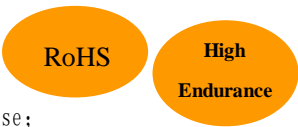


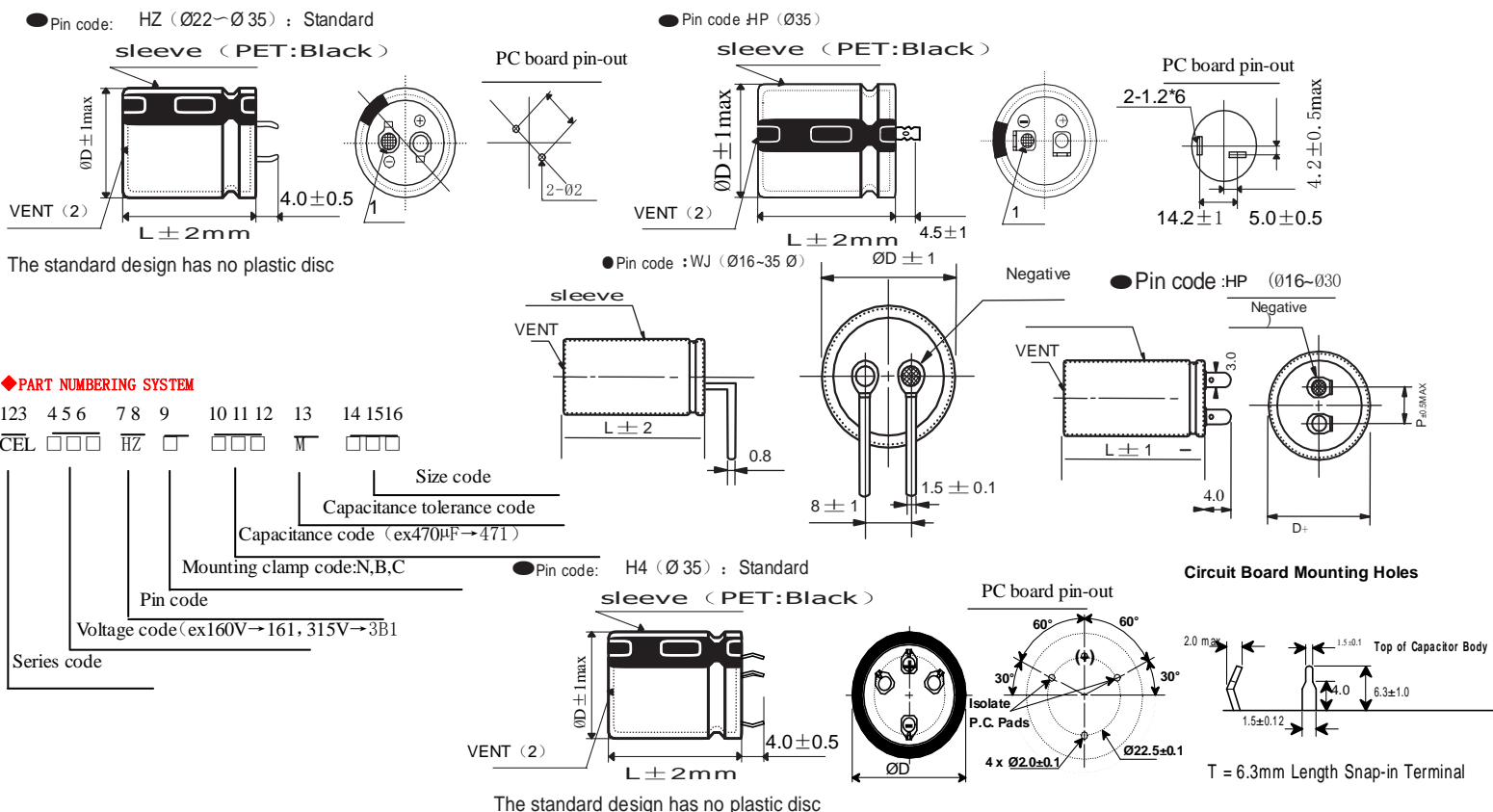
- Doesn't spark with DC over voltage;
- Downsized from current Endurance with ripple current: 5000 hours at 105°C;
- Apply to Switching Power Supply And General Frequency converter Etc Smooth Use;
- Piezoelectric wafer warp drive products, Servo motor, Servo drive, Data device, Smart homes;



