

### FEATURES

- General Purpose, 85°C Temperature Rating
- Available in Wide Range of High CV Values
- Long Life (3,000 hours) at Rated Temperature and Ripple Current

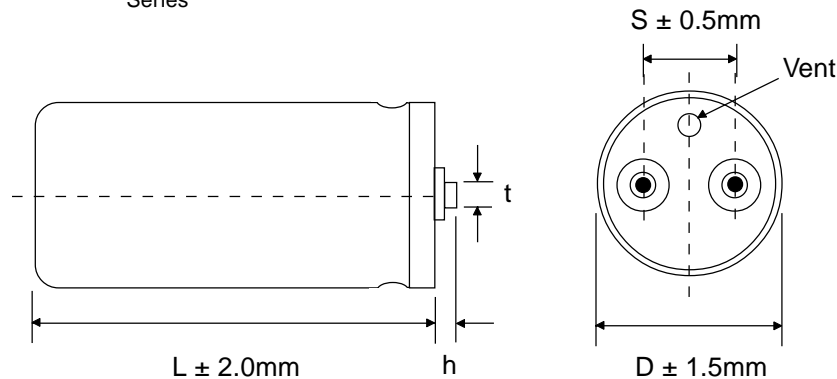
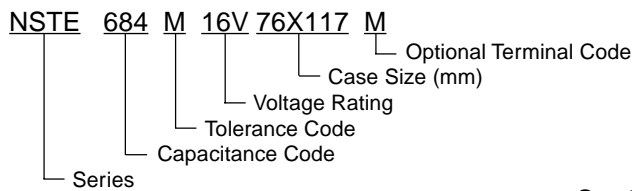


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### SPECIFICATIONS

Operating Temperature Range	-40°C ~ +85°C							
Rated Working Voltage Range	16 ~ 500Vdc							
Rated Capacitance Range	150μF ~ 1.0F							
Capacitance Tolerance	± 20% (M) at 120Hz, +20°C							
Max. Leakage Current After 5 Minutes (20°C)	$3\sqrt{C(\mu F)V}$ (μA)							
Surge Voltage	W.V. (Vdc)	16	25	35	50	63	80	100
	S.V. (Vdc)	20	32	44	63	79	100	125
	W.V. (Vdc)	250	400	500	-	-	-	-
	S.V. (Vdc)	300	450	550	-	-	-	-
Ripple Current Frequency Correction Factors	Voltage Rating	16 ~ 100Vdc						
	Frequency (Hz)	50	60	120	500	1K	10K	50K
	Multiplier @ 85°C	0.9	0.95	1.0	1.05	1.08	1.15	1.15
	Voltage Rating	250 ~ 500Vdc						
	Frequency (Hz)	50	60	120	500	1K	10K	50K
	Multiplier @ 85°C	0.75	0.8	1.0	1.2	1.25	1.4	1.4
Ripple Current Temperature Correction Factors	Temperature (°C)	≤ +45	+60	+70	+85	-	-	-
	Multiplier	2.2	2.0	1.6	1.0	-	-	-
Load Life Test 3,000 Hours @ 85°C	Capacitance Change	Within ± 20% of initial measured value						
	Tan δ & ESR	Less than 200% of the specified maximum value						
	Leakage Current	Less than the specified maximum value						
Shelf Life Test No Load 1,000 Hours @ 85°C	Capacitance Change	Within ± 20% of initial measured value						
	Tan δ & ESR	Less than 200% of the specified maximum value						
	Leakage Current	Less than the specified maximum value						

### PART NUMBERING SYSTEM



Terminal Specifications (mm)				
Thread	Code	Thread Depth	h ± 0.79	t ± 0.25
10-32 NF -2B*	-	9.5	6.4	8.0
10-32 NF-2B	L	5.5	1.6	8.0
M5	M	9.5	6.4	8.0
1/4-28 NF-2B	H	11.9	6.4	17.4
1/4-28 NF-2B	J	8.7	2.8	17.4
M6	X	11.9	6.4	17.4
M6	Y	8.7	2.8	17.4
Can Diameter			Terminal Spacing	
35			12.7 ± 0.5	
52			21.9 ± 0.5	
64			28.6 ± 0.5	
76			31.8 ± 0.5	

