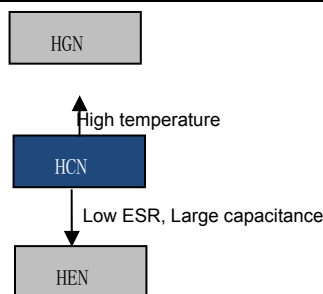


- Standard 105°C, 2000 hours
- Low ESR, high ripple current capability
- Applications: DC/DC Converter, Switching Power Supply, Back up Power Supplies for CPU etc.
- RoHS Compliant



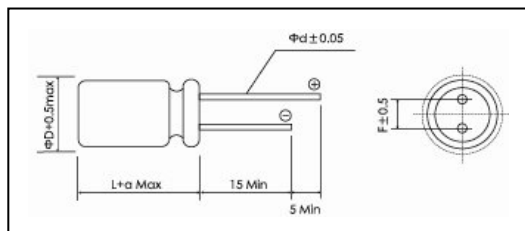
Items	Characteristics
Operating Temperature Range (°C)	-55 ~ +105
Voltage Range (V)	2.5 ~ 35
Capacitance Range (μF) (20°C, 120Hz)	10~1500
Capacitance Tolerance (20°C, 120Hz)	± 20%
Surge Voltage	UR x 1.15
Leakage Current (μA) ※1	Please see the attached ratings list (20°C, 2min)
Dissipation Factor (20°C, 120Hz)	Please see the attached ratings list
Equivalent Series Resistance(20°C, 100kHz)	Please see the attached ratings list
Temperature Characteristics (Max Impedance Ratio at 100kHz)	$Z_{+105^{\circ}\text{C}}/Z_{+20^{\circ}\text{C}} \leq 1.25$ $Z_{-55^{\circ}\text{C}}/Z_{+20^{\circ}\text{C}} \leq 1.25$
Endurance	2000h, Rated voltage applied at 105°C Capacitance change: within ± 20% of the Initial measured value Dissipation Factor (Tan δ): ≤150% of initial specified value ESR: ≤150% of initial specified value DC Leakage Current: ≤the initial specified value
Damp heat(Steady state)	1000h, No-applied voltage 60°C ,90~95% RH Capacitance change: within ± 20% of the initial measured value Dissipation Factor (Tan δ): ≤150% of initial specified value ESR: ≤150% of initial specified value DC Leakage Current: ≤the initial specified value (after voltage processing)
Resistance to soldering heat	Flow method (260 ± 5°C x 10s) Capacitance change: within ± 5% of the initial measured value Dissipation Factor (Tan δ): ≤the initial specified value ESR: ≤the initial specified value DC Leakage Current: ≤the initial specified value (after voltage processing)

※1 In case of some problems for measured values, measure after applying rated voltage for 120 minutes at 105°C.

Dimensions

mm

(unit:mm)



Size Code	ΦD±0.5	L	amax	F±0.5	Φd±0.05
F08	6.3	8	1.0	2.5	0.5
F10	6.3	10	0.5	2.5	0.5
B08	8.0	8	1.0	3.5	0.6
BAB	8.0	11.5	1.5	3.5	0.6
CAC	10.0	12.5	1.5	5.0	0.6

Size List

UR [S.V] (V)	2.5 [2.9]	4 [4.6]	6.3 [7.2]	10 [12]	16 [18]	20 [23]	25 [29]	35 [40]
10							F08	B08
15							F10	
18								BAB
22							B08	
33						F10	BAB	CAC
47				F10		B08	BAB	
56							CAC	
68				F10			BAB	
100				F10	F10.BAB	BAB.CAC	CAC	
150				F10	B08.BAB.CAC	CAC		
180					BAB			
220			F10	F10.CAC	B08.BAB			
270		F10		BAB	CAC			
330			F10	BAB	CAC			
390	F10	F10	BAB					
470			BAB	CAC				
560		BAB		CAC				
680	BAB		CAC					
820	BAB	CAC	CAC					
1000		CAC	CAC					
1200	CAC	CAC						
1500	CAC							



