THE DATASHEET OF

SN220M025ST

Type SN 85 ºC Non-Polar Aluminum Electrolytic Capacitors

85 ºC, Radial Leaded Non-Polar Aluminum Electrolytic

Type SN is a non-polar radial leaded aluminum electrolytic capacitor with a +85 ºC, 1000 hours life rating. The SN is ideal for applications where the polarity is unknown or reversed such as signal coupling circuits and speakers.

Highlights

- Non-polar
- +85 ºC
- Good for unknown polarity applications
- Available in T&R and ammo pack

Specifications

Capacitance Range: 0.47 to 2200 µF

Voltage Range: 6.3 to 100 WVNP

Capacitance Tolerance: ±20%

Operating Temperature Range: –40 ºC to +85 ºC

DC Leakage Current: After 2 minutes, +20 ºC at rated voltage

I = .03CV + 4 µA Max

C = Capacitance in (µF)

V = Rated voltage

I = Leakage current in µA

Dissipation Factor @ 120 Hz, +25 ºC:

WV (V)	6.3	10	16	25	35	50	100
DF(%)	24	20	17	15	14	12	10

For capacitance values > 1000 µF, the DF (%) value is increased 2% for every additional 1000 µF

Load Life: Apply WVNP for 1,000 hours at +85 ºC with polarity inverted every 250 hours

Capacitance change within 20% of initial limit

DC leakage current meets initial limits

ESR ≤ 200% of initial value

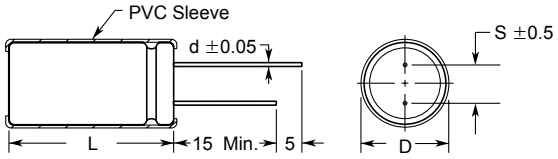
Shelf Life: 500 hrs with no voltage applied at +85 ºC

Cap change within 25% from initial limits

DC leakage ≤ 200% of initial value

ESR ≤ 200% of initial value

Outline Drawing



Case vented on diameters 6.3 and greater.

Vinyl sleeve adds .5 Max. to diameter and 2.0 Max. to length.

Dimensions in (millimeters)

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Part Numbering System

SN	100	M	100	S	T
Type	Capacitance (µF)	Capacitance Tolerance (%)	Rated Voltage (Vdc)	Packaging	Lead Configuration
SN	1R0 = 1 100 = 10 101 = 100 102 = 1000	M = ±20	6R3 = 6.3 010 = 10 100 = 100	A = Tape & Ammo E = Different Characteristic R = Tape & Reel S = Standard	1 = Lead cut 2 = Lead form 4 = Lead crimp & cut (form) T = Standard

Ratings

Cap (µF)	Catalog Part Number	Max ESR 120 Hz +25 °C (Ω)	Max Ripple 120 Hz +85 °C (mA)	Size in. (mm) Diameter (D)	Length (L)	Lead Space (S)	Lead Dia. (d)
6.3 WVNP (8 VNP Surge)							
33	SN330M6R3ST	9.65	63	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
47	SN470M6R3ST	6.78	84	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
100	SN101M6R3ST	3.18	140	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
220	SN221M6R3ST	1.45	235	.394 (10.0)	.472 (12.0)	.197 (5.0)	.0236 (0.6)
330	SN331M6R3ST	0.97	310	.394 (10.0)	.630 (16.0)	.197 (5.0)	.0236 (0.6)
470	SN471M6R3ST	0.68	400	.394 (10.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
1000	SN102M6R3ST	0.32	690	.512 (13.0)	.984 (25.0)	.197 (5.0)	.0236 (0.6)
2200	SN222M6R3ST	0.16	1250	.630 (16.0)	1.26 (32.0)	.295 (7.5)	.0315 (0.8)
10 WVNP (13 VNP Surge)							
10	SN100M010ST	26.54	42	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
22	SN220M010ST	12.06	57	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
33	SN330M010ST	8.04	77	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
47	SN470M010ST	5.65	93	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
100	SN101M010ST	2.65	193	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
220	SN221M010ST	1.21	255	.394 (10.0)	.630 (16.0)	.197 (5.0)	.0236 (0.6)
330	SN331M010ST	0.80	380	.394 (10.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
470	SN471M010ST	0.56	470	.512 (13.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
1000	SN102M010ST	0.27	885	.630 (16.0)	.984 (25.0)	.295 (7.5)	.0315 (0.8)
2200	SN222M010ST	0.13	1450	.630 (16.0)	1.42 (36.0)	.295 (7.5)	.0315 (0.8)
16 WVNP (20 VNP Surge)							
10	SN100M016ST	22.56	42	.236 (6.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
22	SN220M016ST	10.25	69	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
33	SN330M016ST	6.84	98	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
47	SN470M016ST	4.80	115	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
100	SN101M016ST	2.26	205	.394 (10.0)	.630 (16.0)	.197 (5.0)	.0236 (0.6)
220	SN221M016ST	1.03	330	.394 (10.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
330	SN331M016ST	0.68	445	.512 (13.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
470	SN471M016ST	0.48	570	.512 (13.0)	.984 (25.0)	.197 (5.0)	.0236 (0.6)
1000	SN102M016ST	0.23	1020	.630 (16.0)	1.26 (32.0)	.295 (7.5)	.0315 (0.8)

