

Snap in Aluminum Electrolytic Capacitors

SNC Series



FEATURES

- High temperature, high ripple current capability, longer life
- Endurance: 2000 hours at 105°C
- RoHS Compliance and Halogen-free

APPLICATIONS

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



HOW TO ORDER

S	NC	I30	221	M	450	B	*	-
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 035 = 35Vdc 250 = 250Vdc 050 = 50Vdc 350 = 350Vdc 063 = 63Vdc 400 = 400Vdc 080 = 80Vdc 420 = 420Vdc 100 = 100Vdc 450 = 450Vdc 160 = 160Vdc 500 = 500Vdc 200 = 200Vdc	Packaging B = Bulk Pack	Termination K = 2 terminals Please contact manufacturer upon request	Special Request

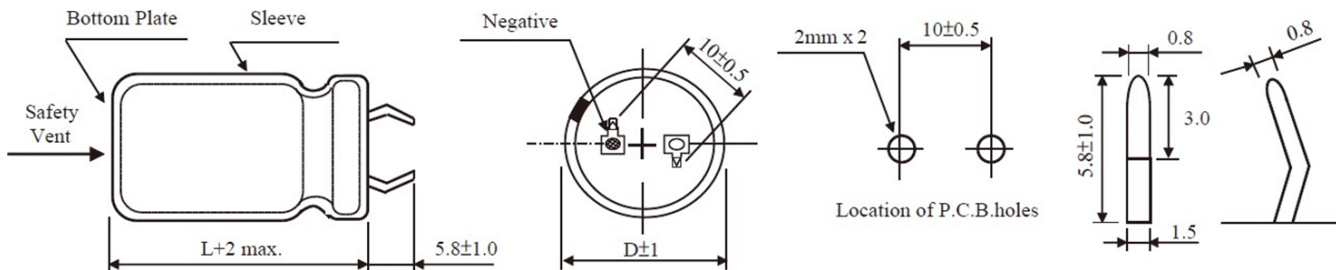
CASE DIMENSIONS millimeters (inches)

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)
		60	60.00 (2.362)

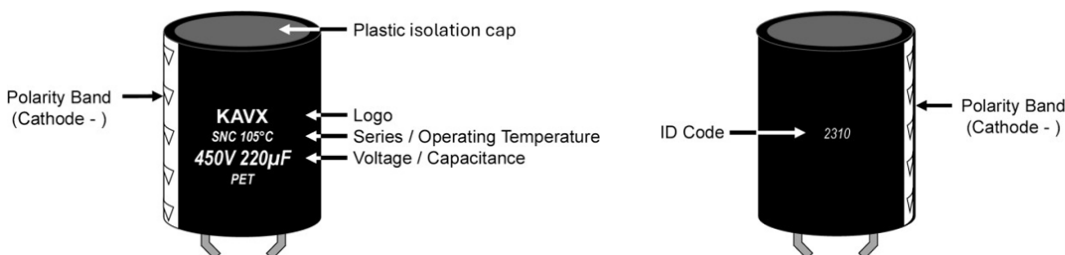
TYPICAL WEIGHT (grams)

Code	Typical Weight (g)	Code	Typical Weight (g)
F30	13.00	I30	27.00
G25	13.00	I35	36.00
G30	16.00	I40	40.00
G35	20.00	I45	45.00
G45	25.22	I50	50.00
H25	16.00	J30	36.00
H30	17.00	J35	39.47
H35	24.95	J40	52.00
H40	28.00	J45	59.30
H45	32.00	J50	61.00
H50	44.66	J60	66.00
I25	24.00		

K TERMINAL CONFIGURATION



MARKING



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TECHNICAL SPECIFICATIONS

Category Temperature Range:	-40°C to +105°C (35-250V), -25°C to +105°C (350-500V)	
Capacitance Range:	at 25°C, 120Hz	120µF to 33,000µF
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	$I \leq 3\sqrt{CV}(\mu A)$

CAPACITANCE AND RATED VOLTAGE RANGE (FIGURES DENOTES CASE SIZE)

Capacitance		Rated Voltage DC (V _R)												
µF	Code	35V	50V	63V	80V	100V	160V	200V	250V	350V	400V	420V	450V	500V
120	121										H25		G45	H30
150	151								G25		H30		H30	
180	181										G35		H30	
220	221							G25	H25				I30	I45
270	271							G25			I30		I35	
330	331							H25				H45	J35	
390	391							G25		H45			J35	
470	471							G30	I25				J50	
560	561							H35		I50	I50		J45	
680	681							H35	J30	I50	J50	I45	J50	
820	821					H25		G45	J35		J60			
1000	102							H45	I40					
1200	122							I35	J40					
1500	152							J45	J50					
1800	182						H50	I50						
2200	222		G30					J50						
3300	332			I30	H45	I50								
3900	392	F30		I35										
4700	472	H25	G35	H40	I50	J50								
6800	682	H25		I50	J50									
8200	822			I50										
10,000	103	H40	H50	J50										
12,000	123		J50											
33,000	333	J50												