SPECIFIC ATIONS

items	characteristics		
Category temperature Range	-25~+105°C		
Rated voltage Range	160~450VDC		
Capacitance Tolerance	±20% (M) 20°C、120HZ		
Leakage Current	I=0.02CV or 5mA, whichever is smaller I: Where, I : Max. leakage current (μA)、C: Nominal capacitance (μF)、Rated voltage (V) at 20°C after 5 minutes)		
Dissipation Factor (MAX)	Rated voltage (Vdc)	160V~400V	420V~450V
	tanδ Max	0.15	0.20
Low Temperature characteristics	Rated voltage (Vdc)	160V~400V	420V~500V
	Z(-25°C)/Z(+20°C)	4	8
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 5,000 hours at 105°C		
	Capacitance change	≤±20% of the initial value	
	D.F. (tanδ)	≤300% of the initial specified value	
	Leakage current	≤The initial specified value	
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4		
	Capacitance change	≤±20% of the initial value	
	D.F. (tanδ)	≤300% of the initial specified value	
	Leakage current	≤The initial specified value	

size Fig (snap-in Fig)[mm]





SRANDRAD RATINGS

WV [Vdc]	cap [μ F]	Case size D x L [mm]	tanδ 120Hz20°C	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	WV [Vdc]	cap [μ F]	Case size D x L [mm]	tanδ 120Hz20°C	Ripple current (Ams/105 °C, 120Hz)	Par t NO.
160	390	22×25	0.15	1.32	CHI161HZN391MP25	200	560	22×40	0.15	1.73	CHI201HZN561MP40
	560	22×30	0.15	1.66	CHI161HZN561MP30		560	25.4×30	0.15	1.71	CHI201HZN561MQ30
	560	25.4×25	0.15	1.68	CHI161HZN561MQ25		560	30×25	0.15	1.78	CHI201HZN561MR25
	680	22×35	0.15	1.87	CHI161HZN681MP35		680	22×45	0.15	1.81	CHI201HZN681MP45
	680	25.4×30	0.15	1.88	CHI161HZN681MQ30		680	25.4×35	0.15	1.87	CHI201HZN681MQ35
	680	30×25	0.15	1.96	CHI161HZN681MR25		680	30×30	0.15	1.98	CHI201HZN681MR30
	820	22×40	0.15	2.09	CHI161HZN821MP40		680	35×25	0.15	2.10	CHI201HZN681MA25
	1000	22×45	0.15	2.36	CHI161HZN102MP45		820	22×50	0.15	2.18	CHI201HZN821MP50
	1000	22×50	0.15	2.41	CHI161HZN102MP50		820	25.4×40	0.15	2.09	CHI201HZN821MQ40
	1000	25.4×35	0.15	2.38	CHI161HZN102MQ35		820	30×35	0.15	2.22	CHI201HZN821MR35
	1000	30×30	0.15	2.40	CHI161HZN102MR30		1000	25.4×45	0.15	2.35	CHI201HZN102MQ45
	1000	35×25	0.15	2.55	CHI161HZN102MA25		1000	25.4×50	0.15	2.39	CHI201HZN102MQ50
	1200	25.4×40	0.15	2.66	CHI161HZN122MQ40		1000	30×40	0.15	2.53	CHI201HZN102MR40
	1200	25.4×45	0.15	2.71	CHI161HZN122MQ45		1000	35×30	0.15	2.61	CHI201HZN102MA30
	1200	30×35	0.15	2.69	CHI161HZN122MR35		1200	30×45	0.15	2.84	CHI201HZN122MR45
	1200	30×40	0.15	2.77	CHI161HZN122MR40		1200	30×50	0.15	2.88	CHI201HZN122MR50
	1200	35×30	0.15	2.86	CHI161HZN122MA30		1200	35×35	0.15	2.88	CHI201HZN122MA35
	1500	25.4×50	0.15	3.08	CHI161HZN152MQ50		1500	35×40	0.15	3.34	CHI201HZN152MA40
