Snap in Aluminum Electrolytic Capacitors
SNB Series

FEATURES
- High temperature, high ripple current capability, longer life
- Endurance: 3000 hours at 105°C
- RoHS Compliance and Halogen-free

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

APPLICATIONS
- Solar inverters, frequency converters, power supplies, energy backup, etc.

RoHS COMPLIANT

HOW TO ORDER

S	NB	I30	221	M	450	B	K	-
Product Type Aluminum	**Series Type**	**Case Size** See table below	**Capacitance Code** µF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	**Tolerance** M = ±20%	**Rated DC Voltage** 050 = 50Vdc, 063 = 63Vdc, 080 = 80Vdc, 100 = 100Vdc, 180 = 180Vdc, 200 = 200Vdc, 250 = 250Vdc, 350 = 350Vdc, 400 = 400Vdc, 450 = 450Vdc, 500 = 500Vdc	**Packaging** B = Bulk Pack	**Termination** K = 2 terminals Please contact manufacturer Additional terminals upon request	**Special Request**

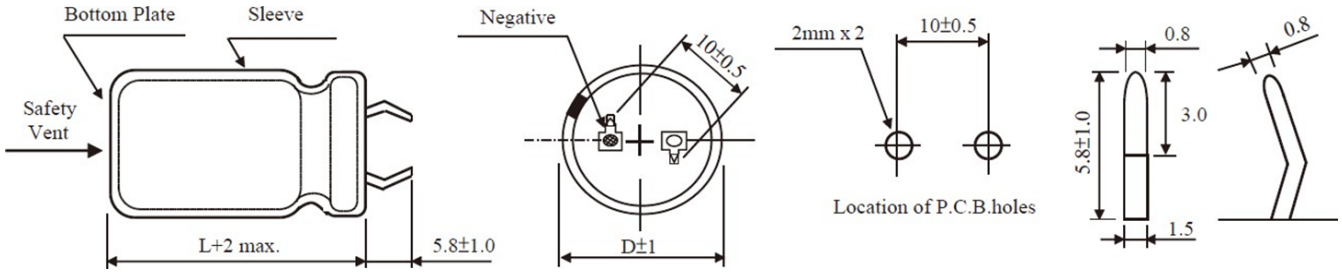
CASE DIMENSIONS millimeters (inches)

1st Character	D±1.00(0.039)	2nd & 3rd Character	L+2.00(0.079) Max.
F	20.00 (0.787)	25	25.00 (0.984)
G	22.00 (0.866)	30	30.00 (1.181)
H	25.00 (0.984)	35	35.00 (1.378)
I	30.00 (1.181)	40	40.00 (1.575)
J	35.00 (1.378)	45	45.00 (1.772)
		50	50.00 (1.969)
		55	55.00 (2.165)
		60	60.00 (2.362)

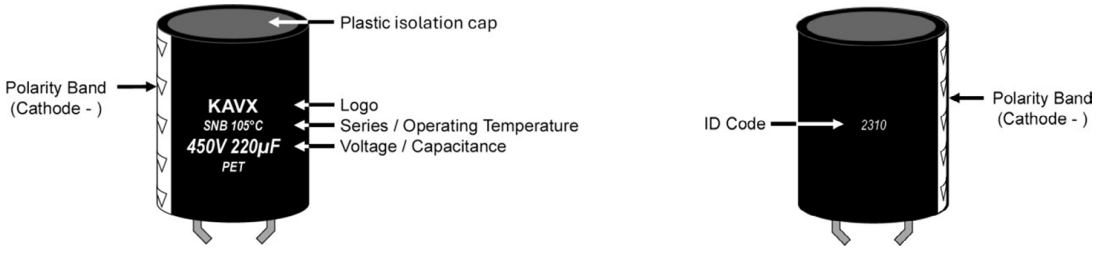
TYPICAL WEIGHT (grams)

Code	Typical Weight (g)	Code	Typical Weight (g)
F25	10.00	I30	27.00
G25	13.00	I35	36.00
G30	16.00	I40	40.00
G35	20.00	I45	45.00
G40	22.00	I60	60.00
G45	25.22	J30	36.00
H25	16.00	J35	39.47
H30	17.00	J40	52.00
H35	24.95	J45	59.30
H45	32.00	J50	61.00
H50	44.66	J55	63.50
I25	24.00	J60	66.00