Released ratings

RATINGS & PART NUMBER REFERENCE

Part No.	Case Size	Capacitance (µF)	Rated Voltage (V)	DF Max. (%)	120Hz RMS Current (A) / 105°C	MSL
35 Volt						
SNCF30392M035BK	F30	3900	35	32	1.30	1
SNCH25472M035BK	H25	4700	35	33	1.77	1
SNCH25682M035BK	H25	6800	35	35	1.99	1
SNCH40103M035BK	H40	10,000	35	39	2.74	1
SNCJ50333M035BK	J50	33,000	35	62	6.32	1
50 Volt						
SNCG30222M050BK	G30	2200	50	26	1.60	1
SNCG35472M050BK	G35	4700	50	28	2.10	1
SNCH50103M050BK	H50	10,000	50	34	3.60	1
SNCJ50123M050BK	J50	12,000	50	36	4.52	1
63 Volt						
SNCI30332M063BK	I30	3300	63	27	2.30	1
SNCI35392M063BK	I35	3900	63	27	2.42	1
SNCH40472M063BK	H40	4700	63	28	2.40	1
SNCI50682M063BK	I50	6800	63	30	3.54	1
SNCI50822M063BK	I50	8200	63	32	3.82	1
SNCJ50103M063BK	J50	10,000	63	34	4.50	1
80 Volt						
SNCH45332M080BK	H45	3300	80	22	2.62	1
SNCI50472M080BK	I50	4700	80	23	3.29	1
SNCJ50682M080BK	J50	6800	80	25	3.92	1
100 Volt						
SNCH25821M100BK	H25	820	100	20	1.32	1
SNCI50332M100BK	I50	3300	100	22	3.32	1
SNCJ50472M100BK	J50	4700	100	23	3.80	1

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Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	DF Max. (%)	120Hz RMS Current (A) / 105°C	MSL
160 Volt						
SNCH50182M160BK	H50	1800	160	15	2.80	1
200 Volt						
SNCG25221M200BK	G25	220	200	15	0.82	1
SNCG25271M200BK	G25	270	200	15	0.82	1
SNCH25331M200BK	H25	330	200	15	1.28	1
SNCG25391M200BK	G25	390	200	15	1.23	1
SNCG30471M200BK	G30	470	200	15	1.50	1
SNCH35561M200BK	H35	560	200	15	1.72	1
SNCH35681M200BK	H35	680	200	15	1.72	1
SNCG45821M200BK	G45	820	200	15	2.04	1
SNCH45102M200BK	H45	1000	200	15	2.04	1
SNCI35122M200BK	I35	1200	200	15	2.15	1
SNCJ45152M200BK	J45	1500	200	15	3.07	1
SNCI50182M200BK	I50	1800	200	15	3.17	1
SNCJ50222M200BK	J50	2200	200	16	3.80	1
250 Volt						
SNCG25151M250BK	G25	150	250	15	0.76	1
SNCH25221M250BK	H25	220	250	15	1.09	1
SNCI25471M250BK	I25	470	250	15	1.50	1
SNCJ30681M250BK	J30	680	250	15	2.05	1
SNCJ35821M250BK	J35	820	250	15	2.29	1
SNCI40102M250BK	I40	1000	250	15	2.20	1
SNCJ40122M250BK	J40	1200	250	15	2.60	1
SNCJ50152M250BK	J50	1500	250	15	3.05	1
350 Volt						
SNCH45391M350BK	H45	390	350	20	1.15	1
SNCI50561M350BK	I50	560	350	20	1.70	1
SNCI50681M350BK	I50	680	350	20	1.80	1
400 Volt						
SNCH25121M400BK	H25	120	400	20	0.75	1
SNCH30151M400BK	H30	150	400	20	0.83	1
SNCG35181M400BK	G35	180	400	20	0.92	1
SNCI30271M400BK	I30	270	400	20	1.10	1
SNCI50561M400BK	I50	560	400	20	1.70	1
SNCJ50681M400BK	J50	680	400	20	2.20	1
SNCJ60821M400BK	J60	820	400	20	2.40	1
420 Volt						
SNCH45331M420BK	H45	330	420	20	1.45	1
SNCI45681M420BK	I45	680	420	20	1.70	1
450 Volt						
SNCG45121M450BK	G45	120	450	20	0.83	1
SNCH30151M450BK	H30	150	450	20	0.80	1
SNCH30181M450BK	H30	180	450	20	0.85	1
SNCI30221M450BK	I30	220	450	20	1.12	1
SNCI35271M450BK	I35	270	450	20	1.24	1
SNCJ35331M450BK	J35	330	450	20	1.15	1
SNCJ35391M450BK	J35	390	450	20	1.40	1
SNCJ50471M450BK	J50	470	450	20	1.75	1
SNCJ45561M450BK	J45	560	450	20	1.75	1
SNCJ50681M450BK	J50	680	450	20	1.80	1
500 Volt						
SNCH30121M500BK	H30	120	500	20	0.80	1
SNCI45221M500BK	I45	220	500	20	1.35	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 +25°C. 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
35 - 100	0.88	1.00	1.15	1.15	1.20
160 - 250	0.85	1.00	1.15	1.20	1.20
350 - 500	0.88	1.00	1.10	1.15	1.20

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QUALIFICATION TABLE

Test	SNC series (Temperature range -40°C to +105°C (35-250V), -25°C to +105°C (350-500V))						
	Condition	Characteristics					
Low Temperature Characteristics (Max. Impedance Ratio)	At 120Hz	Rated Voltage (V)	35	50	63-100	160-250	350-500
		Z(-25°C)/Z(+20°C)	4	4	4	4	8
		Z(-40°C)/Z(+20°C)	10	8	6	15	-
Endurance	2000 hours, with application of rated voltage at 105°C	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°C after exposing them for 1000hours 105°C 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

- 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.
- 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.
- 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)
F30	20x30	300	4	1200	272x272x146	564x282x312
G25	22x25	300	4	1200		
G30	22x30	200	4	800		
G35	22x35	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		
H40	25x40	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		
I50	30x50	50	4	200		
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		
J60	35x60	25	4	100		