	1500	30×45	0.15	3.17	CHI161HZN152MR45		1800	35×45	0.15	3.74	CHI201HZN182MA45
	1500	35×35	0.15	3.22	CHI161HZN152MA35		1800	35×50	0.15	3.82	CHI201HZN182MA50
1800	30×50	0.15	3.53	CHI161HZN182MA35	270	22×25	0.15	1.10	CHI221HZN271MP25		
1800	35×40	0.15	3.66	CHI161HZN182MA40	330	22×30	0.15	1.19	CHI221HZN331MP30		
2200	35×45	0.15	4.14	CHI161HZN222MA45	390	25.4×25	0.15	1.39	CHI221HZN391MQ25		
2700	35×50	0.15	4.68	CHI161HZN272MA50	470	22×35	0.15	1.55	CHI221HZN471MP35		
180	330	22×25	0.15	1.21	CHI181HZN331MP25	470	25.4×30	0.15	1.56	CHI221HZN471MQ30	
	470	22×30	0.15	1.52	CHI181HZN471MP30	470	30×25	0.15	1.63	CHI221HZN471MR25	
	470	25.4×25	0.15	1.52	CHI181HZN471MQ25	560	22×40	0.15	1.73	CHI221HZN561MP40	
	560	22×35	0.15	1.70	CHI181HZN561MP35	560	30×30	0.15	1.73	CHI221HZN561MR30	
	560	30×25	0.15	1.78	CHI181HZN561MR25	680	22×45	0.15	1.94	CHI221HZN681MP45	
	680	22×40	0.15	1.91	CHI181HZN681MP40	680	22×50	0.15	1.99	CHI221HZN681MP50	
	680	25.4×30	0.15	1.88	CHI181HZN681MQ30	680	25.4×35	0.15	1.96	CHI221HZN681MQ35	
	820	22×45	0.15	1.99	CHI181HZN821MP45	680	30×35	0.15	2.02	CHI221HZN681MR35	
	820	25.4×35	0.15	2.16	CHI181HZN821MQ35	680	35×25	0.15	2.10	CHI221HZN681MA25	
	820	30×30	0.15	2.17	CHI181HZN821MR30	820	25.4×45	0.15	2.24	CHI221HZN821MQ45	
	820	35×25	0.15	2.31	CHI181HZN821MA25	820	30×40	0.15	2.29	CHI221HZN821MR40	
	1000	22×50	0.15	2.25	CHI181HZN102MP50	820	35×30	0.15	2.36	CHI221HZN821MA30	
	1000	25.4×40	0.15	2.43	CHI181HZN102MQ40	1000	25.4×50	0.15	2.51	CHI221HZN102MQ50	
	1000	25.4×45	0.15	2.47	CHI181HZN102MQ45	1000	30×45	0.15	2.59	CHI221HZN102MR45	
	1000	30×35	0.15	2.46	CHI181HZN102MR35	1000	35×35	0.15	2.63	CHI221HZN102MA35	
	1200	25.4×50	0.15	2.75	CHI181HZN122MQ50	1200	30×50	0.15	2.88	CHI221HZN102MR50	
	1200	30×40	0.15	2.77	CHI181HZN122MR40	1200	35×40	0.15	2.98	CHI221HZN122MA40	
	1200	35×30	0.15	2.86	CHI181HZN122MA30	1500	35×45	0.15	3.41	CHI221HZN152MA45	
	1500	30×45	0.15	3.17	CHI181HZN152MR45	1800	35×50	0.15	3.82	CHI221HZN152MA50	
	1500	30×50	0.15	3.22	CHI181HZN152MR50	220	22×25	0.15	1.01	CHI251HZN221MP25	
1500	35×35	0.15	3.22	CHI181HZN152MA35	270	22×30	0.15	1.20	CHI251HZN271MP30		
1800	35×40	0.15	3.66	CHI181HZN182MA40	330	25.4×25	0.15	1.32	CHI251HZN331MQ25		
1800	35×45	0.15	3.74	CHI181HZN182MA45	390	22×35	0.15	1.44	CHI251HZN391MP35		
2200	35×50	0.15	4.22	CHI181HZN222MA50	390	25.4×30	0.15	1.43	CHI251HZN391MQ30		
200	270	22×25	0.15	1.10	CHI201HZN271MP25	390	30×25	0.15	1.51	CHI251HZN391MR25	
	390	22×30	0.15	1.38	CHI201HZN391MP30	470	22×40	0.15	1.62	CHI251HZN471MP40	
	390	25.4×25	0.15	1.39	CHI201HZN391MQ25	560	22×45	0.15	1.80	CHI251HZN561MP45	
	470	22×35	0.15	1.55	CHI201HZN471MP35	560	22×50	0.15	1.84	CHI251HZN561MP50	