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## STANDARD VALUES AND CASE SIZES (mm)

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
16	33,000	31.3	35 x 41	5.1
	39,000	26.9	35 x 54	5.8
	56,000	19.6	35 x 66	7.3
	68,000	16.7	35 x 79	8.3
	82,000	14.3	52 x 48	10.0
	100,000	12.3	52 x 54	11.0
	120,000	10.7	52 x 66	12.4
	150,000	9.10	52 x 79	13.9
	180,000	8.10	52 x 92	15.4
	220,000	7.20	52 x 104	16.9
	270,000	6.40	64 x 79	19.3
	330,000	5.70	64 x 92	21.0
	390,000	5.30	76 x 79	23.7
	470,000	4.90	76 x 92	25.5
	560,000	4.60	76 x 104	27.0
	680,000	4.30	76 x 117	28.7
820,000	4.00	76 x 142	30.9	
1,200,000	3.70	76 x 218	36.7	

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
25	22,000	23.4	35 x 41	4.9
	27,000	19.6	35 x 54	5.7
	39,000	14.4	35 x 66	7.1
	56,000	12.4	52 x 48	9.7
	68,000	10.9	52 x 54	10.7
	82,000	9.40	52 x 66	12.2
	100,000	8.30	52 x 79	13.7
	120,000	7.30	52 x 92	15.2
	150,000	6.50	52 x 104	16.9
	180,000	5.80	64 x 79	19.3
	220,000	5.30	64 x 92	21.2
	270,000	4.40	76 x 79	24.3
	330,000	4.10	76 x 92	26.3
	390,000	3.90	76 x 104	28.0
	470,000	3.70	76 x 117	29.9
	560,000	3.60	76 x 142	32.3

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
50	8,200	53.9	35 x 41	3.3
	10,000	44.2	35 x 54	3.8
	15,000	29.5	35 x 66	4.9
	22,000	20.1	52 x 48	6.9
	27,000	16.4	52 x 54	7.7
	33,000	13.4	52 x 66	8.9
	39,000	11.7	52 x 79	9.7
	47,000	10.1	52 x 92	11.1
	56,000	8.80	52 x 104	10.3
	68,000	7.70	64 x 79	14.2
	82,000	6.70	64 x 92	15.7
	100,000	5.90	76 x 79	18.3
	120,000	5.30	76 x 92	20.0
	150,000	4.70	76 x 104	21.9
	180,000	4.30	76 x 117	23.6
	220,000	3.90	76 x 142	25.9

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
20	27,000	32.7	35 x 41	4.9
	33,000	27.4	35 x 54	5.7
	39,000	20.2	35 x 66	7.1
	56,000	17.4	35 x 79	8.0
	68,000	14.9	52 x 48	9.7
	82,000	12.9	52 x 54	10.7
	100,000	11.2	52 x 66	12.1
	120,000	9.80	52 x 79	13.5
	150,000	8.50	52 x 92	15.2
	180,000	7.60	52 x 104	16.6
	220,000	6.80	64 x 79	19.0
	270,000	6.10	64 x 92	20.0
	330,000	5.60	76 x 79	23.9
	390,000	5.20	76 x 92	25.6
	470,000	4.90	76 x 104	27.3
	560,000	4.60	76 x 117	29.0
	680,000	4.50	76 x 130	30.2
	820,000	4.40	76 x 142	31.4
	1,000,000	4.00	76 x 218	37.5

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
35	15,000	34.4	35 x 41	4.1
	18,000	28.9	35 x 54	4.7
	22,000	23.9	35 x 66	5.5
	33,000	16.4	52 x 48	7.7
	47,000	12.0	52 x 54	9.1
	56,000	10.3	52 x 66	10.3
	68,000	8.70	52 x 79	11.7
	82,000	7.50	52 x 92	13.1
	100,000	6.40	52 x 104	14.6
	120,000	5.60	64 x 79	16.7
	150,000	4.80	64 x 92	18.7
	180,000	4.20	76 x 79	21.5
	220,000	3.70	76 x 92	23.5
	270,000	3.30	76 x 92	20.0
	330,000	3.00	76 x 130	28.2
	360,000	2.90	76 x 142	29.5
	560,000	2.40	76 x 218	36.4