K TERMINAL CONFIGURATION



MARKING



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TECHNICAL SPECIFICATIONS

Category Temperature Range:	-40°C to +105°C (50-250V), -25°C to +105°C (350-500V)	
Capacitance Range:	at 25°C, 120Hz	120µF to 12,000µF
Capacitance Tolerance:	at 25°C, 120Hz	±20%
Dissipation Factor (%)	Measurement Frequency: 120Hz at 25°C	Please see the Ratings and Part Number Reference Table below
Leakage Current:	After 5 minutes at rated working voltage at 25°C	I ≦ 3√CV(µA)

CAPACITANCE AND RATED VOLTAGE RANGE (FIGURES DENOTES CASE SIZE)

Capacitance		Rated Voltage DC (V_R)										
µF	**Code**	**50V**	**63V**	**80V**	**100V**	**180V**	**200V**	**250V**	**350V**	**400V**	**450V**	**500V**
120	121											I35
180	181								H25		H35	I35
220	221						F25	F25		I30	I30	
270	271							G25		J30	I35	I40
330	331						G30	G35		I35		J40
390	391					G30		G35				
470	471						G30			I45		J50
560	561						G40					
680	681				G25	G35	H35	I35		J40	J50	
820	821					I25	I30	I40		J60	J55	
1000	102				H25			J35				
1200	122				G30			J45				
1500	152				H30							
1800	182			H30								
2200	222		G30	G40								
2700	272			G45	H50							
3300	332		H35		J35							
3900	392			H50								
4700	472	G45	H35	I40	J45							
6800	682			I60								
8200	822	H45										
10,000	103		J45									
12,000	123	J40										

Released ratings

RATINGS & PART NUMBER REFERENCE

Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DF Max. (%)	120Hz RMS Current (A) / 105°C	MSL
50 Volt						
SNBG45472M050BK	G45	4700	50	38	2.50	1
SNBH45822M050BK	H45	8200	50	42	3.40	1
SNBJ40123M050BK	J40	12,000	50	46	4.56	1
63 Volt						
SNBG30222M063BK	G30	2200	63	31	1.60	1
SNBH35332M063BK	H35	3300	63	32	2.33	1
SNBH35472M063BK	H35	4700	63	33	2.40	1
SNBJ45103M063BK	J45	10,000	63	39	4.48	1
80 Volt						
SNBH30182M080BK	H30	1800	80	25	2.03	1
SNBG40222M080BK	G40	2200	80	26	2.03	1
SNBG45272M080BK	G45	2700	80	26	2.39	1
SNBH50392M080BK	H50	3900	80	27	2.97	1
SNBI40472M080BK	I40	4700	80	28	3.38	1
SNBI60682M080BK	I60	6800	80	30	5.00	1
100 Volt						
SNBG25681M100BK	G25	680	100	20	1.05	1
SNBH25102M100BK	H25	1000	100	20	1.40	1
SNBG30122M100BK	G30	1200	100	20	1.52	1

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Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DF Max. (%)	120Hz RMS Current (A) / 105°C	MSL
SNBH30152M100BK	H30	1500	100	20	2.05	1
SNBH50272M100BK	H50	2700	100	21	2.89	1
SNBJ35332M100BK	J35	3300	100	22	3.30	1
SNBJ45472M100BK	J45	4700	100	23	3.80	1
180 Volt						
SNBG30391M180BK	G30	390	180	15	1.30	1
SNBG35681M180BK	G35	680	180	15	1.70	1
SNBI25821M180BK	I25	820	180	15	1.45	1
200 Volt						
SNBF25221M200BK	F25	220	200	15	1.00	1
SNBG30331M200BK	G30	330	200	15	1.28	1
SNBG30471M200BK	G30	470	200	15	1.35	1
SNBG40561M200BK	G40	560	200	15	1.60	1
SNBH35681M200BK	H35	680	200	15	1.78	1
SNBI30821M200BK	I30	820	200	15	1.87	1
250 Volt						
SNBF25221M250BK	F25	220	250	15	0.90	1
SNBG25271M250BK	G25	270	250	15	1.00	1
SNBG35331M250BK	G35	330	250	15	0.95	1
SNBG35391M250BK	G35	390	250	15	1.40	1
SNBI35681M250BK	I35	680	250	15	2.00	1
SNBI40821M250BK	I40	820	250	15	2.18	1
SNBJ35102M250BK	J35	1000	250	15	2.35	1
SNBJ45122M250BK	J45	1200	250	15	2.80	1
350 Volt						
SNBH25181M350BK	H25	180	350	20	0.78	1
400 Volt						
SNBI30221M400BK	I30	220	400	20	1.10	1
SNBJ30271M400BK	J30	270	400	20	1.22	1
SNBI35331M400BK	I35	330	400	20	1.20	1
SNBI45471M400BK	I45	470	400	20	1.75	1
SNBJ40681M400BK	J40	680	400	20	1.93	1
SNBJ60821M400BK	J60	820	400	20	2.50	1
450 Volt						
SNBH35181M450BK	H35	180	450	20	0.89	1
SNBI30221M450BK	I30	220	450	20	1.05	1
SNBI35271M450BK	I35	270	450	20	1.15	1
SNBJ50681M450BK	J50	680	450	20	2.10	1
SNBJ55821M450BK	J55	820	450	20	2.08	1
500 Volt						
SNBI35121M500BK	I35	120	500	20	0.95	1
SNBI35181M500BK	I35	180	500	20	0.98	1
SNBI40271M500BK	I40	270	500	20	1.10	1
SNBJ40331M500BK	J40	330	500	20	0.95	1
SNBJ50471M500BK	J50	470	500	20	1.65	1

