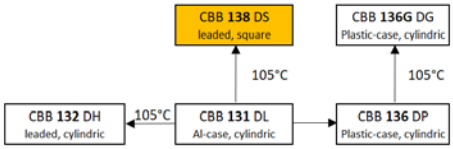
Polypropylene Film Capacitors for DC-Link Application

Features

- Design for DC Link Application
- Metal sprayed contacts for low ESL
- Self-healing



Applications

- Frequency inverter and intermediate circuits
- Industry high-end power supplies

Item	Characteristics
Climatic Category	40/105/56 (IEC 61071)
Operating Temperature	–40 ~ +105 °C ($\theta_{hotspot}$ ≤ 105 °C) $\theta_{hotspot}$ = 85~105°C: Voltage Derating of 1,35% per °C for U_{RDC}
Storage Temperature	–40 ~ +105 °C
DC Voltage Rating U_{RDC}	450 ~ 1700 V_{DC}
Capacitance Range	1 ~ 110 µF
Capacitance Tolerance	±10 % (K), ±5 % (J)
Voltage between Terminals U_{TT}	1,5 * U_{RDC} (20 °C, 10 s)
Voltage between Terminals and Case U_{TC}	3000 V_{AC} (20 °C, 50 Hz, 10 s)
Capacitor Dissipation Factor	tan δ ≤ 5 * 10^{-4} (20 °C, 1 kHz)
Dielectric Dissipation Factor	tan δ_o ≤ 2 * 10^{-4} (20 °C, 1 kHz)
Insulation Resistance R_i * C	≥ 5.000 MΩ * µF (20 °C, 100 V_{DC}, 1 min)
Max. Overvoltage	1,1 * U_{RDC} (30 % of time under load)
	1,15 * U_{RDC} (30 min. per day)
	1,2 * U_{RDC} (5 min. per day)
	1,3 * U_{RDC} (1 min. per day)
	1,5 * U_{RDC} (max. 30 ms, 100ms per day)
Life Time Expectancy	≥ 100.000 h, Failure Rate ≤ 50 FIT (70 °C)
Reference Standard	IEC 61071:2007, REACH, RoHS

Ratings for CBB 138 DS Series

U_R (V)	C_R (µF)	dV/dt 20 °C (V/µS)	$\hat{I}$(1) (A)	Rs(2) (mΩ)	I_{max}(3) 70 °C (A)	W ±1.0 (mm)	H ±1.0 (mm)	T ±1.0 (mm)	P_1 ±1.0 (mm)	P_2 ±1.0 (mm)	ød ±0.05 (mm)	Ordering Code
450V_{DC} 2W	5	50	250	15.0	5	32	20	11	27.5	-	0.8	FCS2WDS505*BI42700BE3
	10	50	500	8.5	7.5	32	28	14	27.5	-	0.8	FCS2WDS106*BIC2700BE3
	18	50	900	6.0	11	32	37	22	27.5	-	0.8	FCS2WDS186*BII2700BE3
	20	50	1000	5.0	12.5	32	37	22	27.5	-	0.8	FCS2WDS206*BII2700BE3
	22	50	1100	5.0	12.5	32	37	22	27.5	-	0.8	FCS2WDS226*BII2700BE3
	30	30	900	6.0	12	42.5	40	20	37.5	10.2	1.2	FCS2WDS306*AF23710DE3
	40	30	1200	5.5	14	42.5	37	28	37.5	10.2	1.2	FCS2WDS406*AF13710DE3
	50	30	1500	4.0	15	42.5	45	30	37.5	20.3	1.2	FCS2WDS506*AFF3720DE3
	60	30	1800	4.0	16.5	42.5	45	30	37.5	20.3	1.2	FCS2WDS606*AFF3720DE3
	80	15	1200	4.0	16	57.5	45	30	52.5	20.3	1.2	FCS2WDS806*AHH5220DE3
	100	15	1500	3.8	18	57.5	50	35	52.5	20.3	1.2	FCS2WDS107*AHL5220DE3
500V_{DC} 2H	70	15	1050	6.0	17.5	57.5	30	35	52.5	20.3	1.2	FCS2HDS706*AH75220DE3

(1) Maximum permissible peak current
(2) Series resistance at 20°C ambient temperature at 10kHz
(3) Maximum permissible r.m.s. ripple current at 10kHz

"*" to be defined, see ordering code table
Customized products are available on request

