10K0B7F-1836	10000	16	18X36	1600	0.34	2700
SK025M4R70B2F-0511	4.7	25	5X11	3	0.14	30
SK025M0010B2F-0511	10	25	5X11	3	0.14	50
SK025M0022B2F-0511	22	25	5X11	6	0.14	90
SK025M0033B2F-0511	33	25	5X11	8	0.14	110
SK025M0047B2F-0511	47	25	5X11	12	0.14	130
SK025M0100BZF-0611	100	25	6X11	25	0.14	185
SK025M0220B3F-0811	220	25	8X11	55	0.14	320
SK025M0220B5S-1012	220	25	10X12	55	0.14	320
SK025M0330B5S-1012	330	25	10X12	83	0.14	420
SK025M0470B5S-1012	470	25	10X12	118	0.14	540
SK025M0470B5S-1015	470	25	10X15	118	0.14	540
SK025M1000B5S-1019	1000	25	10X19	250	0.14	950
SK025M1000B5S-1320	1000	25	13X20	250	0.14	950
SK025M2200B5S-1325	2200	25	13X25	550	0.16	1550
SK025M2200B7F-1625	2200	25	16X25	550	0.16	1550
SK025M3300B7F-1625	3300	25	16X25	825	0.18	1950

SK025M3300B7F-1632	3300	25	16X32	825	0.18	1950
SK025M4700B7F-1632	4700	25	16X32	1175	0.20	2360
SK025M4700B7F-1836	4700	25	18X36	1175	0.20	2360
SK025M6800B7F-1836	6800	25	18X36	1700	0.24	2550

Table 1-3 SK Type, Standard Ratings and Catalog Number

Catalog Number	Capacitance (uF)	Rated Voltage (V.DC)	Size (mm) D X L	Leakage Current (uA)	Dissipation Factor (Tan δ)	Ripple 120 Hz (mA)
SK035M4R70B2F-0511	4.7	35	5X11	3	0.12	35
SK035M0010B2F-0511	10	35	5X11	4	0.12	60
SK035M0022B2F-0511	22	35	5X11	8	0.12	95
SK035M0033B2F-0511	33	35	5X11	12	0.12	115
SK035M0047B2F-0511	47	35	5X11	16	0.12	140
SK035M0047BZF-0611	47	35	6X11	16	0.12	140
SK035M0100B3F-0811	100	35	8X11	35	0.12	230
SK035M0220B5S-1012	220	35	10X12	77	0.12	370
SK035M0330B5S-1012	330	35	10X12	116	0.12	490
SK035M0330B5S-1015	330	35	10X15	116	0.12	490
SK035M0470B5S-1015	470	35	10X15	164	0.12	640
SK035M0470B5S-1320	470	35	13X20	164	0.12	640
SK035M1000B5S-1320	1000	35	13X20	350	0.12	1100
SK035M1000B5S-1325	1000	35	13X25	350	0.12	1100
SK035M2200B7F-1625	2200	35	16X25	770	0.14	1800
SK035M2200B7F-1632	2200	35	16X32	770	0.14	1800
SK035M3300B7F-1636	3300	35	16X36	1155	0.16	2220
SK035M3300B7F-1836	3300	35	18X36	1155	0.16	2220
SK035M4700B7F-1836	4700	35	18X36	1645	0.18	2400
SK050M0R10B2F-0511	0.1	50	5X11	3	0.10	1
SK050M0R22B2F-0511	0.22	50	5X11	3	0.10	2
SK050M0R33B2F-0511	0.33	50	5X11	3	0.10	3
SK050M0R47B2F-0511	0.47	50	5X11	3	0.10	5
SK050M1R00B2F-0511	1	50	5X11	3	0.10	10
SK050M2R20B2F-0511	2.2	50	5X11	3	0.10	23
SK050M3R30B2F-0511	3.3	50	5X11	3	0.10	35
SK050M4R70B2F-0511	4.7	50	5X11	3	0.10	45
SK050M0010B2F-0511	10	50	5X11	5	0.10	65
SK050M0022B2F-0511	22	50	5X11	11	0.10	100
SK050M0033BZF-0611	33	50	6X11	17	0.10	125
SK050M0047BZF-0611	47	50	6X11	24	0.10	150
SK050M0047B3F-0811	47	50	8X11	24	0.10	150
SK050M0100B3F-0811	100	50	8X11	50	0.10	250
SK050M0100B5S-1012	100	50	10X12	50	0.10	250
SK050M0220B5S-1015	220	50	10X15	110	0.10	440
SK050M0330B5S-1015	330	50	10X15	165	0.10	580

SK050M0330B5S-1019	330	50	10X19	165	0.10	580
SK050M0470B5S-1320	470	50	13X20	235	0.10	760
SK050M1000B5S-1325	1000	50	13X25	500	0.10	1350
SK050M1000B7F-1625	1000	50	16X25	500	0.10	1350
SK050M2200B7F-1636	2200	50	16X36	1100	0.12	2090
SK050M2200B7F-1836	2200	50	18X36	1100	0.12	2090

