

- Endurance with ripple current: 8000 hours at 105°C, Extended higher CV ratings provides stability and keyed polarity
- Apply to inverters servo amplifier Circuit, Large industrial power supply Military power Etc High requirements for electrical circuit Implementation Charge and discharge Countermeasures The Products, current changes in a while
- High ripple circuit, Fast Pulse circuit
- Traffic HD intelligent video surveillance, HD fill, FANUC

Long life

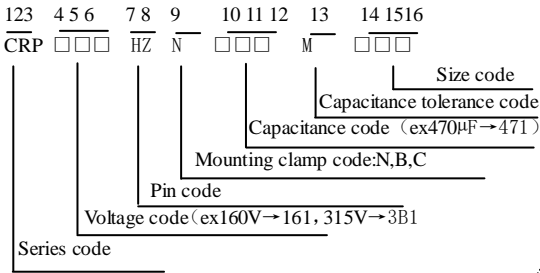
RoHS



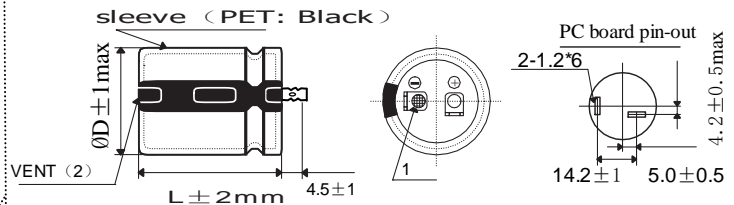
SPECIFIC ATIONS

items	characteristics	
Category temperature Range	-25~+85°C (500vdc~600vdc)	-25~+105°C (16vdc~450vdc)
Rated voltage Range	16~600 _{VDC}	
Capacitance Tolerance	± 20% (M)	20°C、120HZ
Leakage Current	I=3√CV 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)	≅ Specifications	
Low Temperature characteristics	Rated voltage (Vdc)	16v~400V 420V~600V
	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 8,000 hours at 105°C	
	Capacitance change	≤ ±20% of the initial value
	D.F. (tanδ)	≤ of the initial specified value 200% (≧500Vdc:250%≅)
	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)	≤ 200% of the initial specified value
	Leakage current	≤ The initial specified value

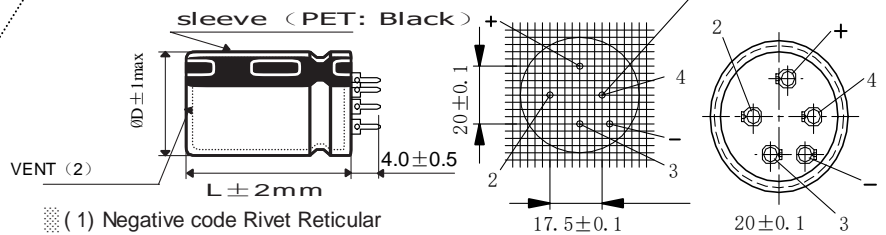
PART NUMBERING SYSTEM



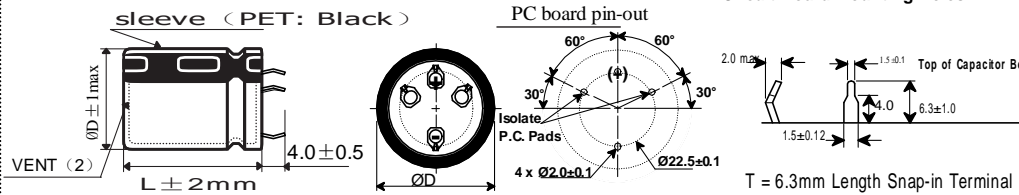
● Pin code :HP (Ø35)



