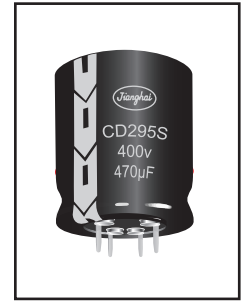
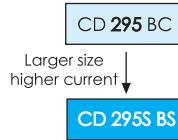


5000h at 85°C

- Larger Size Components
- Long Useful Life
- High Ripple Current
- Industrial Power Supplies
- Voltage derating (0.93\*V<sub>R</sub>) enables 105°C operation



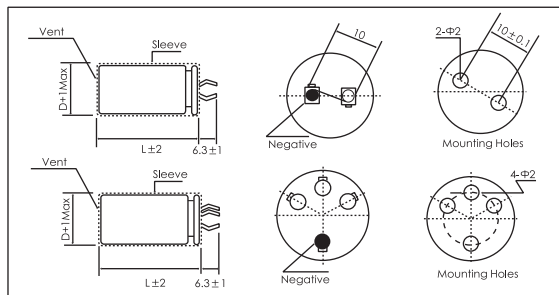
SNAP-IN/LUG

Items	Characteristics			
Operating Temperature Range (°C)	-40 ~ +85	-25 ~ +85		
Voltage Range (V)	160 ~ 400	450 ~ 500		
Capacitance Range (µF)	390 ~ 4700			
Capacitance Tolerance (20°C, 120Hz)	± 20%			
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 1.5mA, whichever is smaller. C: Nominal Capacitance (µF) V: Rated Voltage (V)			
Dissipation Factor (20°C, 120Hz)	WV (V)	160~500		
	Tan δ	0.15		
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	160~200	250~400	450~500
	Z <sub>-25°C</sub> / Z <sub>+20°C</sub>	3	4	
	Z <sub>-40°C</sub> / Z <sub>+20°C</sub>	6	8	-

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	12000h	>100000h	5000h	7000h	1000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacitance Change	Within ± 30% of initial value		Within ± 20% of initial value	Within ± 20% of initial value	Within ± 20% of initial value
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 200% of specified value	Not more than 200% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	U <sub>R</sub> I <sub>R</sub> 85°C	U <sub>R</sub> 1.2 x I <sub>R</sub> 40°C	U <sub>R</sub> I <sub>R</sub> 85°C	U <sub>R</sub> I <sub>R</sub> = 0 85°C	U <sub>R</sub> = 0 I <sub>R</sub> = 0 85°C After test: U <sub>R</sub> to be applied for 30min >24h before measurement

## Dimensions

mm



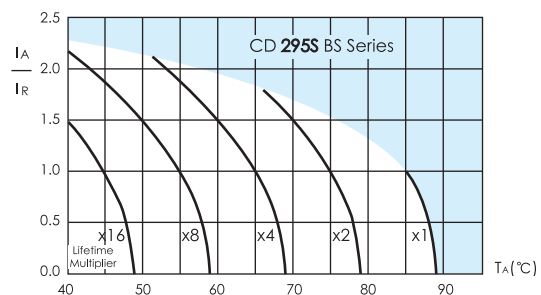
## Frequency Coefficient

Frequency	50/60Hz	120Hz	300Hz	1kHz	10kHz	≥50kHz
Factor	0.8	1.0	1.16	1.3	1.41	1.45

## Temperature Coefficient

Temperature (°C)	+40	+55	+70	+85
Factor	2.3	2.1	1.75	1.0

## Lifetime Diagram



I<sub>A</sub> = actual ripple current at 120Hz, I<sub>R</sub> = rated ripple current at 120Hz, 85°C  
Multiplier of Useful Life as a function of ambient temperature and ripple current load