Table 1-4 SK Type, Standard Ratings and Catalog Number

Catalog Number	Capacitance	Rated Voltage	Size (mm)	Leakage Current	Dissipation Factor	Ripple
	(μ F)	(V.DC)	D X L	(μ A)	(Tan δ)	120 Hz (mA)
SK063M0R47B2F-0511	0.47	63	5X11	3	0.09	5
SK063M1R00B2F-0511	1	63	5X11	3	0.09	10
SK063M2R20B2F-0511	2.2	63	5X11	3	0.09	29
SK063M3R30B2F-0511	3.3	63	5X11	3	0.09	40
SK063M4R70B2F-0511	4.7	63	5X11	3	0.09	45
SK063M0010B2F-0511	10	63	5X11	6	0.09	70
SK063M0022BZF-0611	22	63	6X11	14	0.09	115
SK063M0033BZF-0611	33	63	6X11	21	0.09	140
SK063M0033B3F-0811	33	63	8X11	21	0.09	140
SK063M0047B3F-0811	47	63	8X11	30	0.09	190
SK063M0100B5S-1012	100	63	10X12	63	0.09	300
SK063M0220B5S-1015	220	63	10X15	139	0.09	490
SK063M0220B5S-1019	220	63	10X19	139	0.09	490
SK063M0330B5S-1019	330	63	10X19	208	0.09	680
SK063M0330B5S-1320	330	63	13X20	208	0.09	680
SK063M0470B5S-1325	470	63	13X25	296	0.09	880
SK063M1000B7F-1625	1000	63	16X25	630	0.09	1550
SK063M1000B7F-1632	1000	63	16X32	630	0.09	1550
SK100M0R47B2F-0511	0.47	100	5X11	3	0.08	10
SK100M1R00B2F-0511	1	100	5X11	3	0.08	21
SK100M2R20B2F-0511	2.2	100	5X11	3	0.08	30
SK100M3R30B2F-0511	3.3	100	5X11	3	0.08	40
SK100M4R70B2F-0511	4.7	100	5X11	5	0.08	50
SK100M0010BZF-0611	10	100	6X11	10	0.08	75
SK100M0022B3F-0811	22	100	8X11	22	0.08	130
SK100M0033B3F-0811	33	100	8X11	33	0.08	170
SK100M0033B5S-1012	33	100	10X12	33	0.08	170
SK100M0047B5S-1012	47	100	10X12	47	0.08	230
SK100M0047B5S-1015	47	100	10X15	47	0.08	230
SK100M0100B5S-1019	100	100	10X19	100	0.08	400
SK100M0220B5S-1325	220	100	13X25	220	0.08	710
SK100M0330B5S-1325	330	100	13X25	330	0.08	860
SK100M0330B7F-1625	330	100	16X25	330	0.08	860
SK100M0470B7F-1625	470	100	16X25	470	0.08	1100

SK100M0470B7F-1632	470	100	16X32	470	0.08	1100
SK100M1000B7F-1840	1000	100	18X40	1000	0.08	1380
SK160M0R47B2F-0511	0.47	160	5X11	12	0.15	12
SK160M1R00B2F-0511	1	160	5X11	15	0.15	17
SK160M2R20BZF-0611	2.2	160	6X11	21	0.15	26
SK160M3R30BZF-0611	3.3	160	6X11	26	0.15	35
SK160M3R30B3F-0811	3.3	160	8X11	26	0.15	35
SK160M4R70BZF-0611	4.7	160	6X11	33	0.15	40

Table 1-5 SK Type, Standard Ratings and Catalog Number

Catalog Number	Capacitance (μ F)	Rated Voltage (V.DC)	Size (mm)	Leakage Current (μ A)	Dissipation Factor (Tan δ)	Ripple 120 Hz (mA)
			D X L			
SK160M4R70B3F-0811	4.7	160	8X11	33	0.15	40
SK160M0010B3F-0811	10	160	8X11	58	0.15	65
SK160M0010B5S-1012	10	160	10X12	58	0.15	65
SK160M0022B5S-1015	22	160	10X15	116	0.15	110
SK160M0033B5S-1019	33	160	10X19	168	0.15	150
SK160M0047B5S-1320	47	160	13X20	236	0.15	180
SK160M0100B5S-1325	100	160	13X25	490	0.15	300
SK160M0100B7F-1625	100	160	16X25	490	0.15	300
SK160M0220B7F-1632	220	160	16X32	1066	0.15	510
SK160M0220B7F-1636	220	160	16X36	1066	0.15	510
SK160M0330B7F-1836	330	160	18X36	1594	0.15	600
SK160M0330B7F-1840	330	160	18X40	1594	0.15	600
SK200M0R47B2F-0511	0.47	200	5X11	13	0.15	12
SK200M1R00B2F-0511	1	200	5X11	16	0.15	17
SK200M2R20BZF-0611	2.2	200	6X11	23	0.15	26
SK200M2R20B3F-0811	2.2	200	8X11	23	0.15	26
SK200M3R30BZF-0611	3.3	200	6X11	30	0.15	35
SK200M3R30B3F-0811	3.3	200	8X11	30	0.15	35
SK200M4R70B3F-0811	4.7	200	8X11	38	0.15	45
SK200M4R70B5S-1012	4.7	200	10X12	38	0.15	45
SK200M0010B5S-1012	10	200	10X12	70	0.15	70
SK200M0010B5S-1015	10	200	10X15	70	0.15	70
SK200M0022B5S-1015	22	200	10X15	142	0.15	110
SK200M0033B5S-1019	33	200	10X19	208	0.15	160
SK200M0047B5S-1320	47	200	13X20	292	0.15	180
SK200M0047B5S-1325	47	200	13X25	292	0.15	180
SK200M0100B7F-1625	100	200	16X25	610	0.15	330
SK200M0180B7F-1632	180	200	16X32	1090	0.15	420
SK200M0220B7F-1836	220	200	18X36	1330	0.15	520
SK200M0220B7F-1840	220	200	18X40	1330	0.15	520
SK250M0R47B2F-0511	0.47	250	5X11	14	0.15	12
SK250M1R00BZF-0611	1	250	6X11	18	0.15	17