SRANDRAD RATINGS

WV [Vdc]	cap [μ F]	Case size D x L [mm]	tanδ 120Hz20°C	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	WV [Vdc]	cap [μ F]	Case size D x L [mm]	tanδ 120Hz20°C	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	
250	560	25.4×35	0.15	1.78	CHI251HZN561MQ35	350	330	25.4×40	0.15	1.39	CHI351HZN331MQ40	
	560	30×30	0.15	1.83	CHI251HZN561MR30		330	30×35	0.15	1.43	CHI351HZN331MR35	
	560	35×25	0.15	1.91	CHI251HZN561MA25		390	25.4×45	0.15	1.55	CHI351HZN391MQ45	
	680	25.4×40	0.15	2.00	CHI251HZN681MQ40		390	30×40	0.15	1.60	CHI351HZN391MR40	
	680	25.4×45	0.15	2.04	CHI251HZN681MQ45		390	35×30	0.15	1.66	CHI351HZN391MA30	
	680	30×35	0.15	2.06	CHI251HZN681MR35		470	25.4×50	0.15	1.72	CHI351HZN471MQ50	
	680	35×30	0.15	2.15	CHI251HZN681MA30		470	30×45	0.15	1.81	CHI351HZN471MR45	
	820	25.4×50	0.15	2.28	CHI251HZN821MQ50		470	35×35	0.15	1.83	CHI351HZN471MA35	
	820	30×40	0.15	2.33	CHI251HZN821MR40		560	30×50	0.15	2.00	CHI351HZN561MR50	
	820	30×45	0.15	2.39	CHI251HZN821MR45		560	35×40	0.15	2.07	CHI351HZN561MA40	
	820	35×35	0.15	2.38	CHI251HZN821MA35		680	35×45	0.15	2.34	CHI351HZN681MA45	
	1000	30×50	0.15	2.68	CHI251HZN102MR50		820	35×50	0.15	2.62	CHI351HZN821MA50	
	1000	35×40	0.15	2.72	CHI251HZN102MA40		400	100	22×25	0.15	0.66	CHI401HZN101MP25
	1200	35×45	0.15	3.05	CHI251HZN122MA45			120	22×30	0.15	0.75	CHI401HZN121MP30
1500	35×50	0.15	3.49	CHI251HZN152MA50	150	22×35		0.15	0.86	CHI401HZN151MP35		
315	150	22×25	0.15	0.80	CHI3B1HZN151MP25	150		25.4×25	0.15	0.86	CHI401HZN151MQ25	
	180	22×30	0.15	0.92	CHI3B1HZN181MP30	180		22×40	0.15	0.96	CHI401HZN181MP40	
	180	25.4×25	0.15	0.94	CHI3B1HZN181MQ25	180		25.4×30	0.15	0.97	CHI401HZN181MQ30	
	220	22×35	0.15	1.04	CHI3B1HZN221MP35	180		30×25	0.15	1.02	CHI401HZN181MR25	
	220	30×25	0.15	1.17	CHI3B1HZN221MR25	220		22×45	0.15	1.09	CHI401HZN221MP45	
	270	22×40	0.15	1.18	CHI3B1HZN271MP40	220		25.4×35	0.15	1.12	CHI401HZN221MQ35	
	270	25.4×30	0.15	1.19	CHI3B1HZN271MQ30	220		35×25	0.15	1.22	CHI401HZN221MA25	
	330	22×25	0.15	1.33	CHI3B1HZN331MP25	270		22×50	0.15	1.23	CHI401HZN271MP50	
	330	25.4×35	0.15	1.37	CHI3B1HZN331MQ35	270		25.4×40	0.15	1.26	CHI401HZN271MQ40	