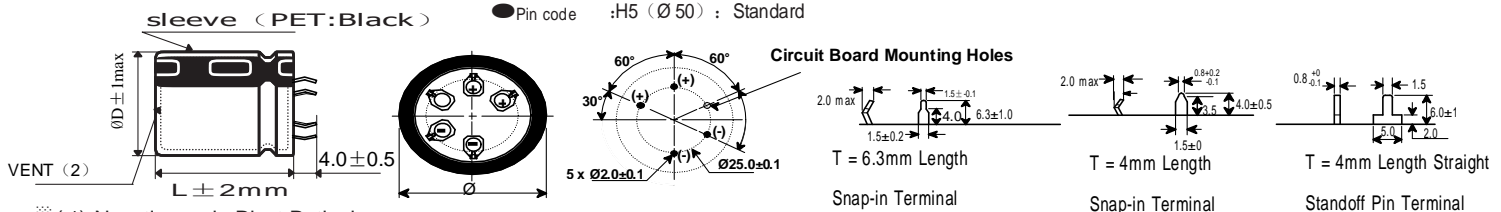
● Pin code :H5 (Ø40) : Standard



● Pin code: H4 (Ø35) : Standard



● Pin code :H5 (Ø50) : Standard



SRANDRAD RATINGS

WV [Vdc]	cap [μ F]	Case size D x L [mm]	Tan δ 120Hz20 $^{\circ}$ C	Ripple current (Ams/105 $^{\circ}$ C, 120Hz)	Par t NO.	WV [Vdc]	cap [μ F]	Case size D x L [mm]	Tan δ 120Hz20 $^{\circ}$ C	Ripple current (Ams/105 $^{\circ}$ C, 120Hz)	Par t NO.	
16	39000	35×40	0.5	5.10	CS2161HZD393MA40	50	27000	40×63	0.30	6.05	CS2500HZZT273MU63	
	47000	40×40	0.5	5.50	CS2161HZZT473MU40		33000	35×105	0.30	7.23	CS2500HZZD333MA5	
	56000	35×50	0.5	6.00	CS2161HZD563MA50		33000	50×50	0.30	7.75	CS2500HZZT333MC50	
	68000	35×63	0.5	6.62	CS2161HZD393MA63		39000	40×80	0.30	7.55	CS2500HZZT393MU80	
	68000	40×50	0.5	7.29	CS2161HZZT683MU50		39000	50×63	0.30	8.40	CS2500HZZT393MC63	
	82000	40×63	0.5	7.66	CS2161HZZT823MU63		47000	40×105	0.30	8.18	CS2500HZZD473MUA5	
	100000	35×80	0.5	8.03	CS2161HZD104MA80		47000	50×63	0.30	9.19	CS2500HZZT473MC63	
	120000	35×105	0.5	8.71	CS2161HZD124MAA5		56000	50×92	0.30	9.79	CS2500HZZT563MC92	
	120000	40×80	0.5	8.79	CS2161HZZT124MU80		68000	50×105	0.30	10.42	CS2500HZZT683MCA5	
	120000	50×80	0.5	9.02	CS2161HZZT124MC80		63	6800	35×40	0.25	3.60	CS2630HZZD682MA40
	150000	40×105	0.5	9.88	CS2161HZZT154MUA5			12000	35×50	0.25	4.40	CS2630HZZD123MA50
	150000	50×63	0.5	10.15	CS2161HZZT154MC63			12000	40×40	0.25	4.52	CS2630HZZT123MU40
	180000	50×80	0.5	11.02	CS2161HZZT184MC80			15000	35×63	0.25	4.92	CS2630HZZD153MA63
	220000	50×92	0.5	11.71	CS2161HZZT224MC92			15000	40×50	0.25	4.80	CS2630HZZT153MU50
	250000	50×105	0.5	12.31	CS2161HZZT254MCA5			18000	35×80	0.25	5.79	CS2630HZZD183MA80
25	27000	35×40	0.4	4.80	CS2250HZZD273MA40	18000		40×63	0.25	5.39	CS2630HZZT183MU63	
	33000	35×50	0.4	5.50	CS2250HZZD333MA50	22000		50×50	0.25	6.76	CS2630HZZT223MC50	
	33000	40×40	0.4	5.50	CS2250HZZT333MU40	27000		35×105	0.25	6.53	CS2630HZZD273MAA5	
	47000	35×63	0.4	6.56	CS2250HZZD473MA63	27000		40×80	0.25	6.59	CS2630HZZT273MU80	
	47000	40×50	0.4	6.47	CS2250HZZT473MU50	27000		50×63	0.25	7.34	CS2630HZZT273MC63	
	56000	35×80	0.4	7.25	CS2250HZZD563MA80	33000		50×80	0.25	8.00	CS2630HZZT333MC80	
	56000	40×63	0.4	7.17	CS2250HZZT563MU63	39000		40×105	0.25	7.53	CS2630HZZT393MUA5	
	82000	35×105	0.4	8.58	CS2250HZZD823MAA5	39000		50×92	0.25	8.48	CS2630HZZT393MC92	