SK250M2R20BZF-0611	2.2	250	6X11	27	0.15	30
SK250M2R20B3F-0811	2.2	250	8X11	27	0.15	30
SK250M3R30B3F-0811	3.3	250	8X11	35	0.15	35
SK250M3R30B5S-1012	3.3	250	10X12	35	0.15	35
SK250M4R70B3F-0811	4.7	250	8X11	45	0.15	45
SK250M4R70B5S-1012	4.7	250	10X12	45	0.15	45
SK250M0010B5S-1015	10	250	10X15	85	0.15	70
SK250M0022B5S-1019	22	250	10X19	175	0.15	130
SK250M0033B5S-1320	33	250	13X20	258	0.15	160
SK250M0033B5S-1325	33	250	13X25	258	0.15	160

Table 1-6 SK Type, Standard Ratings and Catalog Number

Catalog Number	Capacitance (uF)	Rated Voltage (V.DC)	Size (mm) D X L	Leakage Current (uA)	Dissipation Factor (Tan δ)	Ripple 120 Hz (mA)
SK250M0047B5S-1325	47	250	13X25	363	0.15	210
SK250M0100B7F-1632	100	250	16X32	760	0.15	310
SK350M0R47B2F-0511	0.47	350	5X11	15	0.20	14
SK350M1R00BZF-0611	1	350	6X11	21	0.20	18
SK350M2R20B3F-0811	2.2	350	8X11	33	0.20	28
SK350M3R30B3F-0811	3.3	350	8X11	45	0.20	35
SK350M3R30B5S-1012	3.3	350	10X12	45	0.20	35
SK350M4R70B5S-1012	4.7	350	10X12	59	0.20	40
SK350M4R70B5S-1015	4.7	350	10X15	59	0.20	40
SK350M0010B5S-1015	10	350	10X15	115	0.20	70
SK350M0022B5S-1320	22	350	13X20	241	0.20	110
SK350M0033B5S-1325	33	350	13X25	357	0.20	140
SK350M0047B7F-1625	47	350	16X25	504	0.20	220
SK350M0100B7F-1836	100	350	18X36	1060	0.20	360
SK400M0R47BZF-0611	0.47	400	6X11	15	0.20	14
SK400M1R00B3F-0811	1	400	8X11	22	0.20	19
SK400M2R20B5S-1012	2.2	400	10X12	36	0.20	29
SK400M3R30B5S-1012	3.3	400	10X12	50	0.20	32
SK400M4R70B5S-1015	4.7	400	10X15	66	0.20	41
SK400M0010B5S-1320	10	400	13X20	130	0.20	70
SK400M0022B7F-1625	22	400	16X25	274	0.20	120
SK400M0033B7F-1625	33	400	16X25	406	0.20	140
SK400M0047B7F-1632	47	400	16X32	574	0.20	220
SK450M0R47BZF-0611	0.47	450	6X11	16	0.20	14
SK450M1R00B3F-0811	1	450	8X11	24	0.20	19
SK450M2R20B5S-1012	2.2	450	10X12	40	0.20	29
SK450M3R30B5S-1015	3.3	450	10X15	55	0.20	35
SK450M4R70B5S-1015	4.7	450	10X15	73	0.20	50
SK450M0010B5S-1320	10	450	13X20	145	0.20	75
SK450M0010B5S-1325	10	450	13X25	145	0.20	75

SK450M0022B7F-1625	22	450	16X25	307	0.20	110
SK450M0022B7F-1632	22	450	16X32	307	0.20	110
SK450M0033B7F-1636	33	450	16X36	456	0.20	150
SK450M0047B7F-1840	47	450	18X40	645	0.20	230

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