# CD 295S BS SERIES



## Ratings for CD 295S BS Series

$U_r$ (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size $\Phi D \times L$	P/N	
(V)	( $\mu F$ )	(m $\Omega$ )	(m $\Omega$ )	(Arms)	(mm)	-	
160 (200) 2C	2200	91	63	4.9	35 × 45	ECS2CBS222M□□350045	
	2700	74	52	5.3	35 × 50	ECS2CBS272M□□350050	
	3300	60	42	5.5	35 × 70	ECS2CBS332M□□350070	
		60	42	5.5	40 × 60	ECS2CBS332M□□400060	
	3900	51	36	5.9	35 × 80	ECS2CBS392M□□350080	
	4700	42	30	7.3	40 × 80	ECS2CBS472M□□400080	
200 (250) 2D	1500	133	93	4.3	35 × 40	ECS2DBS152M□□350040	
	1800	111	77	4.7	35 × 45	ECS2DBS182M□□350045	
	2200	91	63	5.4	35 × 50	ECS2DBS222M□□350050	
		91	63	5.4	40 × 40	ECS2DBS222M□□400040	
	2700	74	52	5.9	35 × 60	ECS2DBS272M□□350060	
		74	52	5.9	40 × 50	ECS2DBS272M□□400050	
	3300	60	42	6.5	35 × 80	ECS2DBS332M□□350080	
		60	42	6.5	40 × 60	ECS2DBS332M□□400060	
	3900	51	36	7.0	40 × 80	ECS2DBS392M□□400080	
	4700	42	30	9.2	40 × 90	ECS2DBS472M□□400090	
250 (300) 2E	1000	199	139	3.7	35 × 40	ECS2EBS102M□□350040	
	1200	166	116	3.8	35 × 45	ECS2EBS122M□□350045	
	1500	133	93	4.4	35 × 50	ECS2EBS152M□□350050	
		133	93	4.5	40 × 40	ECS2EBS152M□□400040	
	1800	111	77	5.0	35 × 70	ECS2EBS182M□□350070	
		111	77	5.0	40 × 50	ECS2EBS182M□□400050	
	2200	91	63	5.4	35 × 70	ECS2EBS222M□□350070	
	2700	74	52	6.9	40 × 80	ECS2EBS272M□□400080	
350 (400) 2V	680	293	205	3.6	35 × 45	ECS2VBS681M□□350045	
		293	205	3.6	40 × 40	ECS2VBS681M□□400040	
	820	243	170	4.5	35 × 60	ECS2VBS821M□□350060	
		243	170	4.5	40 × 50	ECS2VBS821M□□400050	
	1000	199	139	5.2	35 × 70	ECS2VBS102M□□350070	
		199	139	4.9	40 × 60	ECS2VBS102M□□400060	
	1200	166	116	5.5	35 × 80	ECS2VBS122M□□350080	
		166	116	5.6	40 × 70	ECS2VBS122M□□400070	
	1500	133	93	6.5	40 × 80	ECS2VBS152M□□400080	
		133	93	6.2	45 × 70	ECS2VBS152M□□450070	
	1800	111	77	7.9	40 × 100	ECS2VBS182M□□400100	
		111	77	7.1	45 × 70	ECS2VBS182M□□450070	
	2200	91	63	8.7	40 × 100	ECS2VBS222M□□400100	
	400 (450) 2G	560	355	249	3.2	35 × 50	ECS2GBS561M□□350050
		355	249	2.8	40 × 40	ECS2GBS561M□□400040	
680		293	205	3.7	35 × 60	ECS2GBS681M□□350060	
		293	205	3.8	40 × 50	ECS2GBS681M□□400050	
820		243	170	4.2	35 × 60	ECS2GBS821M□□350060	
		243	170	4.1	40 × 50	ECS2GBS821M□□400050	
1000		199	139	4.9	35 × 70	ECS2GBS102M□□350070	
		199	139	4.8	40 × 60	ECS2GBS102M□□400060	
		199	139	4.6	45 × 50	ECS2GBS102M□□450050	
1200		166	116	5.8	35 × 80	ECS2GBS122M□□350080	
		166	116	5.5	40 × 70	ECS2GBS122M□□400070	
		133	93	6.9	40 × 80	ECS2GBS152M□□400080	
		133	93	6.6	45 × 70	ECS2GBS152M□□450070	
		133	93	6.8	45 × 80	ECS2GBS152M□□450080	
1800		111	77	7.9	40 × 90	ECS2GBS182M□□400090	
		111	77	7.3	45 × 80	ECS2GBS182M□□450080	
450 (500) 2W		470	424	296	3.0	35 × 50	ECS2WBS471M□□350050
			424	296	3.0	40 × 40	ECS2WBS471M□□400040
	560	355	249	3.1	35 × 50	ECS2WBS561M□□350050	
		355	249	3.3	35 × 60	ECS2WBS561M□□350060	
		355	249	3.4	40 × 50	ECS2WBS561M□□450050	
	680	293	205	3.5	35 × 60	ECS2WBS681M□□350060	
		293	205	3.8	35 × 70	ECS2WBS681M□□350070	
		293	205	3.8	40 × 60	ECS2WBS681M□□400060	
	820	243	170	4.6	35 × 80	ECS2WBS821M□□350080	
		243	170	4.4	40 × 60	ECS2WBS821M□□400060	
	1000	199	139	5.7	35 × 80	ECS2WBS102M□□350080	
		199	139	5.2	40 × 60	ECS2WBS102M□□400060	
	1200	166	116	5.9	40 × 70	ECS2WBS122M□□400070	
		166	116	6.2	45 × 70	ECS2WBS122M□□450070	
	1500	133	93	7.3	40 × 100	ECS2WBS152M□□400100	
		133	93	7.0	45 × 80	ECS2WBS152M□□450080	
	1800	111	77	7.9	45 × 100	ECS2WBS182M□□450100	
	500 (550) 2H	390	510	357	1.9	35 × 50	ECS2HBS391M□□350050
470		424	296	2.3	35 × 60	ECS2HBS471M□□350060	
560		355	249	2.5	35 × 60	ECS2HBS561M□□350060	
		355	249	2.7	40 × 60	ECS2HBS561M□□400060	
680		293	205	3.1	35 × 80	ECS2HBS681M□□350080	
		293	205	2.8	40 × 70	ECS2HBS681M□□400070	
820		243	170	3.4	35 × 90	ECS2HBS821M□□350090	
		243	170	3.3	40 × 70	ECS2HBS821M□□400070	
1000		199	139	3.9	40 × 80	ECS2HBS102M□□400080	
		199	139	3.9	45 × 70	ECS2HBS102M□□450070	
1200		166	116	4.3	40 × 90	ECS2HBS122M□□400090	
1500		133	93	4.8	45 × 100	ECS2HBS152M□□450100	

Customer products are available on request.