	82000	40×80	0.4	8.68	CS2250HZZT823MU80	47000		50×63	0.25	8.99	CS2630HZZT473MC63	
	82000	50×50	0.4	9.20	CS2250HZZT823MC50	80	4700	35×40	0.20	3.30	CS2800HZZD472MA40	
	100000	40×105	0.4	9.76	CS2250HZZT104MUA5		6800	35×50	0.20	3.90	CS2800HZZD682MA50	
	100000	50×63	0.4	10.02	CS2250HZZT104MC63		6800	40×40	0.20	3.90	CS2800HZZT682MU40	
	120000	50×80	0.4	10.93	CS2250HZZT124MC80		8200	35×63	0.20	4.39	CS2800HZZD822MA63	
	150000	50×92	0.4	11.70	CS2250HZZT154MC92		8200	40×50	0.20	4.29	CS2800HZZT822MU50	
	180000	50×105	0.4	12.42	CS2250HZZT184MCA5		10000	35×80	0.20	4.88	CS2800HZZD103MA80	
35	18000	35×40	0.35	4.30	CS2350HZZD183MA40		10000	40×50	0.20	4.73	CS2800HZZT103MU50	
	22000	35×50	0.35	5.00	CS2350HZZD223MA50		12000	50×50	0.20	6.03	CS2800HZZT123MC50	
	22000	40×40	0.35	5.00	CS2350HZZT223MU40		15000	35×105	0.20	6.13	CS2800HZZD153MAA5	
	27000	35×63	0.35	5.53	CS2350HZZD273MA63		15000	40×80	0.20	5.97	CS2800HZZT153MU80	
	27000	40×50	0.35	5.44	CS2350HZZT273MU50		15000	50×63	0.20	6.65	CS2800HZZT153MC63	
	33000	40×63	0.35	6.61	CS2350HZZT333MU63		18000	50×80	0.20	7.29	CS2800HZZT183MC80	
	39000	35×80	0.35	6.52	CS2350HZZD393MA80		22000	40×105	0.20	6.95	CS2800HZZT223MUA5	
	47000	35×105	0.35	8.07	CS2350HZZD473MAA5		22000	50×92	0.20	7.83	CS2800HZZT223MC92	
	47000	40×80	0.35	7.79	CS2350HZZT473MU80		27000	50×105	0.20	8.38	CS2800HZZT273MCA5	
	47000	50×50	0.35	8.25	CS2350HZZT473MACO	100	3300	35×40	0.20	3.20	CS2101HZZD332MA40	
	56000	50×63	0.35	9.00	CS2350HZZT563MC63		4700	35×50	0.20	3.80	CS2101HZZD472MA50	
	68000	40×105	0.35	9.27	CS2350HZZT683MU50		4700	40×40	0.20	3.80	CS2101HZZD472MU40	
	68000	50×80	0.35	10.07	CS2350HZZT683MC80		5600	35×63	0.20	4.06	CS2101HZZD562MA63	
	82000	50×92	0.35	10.89	CS2350HZZT823MC92		6800	40×50	0.20	4.57	CS2101HZZT682MU50	
	100000	50×105	0.35	11.75	CS2350HZZT104MCA5		8200	35×80	0.20	5.15	CS2101HZZD822MA80	
50	10000	35×40	0.30	4.00	CS2500HZZD103MA40		8200	40×63	0.20	5.02	CS2101HZZT822MU63	
	15000	35×50	0.30	4.80	CS2500HZZD153MA50		8200	50×50	0.20	6.14	CS2101HZZT822MC50	
	15000	40×40	0.30	4.80	CS2500HZZT153MU40		10000	35×105	0.20	6.38	CS2101HZZD103MAA5	
	18000	35×63	0.30	5.27	CS2500HZZD183MA63		12000	40×80	0.20	6.44	CS2101HZZT123MU80	
	22000	40×50	0.30	5.15	CS2500HZZT223MU50		12000	50×63	0.20	7.17	CS2101HZZT123MC63	
	27000	35×80	0.30	6.16	CS2500HZZD273MA80		15000	40×105	0.20	7.37	CS2101HZZT153MUA5	

Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications



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.
100	15000	50×80	0.20	8.01	CS2101HZT153MC80	400	820	50×50	0.15	4.03	CS2401LIN821MC50
	18000	50×92	0.20	8.64	CS2101HZT183MC92		1000	40×75	0.15	4.33	CS2401HZY102MU75
	22000	50×105	0.20	9.32	CS2101HZT223MCA5		1200	40×75	0.15	4.73	CS2401HZY122MU75
125	1800	35*35	0.20	5.90	CS2125HZT182MA35		1200	50×60	0.15	4.92	CS2401LIN122MC60
	2200	35*40	0.20	6.69	CS2125HZT222MA40		1500	50×70	0.15	5.48	CS2401LIN152MC70
	2700	35*50	0.20	7.60	CS2125HZT272MA50	420	390	40×45	0.15	2.56	CS2421HZY391MU45
	2700	40*40	0.20	7.70	CS2125HZT272MU40		560	40×55	0.15	3.04	CS2421HZY561MU55
	3300	35*63	0.20	8.80	CS2125HZT332MA63		680	42×55	0.15	3.39	CS2421LIN681MV55
	3300	40*50	0.20	8.80	CS2125HZT332MU50		820	40×70	0.15	3.72	CS2421HZY821MU70
	3900	35*50	0.20	10.20	CS2125HZT392MA50		820	42×65	0.15	3.76	CS2421LIN821MV65
	3900	40*63	0.20	10.20	CS2125HZT392MU63		820	50×50	0.15	3.87	CS2421LIN821MC50
	4700	40*80	0.20	8.50	CS2125HZT472MU80		1000	42×80	0.15	4.15	CS2421LIN102MV80
	5600	40*80	0.20	11.70	CS2125HZT562MU80		1000	50×60	0.15	4.31	CS2421LIN102MC60
	5600	50*50	0.20	9.50	CS2125HZT562MC50		1200	50×70	0.15	4.71	CS2421LIN122MC70
	6800	35*105	0.20	12.7	CS2125HZT682MCA5		450	330	40×45	0.15	2.35
	8200	50*63	0.20	12.5	CS2125HZT822MC63	470		40×55	0.15	2.79	CS2451HZY471MU55
	10000	40*105	0.20	13.8	CS2125HZT103MUA5	560		40×65	0.15	3.07	CS2451HZY561MU65
	12000	50*92	0.20	18.1	CS2125HZT122MC92	560		42×55	0.15	3.07	CS2451LIN561MV55
15000	50*105	0.20	19.7	CS2125HZT152MCA5	680	42×65		0.15	3.43	CS2451LIN681MV65	
180	1500	40×45	0.15	3.99	CS2181HZY152MU45	680		50×50	0.15	3.50	CS2451LIN681MC50
	2200	40×55	0.15	4.80	CS2181HZY222MU55	820		42×80	0.15	3.75	CS2451LIN821MV80
	2200	42×50	0.15	4.49	CS2181LIN222MV50	820		50×60	0.15	3.90	CS2451LIN821MC60
	2700	40×65	0.15	5.37	CS2181HZY272MU65	1000		50×70	0.15	4.30	CS2451LIN102MC70
	2700	50×50	0.15	4.84	CS2181LIN272MC50	500		330	40×45	0.20	2.96
	3300	42×65	0.15	5.56	CS2181LIN332MV65		470	40×60	0.20	3.50	CS2501HZY471MU60
	3900	42×75	0.15	6.03	CS2181LIN392MV75		470	42×55	0.20	3.54	CS2501LIN471MV55