	330	30×30	0.15	1.40	CHI3B1HZN331MR30	270		25.4×45	0.15	1.29	CHI401HZN271MQ45	
	330	35×25	0.15	1.49	CHI3B1HZN331MA25	270		30×30	0.15	1.27	CHI401HZN271MR30	
	390	22×50	0.15	1.48	CHI3B1HZN391MP50	330	25.4×50	0.15	1.44	CHI401HZN331MQ50		
	390	25.4×40	0.15	1.52	CHI3B1HZN391MQ40	330	30×35	0.15	1.43	CHI401HZN331MR35		
	470	25.4×45	0.15	1.70	CHI3B1HZN471MQ45	330	35×30	0.15	1.52	CHI401HZN331MA30		
470	30×35	0.15	1.71	CHI3B1HZN471MR35	390	30×40	0.15	1.60	CHI401HZN391MR40			
470	35×30	0.15	1.82	CHI3B1HZN471MA30	390	35×35	0.15	1.67	CHI401HZN391MA35			
560	25.4×50	0.15	1.88	CHI3B1HZN561MQ50	470	30×45	0.15	1.81	CHI401HZN471MR45			
560	30×40	0.15	1.92	CHI3B1HZN561MR40	470	30×50	0.15	1.84	CHI401HZN471MR50			
560	30×45	0.15	1.97	CHI3B1HZN561MR45	470	35×40	0.15	1.90	CHI401HZN471MA40			
560	35×35	0.15	2.00	CHI3B1HZN561MA35	560	35×45	0.15	2.12	CHI401HZN561MA45			
680	30×50	0.15	2.21	CHI3B1HZN681MR50	680	35×50	0.15	2.39	CHI401HZN681MA50			
680	35×40	0.15	2.29	CHI3B1HZN681MA40	420	100	22×25	0.20	0.66	CHI421HZN101MP25		
820	35×45	0.15	2.57	CHI3B1HZN821MA45		120	22×30	0.20	0.75	CHI421HZN121MP30		
1000	35×50	0.15	2.89	CHI3B1HZN102MA50		120	25.4×25	0.20	0.77	CHI421HZN121MQ25		
350	120	22×25	0.15	0.72		CHI351HZN121MP25	150	22×35	0.20	0.86	CHI421HZN151MP35	
	150	22×30	0.15	0.84		CHI351HZN151MP30	180	22×40	0.20	0.96	CHI421HZN181MP40	
	180	25.4×25	0.15	0.94		CHI351HZN181MQ25	180	22×45	0.20	0.98	CHI421HZN181MP45	
	220	22×35	0.15	1.04		CHI351HZN221MP35	180	25.4×30	0.20	0.97	CHI421HZN181MQ30	
	220	22×40	0.15	1.06		CHI351HZN221MP40	180	25.4×35	0.20	1.01	CHI421HZN181MQ35	
	220	25.4×30	0.15	1.07		CHI351HZN221MQ30	180	30×25	0.20	1.02	CHI421HZN181MR25	
	220	30×25	0.15	1.13		CHI351HZN221MR25	220	22×50	0.20	1.11	CHI421HZN221MP50	
	270	22×45	0.15	1.20		CHI351HZN271MP45	220	25.4×40	0.20	1.14	CHI421HZN221MQ40	
	270	25.4×30	0.15	1.24		CHI351HZN271MQ30	220	30×30	0.20	1.14	CHI421HZN221MR30	
	270	30×30	0.15	1.27		CHI351HZN271MR30	220	35×25	0.20	1.22	CHI421HZN221MA25	
	270	35×25	0.15	1.35		CHI351HZN271MA25	270	25.4×45	0.20	1.29	CHI421HZN271MQ45	
	330	22×50	0.15	1.36	CHI351HZN331MP50	270	30×35	0.20	1.30	CHI421HZN271MR35		