Note: ESR values upon request
DF = When nominal capacitance exceeds 1000µF, add 0.02 to the value above for each 1000µF increase.
All technical data relates to an ambient temperature of +25C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT

Rated Voltage (V)	Frequency (Hz)				
	50	120	1K	10K	100K
50 - 100	0.88	1.00	1.05	1.10	1.15
180 - 250	0.85	1.00	1.20	1.30	1.50
350 - 500	0.88	1.00	1.20	1.25	1.40

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QUALIFICATION TABLE

Test	SNB Series (Temperature range -40°C to +105°C (50-250V), -25°C to +105°C (350-500V))						
	Condition	Characteristics					
Low Temperature Characteristics (Max. Impedance Ratio)	At 120Hz	Rated Voltage (V)	50	63	80-100	180-250	350-500
		Z(-25°C)/Z(+20°C)	4	4	4	4	8
		Z(-40°C)/Z(+20°C)	10	8	6	15	-
Endurance	3000 hours, with application of rated voltage at 105℃	ΔC/C	≤ ± 20% of the initial limit				
		DF	≤ 200% of Initial specified limit				
		DCL	≤ Initial specified limit				
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 25℃ after exposing them for 1000hours 105℃ without voltage applied. Before the measurement. The Capacitance shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.	ΔC/C	≤ ± 15% of the initial limit				
		DF	≤ 200% of Initial specified limit				
		DCL	≤ Initial specified limit				
Standards	JIS C 5101-4-1 (IEC 60384)						

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C.

STORAGE

1. It is recommended to keep capacitors between the ambient temperatures of 5°C to 35°C (if between 35°C to 85°C, it should be less than three months) and the relative humidity of 75% or below.
2. Confirm that the environment does not have any of the following conditions:
   - Damp conditions such as water, saltwater spray, oil spray or fumes. High humidity or humidity condensation situations.
   - In an atmosphere filled with toxic gasses (such as hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, etc.).
   - Being exposed to direct sunlight, ozone, ultraviolet ray, or radiation.
   - Being exposed to acidic or alkaline solutions.
   - Under severe conditions where vibration and / or mechanical shock exceed the applicable ranges of the specification.
3. Shelf life

Years		
0-1	1-2	>2
Ok	Ok	Performance check

- Years from manufacturing date code.
- KYOCERA AVX does not guarantee or assume responsibility for product behavior after 3 years of storage.
- Ageing procedure should be performed as follows:
  - Connect the capacitor in series to a 1kΩ resistor, and apply half rated voltage for 2 hours.
  - After half rated voltage for 2 hours applied, increase and apply rated voltage for another 2 hours.

PACKING

Case Size	Dimension (D x L)	Quantity (pcs/Inner Box)	Layer Quantity	Total Quantity (pcs/Carton)	Size Inner Box (mm)	Size Out Box (mm)
F25	20x25	300	4	1200	272x272x146	564x282x312
G25	22x25	300	4	1200		
G30	22x30	200	4	800		
G35	22x35	200	4	800		
G40	22x40	200	4	800		
G45	22x45	200	4	800		
H25	25x25	200	4	800	302x302x102	624x312x224
H30	25x30	200	4	800		
H35	25x35	100	4	400	302x302x80	624x312x180
H45	25x45	100	4	400		
H50	25x50	100	4	400		
I25	30x25	75	4	300	179x179x146	378x189x312
I30	30x30	75	4	300		
I35	30x35	50	4	200		
I40	30x40	50	4	200		
I45	30x45	50	4	200		
I60	30x60	25	4	100		
J30	35x30	75	4	300	204x204x146	428x214x312
J35	35x35	50	4	200		
J40	35x40	50	4	200		
J45	35x45	50	4	200		
J50	35x50	50	4	200		
J55	35x55	50	4	200		
J60	35x60	25	4	100		