	3900	50×60	0.15	5.87	CS2181LIN392MC60		560	40×65	0.20	3.87	CS2501HZY561MU65
	4700	50×70	0.15	6.42	CS2181LIN472MC70		680	42×65	0.20	4.31	CS2501LIN681MV65
250	1000	40×45	0.15	3.26	CS2251HZY102MU45		680	50×50	0.20	4.43	CS2501LIN681MC50
	1500	40×55	0.15	3.96	CS2251HZY152MU55		820	42×80	0.20	4.72	CS2501LIN821MV80
	1800	40×65	0.15	4.38	CS2251HZY182MU65		820	50×60	0.20	4.91	CS2501LIN821MC60
	1800	42×55	0.15	4.06	CS2251LIN182MV55		1000	50×70	0.20	5.40	CS2501LIN102MC70
	1800	50×50	0.15	3.95	CS2251LIN182MC50		550	220	40×45	0.20	2.33
	2200	42×65	0.15	4.54	CS2251LIN222MV65	270		40×55	0.20	2.57	CS2551HZY271MU55
	2700	42×80	0.15	5.02	CS2251LIN272MV80	330		42×55	0.20	2.87	CS2551LIN331MV55
	2700	50×60	0.15	4.88	CS2251LIN272MC60	390		40×65	0.20	3.12	CS2551HZY391MU65
	3300	50×70	0.15	5.38	CS2251LIN332MC70	390		42×75	0.20	3.15	CS2551LIN391MV75
	315	680	40×60	0.15	3.35	CS2315HZY681MU60		390	50×50	0.20	3.24
820		40×70	0.15	3.96	CS2315HZY821MU70	560		42×80	0.20	3.77	CS2551LIN561MV80
820		50×60	0.15	4.33	CS2315LIN821MC60	560		50×60	0.20	3.92	CS2551LIN561MC60
1000		40×80	0.15	4.51	CS2315HZY102MU80	680		50×70	0.20	4.31	CS2551LIN681MC70
1200		40×80	0.15	4.95	CS2315HZY122MU80	820		50×80	0.20	4.48	CS2551LIN821MC80
1200		50×65	0.15	5.21	CS2315LIN122MC65	600	180	40×45	0.20	2.11	CS2601HZY181MU45
1500		50×75	0.15	5.72	CS2315LIN152MC75		220	40×55	0.20	2.32	CS2601HZY221MU55
1800		42×90	0.15	5.65	CS2315LIN272MV90		270	42×60	0.20	2.59	CS2601LIN271MV60
2200		50×70	0.15	5.26	CS2315LIN272MC70		330	40×65	0.20	2.87	CS2601HZY331MU65
2700		50×80	0.15	5.51	CS2315LIN332MC80		390	42×65	0.20	3.15	CS2601LIN391MV65
400	470	40×45	0.15	2.92	CS2401HZY471MU45		390	50×50	0.20	3.24	CS2601LIN391MC50
	680	40×60	0.15	3.50	CS2401HZY681MU60		470	42×80	0.20	3.45	CS2601LIN471MV80
	680	42×60	0.15	3.53	CS2401LIN681MV60		470	50×60	0.20	3.59	CS2601LIN471MC60
	820	40×65	0.15	3.87	CS2401HZY821MU65		560	50×70	0.20	3.91	CS2601LIN561MC70



◆ RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency (HZ)	50	120	300	1K	10K	50K
16~250vdc	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
500~600vdc	0.70	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