Ratings for HCN Series

U _R Code	Rated Capacitance		Max ESR 20°C	Rated Ripple Current		Dissipation Factor	Leakage Current	Size	P/N
	20°C, 120Hz	100kHz	100kHz	105°C, 100kHz	20°C, 120Hz	20°C, 2min	(μA)	ΦD×L	
(v)	(μF)	(mΩ)	(mΩ)	(mArms)	(%)	(%)	(μA)	(mm)	-
2.5 0E	390	20		3,200	8		195.0	6.3x10	PCR0ECN391MF10□□
	680	10		5,230	12		340.0	8x11.5	PCR0ECN681MB AB□□
	820	10		5,230	12		410.0	8X11.5	PCR0ECN821MBAB□□
	1,200	8		5,500	12		600.0	10x12.5	PCR0ECN122MCAC□□
	1,500	8		5,500	12		750.0	10x12.5	PCR0ECN152MCAC□□
4 0G	270	20		3,200	8		216.0	6.3x10	PCR0GCN271MF10□□
	390	20		3,300	8		312.0	6.3X10	PCR0GCN391MF10□□
	560	10		5,230	12		448.0	8x11.5	PCR0GCN561MBAB□□
	820	8		5,500	12		656.0	10x12.5	PCR0GCN821MCAC□□
	1,000	8		5,500	12		800.0	10x12.5	PCR0GCN102MCAC□□
	1,200	8		5,500	12		960.0	10X12.5	PCR0GCN122MCAC□□
6.3 0J	220	20		3,200	8		277.2	6.3X10	PCR0JCN221MF10□□
	330	20		3,300	8		415.8	6.3x10	PCR0JCN331MF10□□
	390	12		4,770	12		491.4	8x11.5	PCR0JCN391MB AB□□
	470	12		4,770	12		592.2	8x11.5	PCR0JCN471MBAB□□
	680	10		5,500	12		642.6	10x12.5	PCR0JCN681MCAC□□
	820	10		5,500	12		774.9	10x12.5	PCR0JCN821MCAC□□
	1,000	10		5,500	12		945.0	10x12.5	PCR0JCN102MCAC□□
10 1A	47	25		2,900	8		94.0	6.3X10	PCR1ACN470MF10□□
	68	25		2,900	8		136.0	6.3X10	PCR1ACN680MF10□□
	100	25		2,900	8		200.0	6.3x10	PCR1ACN101MF10□□
	150	25		2,900	8		300.0	6.3x10	PCR1ACNI51MF10□□
	220	25		2,900	12		440.0	6.3X10	PCR1ACN221MF10□□
	270	14		4,420	12		540.0	8X11.5	PCR1ACN271MBAB□□
	330	14		4,420	12		660.0	8x11.5	PCR1ACN331MBAB□□
	220	10		5,500	12		330.0	10x12.5	PCR1ACN221MCAC□□
	470	10		5,500	12		705.0	10x12.5	PCR1ACN471MCAC□□
	560	12		5,300	12		840.0	10x12.5	PCR1ACN561MCAC□□
16 1C	100	24		2,900	8		320.0	6.3x10	PCR1CCN101MF10□□
	150	16		4,000	12		480.0	8x8	PCR1CCN151MB08□□
	220	16		4,000	12		704.0	8X8	PCR1CCN221MB08□□
	100	16		4,360	12		320.0	8X11.5	PCR1CCN101MBAB□□
	150	16		4,360	12		480.0	8x11.5	PCR1CCN151MBAB□□
	180	16		4,360	12		576.0	8x11.5	PCR1CCN181MBAB□□
	220	16		4,360	12		704.0	8x11.5	PCR1CCN221MBAB□□
	150	10		5,500	12		360.0	10x12.5	PCR1CCN151MCAC□□
	270	14		5,050	12		648.0	10x12.5	PCR1CCN271MCAC□□
	330	14		5,050	12		792.0	10x12.5	PCR1CCN331MCAC□□
20 1D	33	48		2,200	6		132.0	6.3x10	PCR1DCN330MF10□□
	47	30		2,800	12		188.0	8X8	PCR1DCN470MB08□□
	100	24		3,320	12		400.0	8x11.5	PCR1DCN101MBAB□□
	100	20		4,320	12		400.0	10x12.5	PCR1DCN101MCAC□□
	150	20		4,320	12		600.0	10x12.5	PCR1DCN151MCAC□□
25 1E	10	50		2,000	12		50.0	6.3x8	PCR1ECN100MF08□□
	15	48		2,200	6		75.0	6.3x10	PCR1ECN150MF10□□
	22	30		2,800	12		110.0	8x8	PCR1ECN220MB08□□
	33	24		3,600	12		165.0	8x11.5	PCR1ECN330MBAB□□
	47	24		3,320	12		235.0	8x11.5	PCR1ECN470MBAB□□
	68	24		3,320	12		340.0	8x11.5	PCR1ECN680MBAB□□
	56	20		3,800	12		280.0	10x12.5	PCR1ECN560MCAC□□
	100	20		4,320	12		500.0	10x12.5	PCR1ECN101MCAC□□
35 1V	10	50		2,300	12		175.0	8X8	PCR1VCN100MB08□□
	18	34		2,830	12		315.0	8X11.5	PCR1VCN180MBAB□□
	33	30		3,270	12		577.5	10x12.5	PCR1VCN330MCAC□□

Customer products are available on request.

Frequency coefficient for ripple current

Frequency	120Hz ≤ f < 1kHz	1kHz ≤ f < 10kHz	10kHz ≤ f < 100kHz	100kHz ≤ f < 500kHz
Coefficient	0.05	0.3	0.7	1