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
63	6,800	54.2	35 x 41	3.3
	8,200	44.9	35 x 54	3.8
	10,000	30.7	35 x 66	4.9
	15,000	29.5	52 x 48	6.3
	18,000	24.6	52 x 54	7.0
	22,000	20.1	52 x 66	8.0
	33,000	13.4	52 x 79	9.9
	39,000	11.6	52 x 92	11.0
	47,000	10.0	52 x 104	12.2
	56,000	9.70	64 x 79	14.0
	68,000	7.50	64 x 92	15.5
	82,000	6.50	76 x 79	17.9
	100,000	5.70	76 x 92	19.6
	120,000	5.00	76 x 104	21.2
	150,000	4.40	76 x 130	23.7
	180,000	4.00	76 x 142	25.3



## STANDARD VALUES AND CASE SIZES (mm)

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
100	2,700	109.2	35 x 41	2.2
	3,300	89.3	35 x 54	2.5
	4,700	62.7	35 x 66	3.2
	5,600	52.6	35 x 79	3.7
	6,800	43.3	52 x 48	4.7
	8,200	35.9	52 x 54	5.2
	10,000	29.5	52 x 66	6.1
	15,000	19.6	52 x 79	7.7
	18,000	16.4	52 x 93	8.7
	22,000	16.7	64 x 79	10.9
	33,000	15.6	76 x 79	15.1
	39,000	13.2	76 x 92	16.8
	47,000	11.0	76 x 104	18.7
	56,000	9.20	76 x 117	20.6

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
400	270	655	35 x 41	1.7
	390	453	35 x 54	2.2
	470	376	35 x 66	2.5
	560	316	35 x 79	2.9
	680	260	52 x 48	3.5
	820	216	52 x 48	4.0
	1,500	118	52 x 79	5.9
	1,800	98.0	52 x 92	6.7
	2,200	80.0	64 x 79	8.2
	3,300	54.0	64 x 104	10.7
	3,900	45.0	76 x 79	12.2
	4,700	38.0	76 x 104	14.2
	5,600	32.0	76 x 117	15.9
	6,800	26.0	76 x 130	18.0

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
250	560	395	35 x 41	2.4
	820	270	35 x 54	3.0
	1,200	184	35 x 66	3.9
	1,500	147	52 x 48	5.0
	1,800	123	52 x 54	5.6
	2,200	100	52 x 66	6.5
	3,300	67.0	52 x 79	8.2
	3,900	57.0	52 x 92	9.2
	4,700	47.0	52 x 104	10.4
	5,600	39.0	62 x 79	12.0
	6,800	33.0	62 x 92	13.5
	8,200	27.0	76 x 79	15.8
	10,000	22.0	76 x 92	17.7
	12,000	18.0	76 x 104	19.5
	15,000	15.0	76 x 117	21.8

W.V. (Vdc)	Cap. (μF)	ESR (mΩ) (20°C/120Hz)	Case Size DxL (mm)	Max. Ripple Current (Arms/85°C, 120Hz)
500	150	1,375	35 x 41	1.2
	180	1,146	35 x 54	1.4
	220	938	35 x 66	1.6
	330	625	35 x 79	2.1
	390	529	52 x 48	2.7
	470	439	52 x 54	3.0
	560	368	52 x 66	3.4
	820	252	52 x 76	4.3
	1,000	206	52 x 92	5.0
	1,200	172	64 x 79	6.2
	1,500	138	64 x 92	7.2
	1,800	115	64 x 104	8.1
	2,200	94.0	64 x 117	9.3
	2,700	76.0	76 x 104	10.9
	3,300	63.0	76 x 117	12.3
	3,900	53.0	76 x 142	14.0