

FEATURES

- CYLINDRICAL LEADLESS TYPE FOR SURFACE MOUNTING
- LOW IMPEDANCE AT 100KHz (Up to 20% lower than NACZ)
- WIDE TEMPERATURE RANGE (-55 +105°C)
- DESIGNED FOR AUTOMATIC MOUNTING AND REFLOW SOLDERING

CHARACTERISTICS

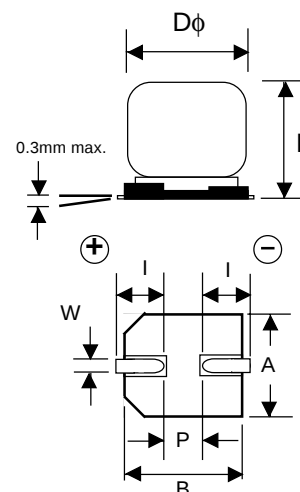
Rated Voltage Range	6.3 ~ 35 Vdc						
Rated Capacitance Range	4.7 ~ 3300μF						
Operating Temp. Range	-55 ~ +105°C						
Capacitance Tolerance	±20%(M) (120Hz/20°C)						
Max. Leakage Current after 2 Minutes @ 20°C	0.01CV or 3μA, whichever is greater						
Max. Tanδ @ 120Hz/20°C	W.V. (Vdc)		6.3	10	16	25	35
	S.V. (Vdc)		8.0	13	20	32	44
	4 ~ 6.3mm Diameter		0.24	0.20	0.16	0.14	0.12
	8 ~ 12.5mm Diameter	C ≤ 1000μF	0.28	0.24	0.20	0.16	0.14
		C ≤ 2200μF	-	0.26	-	-	-
		C = 3300μF	0.32	-	-	-	-
Low Temperature Stability Impedance Ratio @ 120Hz	Z-40°C/Z +20°C		3	2	2	2	2
	Z-55°C/Z +20°C		5	4	4	3	3
Load LifeTest @ 105°C 4~6.3mm Dia 1,000 Hours 8~12.5mm Dia 2,000 Hours	Capacitance Change		Within ± 25% of initial measured value				
	Tanδ		Less than 200% of specified max. value				
	Leakage Current		Less than specified max. value				



SURFACE MOUNT

STANDARD PRODUCTION SIZE DØ xL (mm)

Cap (μF)	Code	Working Voltage (Vdc)				
		6.3	10	16	25	35
4.7	4R7	-	-	-	-	4x6.3
10	100	-	-	-	4x6.3	5x6.3
15	150	-	-	4x6.3	5x6.3	5x6.3
22	220	-	4x6.3	5x6.3	5x6.3	5x6.3
27	270	4x6.3	-	-	-	-
33	330	-	5x6.3	-	6.3x6.3	6.3x6.3
47	470	5x6.3	-	6.3x6.3	6.3x6.3	6.3x6.3
56	560	5x6.3	-	-	6.3x6.3	-
68	680	-	6.3x6.3	6.3x6.3	6.3x6.3	6.3x8
100	101	6.3x6.3	-	6.3x6.3	6.3x8	8x10.5
150	151	6.3x6.3	6.3x6.3	6.3x8	8x10.5	8x10.5
220	221	6.3x6.3	6.3x8	6.3x8	8x10.5	8x10.5
330	331	6.3x8	8x10.5	8x10.5	8x10.5	10x10.5
470	471	8x10.5	8x10.5	8x10.5	10x10.5	12.5x14
680	681	8x10.5	-	10x10.5	-	12.5x14
1000	102	8x10.5	10x10.5	-	12.5x14	-
1500	152	10x10.5	-	12.5x14	-	-
2200	222	-	12.5x14	-	-	-
3300	332	12.5x14	-	-	-	-



SEE PAGE 38
For Case Size Data
SEE PAGE 39
For Taping/Packaging Data

Case Size	A	B	I	P	W
4x6.3	4.3	4.3	2.0	1.0	0.5 ~ 0.8
5x6.3	5.3	5.3	2.3	1.4	0.5 ~ 0.8
6.3x6.3	6.6	6.6	2.5	2.2	0.5 ~ 0.8
6.3x8	6.6	6.6	2.5	2.2	0.5 ~ 0.8
8x10.5	8.3	8.3	2.9	3.2	0.7 ~ 1.0
10x10.5	10.3	10.3	3.2	4.6	1.1 ~ 1.4
12.5x14	12/8	12/8	4.5	4.6	1.1 ~ 1.4

MAXIMUM IMPEDANCE (Ω AT 20°C AND 100KHz)

Cap (μF)	Code	Working Voltage (Vdc)				
		6.3	10	16	25	35
4.7	4R7	-	-	-	-	1.45
10	100	-	-	-	1.45	0.70
15	150	-	-	1.45	0.70	0.70
22	220	-	1.45	0.70	0.70	0.70
27	270	1.45	-	-	-	-
33	330	-	0.70	-	0.39	0.39
47	470	0.70	-	0.39	0.39	0.39
56	560	0.70	-	-	0.39	-
68	680	-	0.39	0.39	0.39	0.30
100	101	0.39	-	0.39	0.30	0.15
150	151	0.39	0.39	0.30	0.15	0.15
220	221	0.39	0.30	0.30	0.15	0.15
330	331	0.30	0.15	0.15	0.15	0.08
470	471	0.15	0.15	0.15	0.15	0.15
680	681	0.15	-	0.08	-	0.058
1000	102	0.15	0.08	-	0.058	-
1500	152	0.08	-	0.058	-	-
2200	222	-	0.058	-	-	-
3300	332	0.058	-	-	-	-

MAXIMUM PERMISSIBLE RIPPLE CURRENT (mA rms AT 100KHz AND 105°C)

Cap (μF)	Code	Working Voltage (Vdc)				
		6.3	10	16	25	35
4.7	4R7	-	-	-	-	90
10	100	-	-	-	90	170
15	150	-	-	90	170	170
22	220	-	90	170	170	170
27	270	90	-	-	-	-
33	330	-	170	-	250	250
47	470	170	-	250	250	250
56	560	170	-	-	250	-
68	680	-	250	250	250	300
100	101	250	-	250	300	600
150	151	250	250	300	600	600
220	221	250	300	300	600	600
330	331	300	600	600	600	850
470	471	600	600	600	850	1150
680	681	600	-	850	-	1150
1000	102	600	0.08	-	1150	-
1500	152	850	-	1150	-	-
2200	222	-	1150	-	-	-
3300	332	1150	-	-	-	-

RIPPLE CURRENT FREQUENCY CORRECTION FACTOR

Frequency	≤ 120Hz	≤ 1K Hz	≤ 10KHz	≤ 100KHz
Correction Factor	0.75	0.85	0.95	1.0

RIPPLE CURRENT TEMPERATURE CORRECTION FACTOR

Temperature	≤ + 65°C	≤ +85°C	≤ 105°C
Correction Factor	1.5	1.3	1.0