U_R (V)	C_R (µF)	dV/dt 20 °C (V/µS)	$\hat{I}$(1) (A)	Rs(2) (mΩ)	I_{max}(3) 70 °C (A)	W ±1.0 (mm)	H ±1.0 (mm)	T ±1.0 (mm)	P_1 ±1.0 (mm)	P_2 ±1.0 (mm)	ød ±0.05 (mm)	Ordering Code
550V$_{DC}$ 2Y	3	50	150	28.0	4	32	20	11	27.5	-	0.8	FCS2YDS305*BI42700BE3
	5	50	250	14.0	6	32	22	13	27.5	-	0.8	FCS2YDS505*BI72700BE3
	8	50	400	12.5	8.5	32	28	14	27.5	-	0.8	FCS2YDS805*BIC2700BE3
	10	50	500	8.0	10	32	33	18	27.5	-	0.8	FCS2YDS106*BIF2700BE3
	15	50	750	6.5	13	32	37	22	27.5	-	0.8	FCS2YDS156*BII2700BE3
	15	50	750	5.5	15	32	37	22	27.5	10.2	1.2	FCS2YDS156*AII2710DE3
	20	30	600	6.5	12.5	42.5	40	20	37.5	10.2	1.2	FCS2YDS206*AF23710DE3
	22	30	660	6.5	13.5	42.5	40	20	37.5	10.2	1.2	FCS2YDS226*AF23710DE3
	25	30	750	6.5	14.5	42.5	40	20	37.5	10.2	1.2	FCS2YDS256*AF23710DE3
	30	30	900	6.0	16	42.5	44	24	37.5	10.2	1.2	FCS2YDS306*AF93710DE3
	35	30	1050	6.0	18	42.5	45	30	37.5	20.3	1.2	FCS2YDS356*AFI3720DE3
	40	30	1200	5.5	18	42.5	45	30	37.5	20.3	1.2	FCS2YDS406*AFI3720DE3
	50	30	1500	5.0	20	42.5	50	35	37.5	20.3	1.2	FCS2YDS506*AFK3720DE3
	60	15	900	4.8	18	57.5	45	30	37.5	20.3	1.2	FCS2YDS606*AHH3720DE3
	75	15	1125	5.0	20	57.5	50	35	52.5	20.3	1.2	FCS2YDS756*AHL5220DE3
	100	15	1500	4.5	24	57.5	55	45	52.5	20.3	1.2	FCS2YDS107*AHS5220DE3
	110	15	1650	4.0	26	57.5	53	50	52.5	20.3	1.2	FCS2YDS117*AHA5220DE3
600V$_{DC}$ 2S	3	50	150	28.0	4	32	20	11	27.5	-	0.8	FCS2SDS305*BI42700BE3
	4	50	200	26.0	5	32	20	11	27.5	-	0.8	FCS2SDS405*BI42700BE3
	5	50	250	14.5	6	32	28	14	27.5	-	0.8	FCS2SDS505*BIC2700BE3
	8	50	400	12.0	7.5	32	28	14	27.5	-	0.8	FCS2SDS805*BIC2700BE3
	10	50	500	7.5	8.5	32	33	18	27.5	-	0.8	FCS2SDS106*BIF2700BE3
	12	50	600	7.5	9.5	32	33	18	27.5	-	0.8	FCS2SDS126*BIF2700BE3
	15	50	750	7.5	10.5	32	37	22	27.5	-	0.8	FCS2SDS156*BII2700BE3
	20	30	600	6.0	11	42.5	40	20	37.5	10.2	1.2	FCS2SDS206*AF23710DE3
	30	30	900	5.5	13	42.5	37	28	37.5	10.2	1.2	FCS2SDS306*AF13710DE3
	40	30	1200	4.0	18	42.5	45	30	37.5	20.3	1.2	FCS2SDS406*AFF3720DE3
	50	15	750	6.5	14	57.5	50	35	52.5	20.3	1.2	FCS2SDS506*AHL5220DE3
	60	15	900	5.0	16	57.5	50	35	52.5	20.3	1.2	FCS2SDS606*AHL5220DE3
	70	15	1050	5.0	18	57.5	50	35	52.5	20.3	1.2	FCS2SDS706*AHL5220DE3
	75	15	1125	5	23	57.5	50	35	52.5	20.3	1.2	FCS2SDS756*AHL5220DE3
	80	15	1200	4.9	24.6	57.5	50	35	52.5	20.3	1.2	FCS2SDS806*BHL5220DE3
	80	15	1200	4.0	20	57.5	55	45	52.5	20.3	1.2	FCS2SDS806*AHS5220DE3
	90	15	1350	4.0	24	57.5	55	45	52.5	20.3	1.2	FCS2SDS906*AHS5220DE3
	100	15	1500	4.0	26	57.5	53	50	52.5	20.3	1.2	FCS2SDS107*AHA5220DE3
	110	15	1650	3.5	28	57.5	53	50	52.5	20.3	1.2	FCS2SDS206*AHA5220DE3
700V$_{DC}$ 2Q	3	50	150	28.0	4.5	32	20	11	27.5	-	0.8	FCS2QDS305*BI42700BE3
	3.3	50	165	26.0	5.5	32	28	14	27.5	-	0.8	FCS2QDS335*BIC2700BE3
	5	50	250	14.0	6	32	28	14	27.5	-	0.8	FCS2QDS505*BIC2700BE3
	8	50	400	10.0	9	32	33	18	27.5	-	0.8	FCS2QDS805*BIF2700BE3
	10	50	500	7.0	10	32	33	18	27.5	-	0.8	FCS2QDS106*BIF2700BE3
	10	50	500	6.5	12	32	37	22	27.5	-	0.8	FCS2QDS106*BII2700BE3
	10	30	300	7.5	11.5	42.5	18	24	37.5	-	1.0	FCS2QDS106*BFL3700CE3
	15	30	450	9.0	9	42.5	33.5	22	37.5	-	1.0	FCS2QDS156*BFT3700CE3
	15	30	450	8.0	10	42.5	33.5	22	37.5	10.2	1.2	FCS2QDS156*AFT3710DE3
	15	30	450	8.0	10	42.5	40	20	37.5	10.2	1.2	FCS2QDS156*AF23710DE3
	20	30	600	7.5	12	42.5	37	28	37.5	10.2	1.2	FCS2QDS206*AF13710DE3