SRANDRAD RATINGS

WV [Vdc]	cap [μ F]	Case size D x L [mm]	tanδ 120Hz20°C	Ripple current (Ams/105 °C, 120Hz)	Par t NO.	WV [Vdc]	cap [μ F]	Case size D x L [mm]	tanδ 120Hz20°C	Ripple current (Ams/105 °C, 120Hz)	Par t NO.
420	270	35×30	0.20	1.38	CHI421HZN271MA30	450	150	30×25	0.20	0.93	CHI451HZN151MR25
	330	25.4×50	0.20	1.44	CHI421HZN331MQ50		180	22×50	0.20	1.01	CHI451HZN181MP50
	330	30×40	0.20	1.48	CHI421HZN331MR40		180	25.4×40	0.20	1.03	CHI451HZN181MQ40
	330	35×35	0.20	1.54	CHI421HZN331MA35		180	30×30	0.20	1.03	CHI451HZN181MR30
	390	30×45	0.20	1.64	CHI421HZN391MR45		180	35×25	0.20	1.10	CHI451HZN181MA25
	390	35×40	0.20	1.73	CHI421HZN391MA30		220	25.4×45	0.20	1.16	CHI451HZN221MQ45
	470	30×50	0.20	1.84	CHI421HZN471MR50		220	30×35	0.20	1.17	CHI451HZN221MR35
	470	35×45	0.20	1.94	CHI421HZN471MA45		220	35×30	0.20	1.24	CHI451HZN221MA30
	560	35×50	0.20	2.17	CHI421HZN561MA50		270	25.4×50	0.20	1.31	CHI451HZN271MQ50
450	82	22×25	0.20	0.59	CHI451HZN820MP25		270	30×40	0.20	1.33	CHI451HZN271MR40
	100	22×30	0.20	0.69	CHI451HZN101MP30		270	35×35	0.20	1.39	CHI451HZN271MA35
	100	25.4×25	0.20	0.70	CHI451HZN101MQ25		330	30×45	0.20	1.51	CHI451HZN331MR45
	120	22×35	0.20	0.77	CHI451HZN121MP35		390	30×50	0.20	1.67	CHI451HZN391MR50
	150	22×40	0.20	0.88	CHI451HZN151MP40		390	35×40	0.20	1.73	CHI451HZN391MA40
	150	22×45	0.20	0.90	CHI451HZN151MP45		390	35×45	0.20	1.77	CHI451HZN391MA45
	150	25.4×30	0.20	0.88	CHI451HZN151MQ30		470	35×50	0.20	1.98	CHI451HZN471MA50
	150	25.4×35	0.20	0.92	CHI451HZN151MQ35		560	35×55	0.20	2.13	CHI451HZN561MA55

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Frequency (HZ)	50	120	300	1K	10K	50K
160~250vdc	0.81	1.00	1.17	1.32	1.45	1.50
315~450vdc	0.77	1.00	1.16	1.30	1.41	1.43

×The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise when long life performance is required in actual use,the rms ripple current has to be reduced