Ratings

Cap (µF)	Catalog Part Number	Max ESR 120 Hz +25 °C (Ω)	Max Ripple 120 Hz +85 °C (mA)	Size in. (mm) Diameter (D)	Length (L)	Lead Space (S)	Lead Dia. (d)
25 WVNP (32 VNP Surge)							
1.0	SN010M025ST	199.04	17	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
2.2	SN2R2M025ST	90.47	25	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
4.7	SN4R7M025ST	42.35	34	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
10	SN100M025ST	19.90	50	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
22	SN220M025ST	9.05	86	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
33	SN330M025ST	6.03	105	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
47	SN470M025ST	4.23	140	.394 (10.0)	.472 (12.0)	.197 (5.0)	.0236 (0.6)
100	SN101M025ST	1.99	240	.394 (10.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
220	SN221M025ST	0.90	390	.512 (13.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
330	SN331M025ST	0.60	580	.630 (16.0)	.984 (25.0)	.295 (7.5)	.0315 (0.8)
470	SN471M025ST	0.42	690	.630 (16.0)	.984 (25.0)	.295 (7.5)	.0315 (0.8)
35 WVNP (44 VNP Surge)							
3.3	SN3R3M035ST	56.30	27	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
4.7	SN4R7M035ST	39.53	34	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
10	SN100M035ST	18.58	54	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
22	SN220M035ST	8.44	94	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
33	SN330M035ST	5.63	125	.394 (10.0)	.472 (12.0)	.197 (5.0)	.0236 (0.6)
47	SN470M035ST	3.95	165	.394 (10.0)	.630 (16.0)	.197 (5.0)	.0236 (0.6)
100	SN101M035ST	1.86	285	.512 (13.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
220	SN221M035ST	0.84	520	.630 (16.0)	.984 (25.0)	.197 (5.0)	.0236 (0.6)
330	SN331M035ST	0.56	630	.630 (16.0)	.984 (25.0)	.295 (7.5)	.0315 (0.8)
470	SN471M035ST	0.40	820	.630 (16.0)	1.26 (32.0)	.295 (7.5)	.0315 (0.8)
50 WVNP (63 VNP Surge)							
0.47	SNR47M050ST	338.80	11	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
1.0	SN010M050ST	159.24	17	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
2.2	SN2R2M050ST	72.38	25	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
3.3	SN3R3M050ST	48.25	31	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
4.7	SN4R7M050ST	33.88	41	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
10	SN100M050ST	15.92	70	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
22	SN220M050ST	7.24	115	.394 (10.0)	.472 (12.0)	.197 (5.0)	.0236 (0.6)
33	SN330M050ST	4.83	150	.394 (10.0)	.630 (16.0)	.197 (5.0)	.0236 (0.6)
47	SN470M050ST	3.39	190	.394 (10.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
100	SN101M050ST	1.59	310	.512 (13.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
220	SN221M050ST	0.72	570	.630 (16.0)	.984 (25.0)	.295 (7.5)	.0315 (0.8)
330	SN331M050ST	0.48	790	.630 (16.0)	1.42 (36.0)	.295 (7.5)	.0315 (0.8)
63 WVNP (79 VNP Surge)							
1.0	SN010M063ST	159.24	17	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
2.2	SN2R2M063ST	72.38	25	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
3.3	SN3R3M063ST	48.25	37	.197 (5.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
4.7	SN4R7M063ST	33.88	44	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
10.0	SN100M063ST	15.92	74	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
22	SN220M063ST	7.24	130	.394 (10.0)	.630 (16.0)	.197 (5.0)	.0236 (0.6)
33	SN330M063ST	4.83	175	.394 (10.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
47	SN470M063ST	3.39	230	.512 (13.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
100	SN101M063ST	1.59	410	.630 (16.0)	.984 (25.0)	.295 (7.5)	.0315 (0.8)
220	SN221M063ST	0.72	660	.630 (16.0)	1.26 (32.0)	.295 (7.5)	.0315 (0.8)

Parts highlighted in yellow are obsolete.

Type SN 85 °C Non-Polar Aluminum Electrolytic Capacitors

Ratings

Cap (µF)	Catalog Part Number	Max ESR 120 Hz +25 °C (Ω)	Max Ripple 120 Hz +85 °C (mA)	Size in. (mm) Diameter (D)	Length (L)	Lead Space (S)	Lead Dia. (d)
100 WVNP (125 VNP Surge)							
0.47	SNR47M100ST	282.33	14	.197 (5.0)	.433 (11.0)	.079 (2.0)	.0197 (0.5)
1.0	SN010M100ST	132.70	21	.197 (5.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
2.2	SN2R2M100ST	60.32	34	.236 (6.0)	.433 (11.0)	.098 (2.5)	.0197 (0.5)
3.3	SN3R3M100ST	40.21	49	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
4.7	SN4R7M100ST	28.23	58	.315 (8.0)	.453 (11.5)	.138 (3.5)	.0197 (0.5)
10.0	SN100M100ST	13.27	100	.394 (10.0)	.472 (12.0)	.197 (5.0)	.0236 (0.6)
22	SN220M100ST	6.03	180	.512 (13.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
33	SN330M100ST	4.02	220	.512 (13.0)	.787 (20.0)	.197 (5.0)	.0236 (0.6)
47	SN470M100ST	2.82	285	.512 (13.0)	.984 (25.0)	.197 (5.0)	.0236 (0.6)
100	SN101M100ST	1.33	510	.630 (16.0)	1.26 (32.0)	.295 (7.5)	.0315 (0.8)

Parts highlighted in yellow are obsolete.

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