(1) Maximum permissible peak current
(2) Series resistance at 20°C ambient temperature at 10kHz
(3) Maximum permissible r.m.s. ripple current at 10kHz

"*" to be defined, see ordering code table
Customized products are available on request

U_R (V)	C_R (µF)	dV/dt 20 °C (V/µS)	$\hat{I}^{(1)}$ (A)	$Rs^{(2)}$ (mΩ)	$I_{max}^{(3)}$ 70 °C (A)	W ±1.0 (mm)	H ±1.0 (mm)	T ±1.0 (mm)	P_1 ±1.0 (mm)	P_2 ±1.0 (mm)	ød ±0.05 (mm)	Ordering Code
700V$_{DC}$ 2Q	22	30	660	6.5	14	42.5	44	24	37.5	10.2	1.2	FCS2QDS226*AF93710DE3
	25	30	750	6.0	16	42.5	44	24	37.5	10.2	1.2	FCS2QDS256*AF93710DE3
	30	30	900	4.8	25.1	42.5	45	30	37.5	20.3	1.2	FCS2QDS306*AFF3720DE3
	35	30	1050	5.5	20	42.5	50	35	37.5	20.3	1.2	FCS2QDS356*AFK3720DE3
	40	15	600	5.0	14	57.5	45	30	52.5	20.3	1.2	FCS2QDS406*AHH5220DE3
	45	15	675	6.5	18.5	57.5	45	30	52.5	20.3	1.2	FCS2QDS456*AHH5220DE3
	50	15	750	4.8	15	57.5	50	35	52.5	20.3	1.2	FCS2QDS506*AHL5220DE3
	55	15	825	4.5	16	57.5	50	35	52.5	20.3	1.2	FCS2QDS556*AHL5220DE3
	60	15	900	5.9	20.2	57.5	50	35	52.5	20.3	1.2	FCS2QDS606*AHL5220DE3
	65	15	975	4.0	20	57.5	55	45	52.5	20.3	1.2	FCS2QDS656*AHS5220DE3
	70	15	1050	3.8	20	57.5	55	45	52.5	20.3	1.2	FCS2QDS706*AHS5220DE3
	75	15	1125	3.8	20	57.5	55	45	52.5	20.3	1.2	FCS2QDS756*AHS5220DE3
	80	15	1200	4.2	28.3	57.5	55	40	52.5	20.3	1.2	FCS2QDS806*AHM5220DE3
	90	15	1350	3.5	24	57.5	53	50	52.5	20.3	1.2	FCS2QDS906*AHA5220DE3
800V$_{DC}$ 2K	3.3	50	165	25.0	4	32	28	14	27.5	-	0.8	FCS2KDS335*BIC2700BE3
	5	50	250	12.0	6	32	28	14	27.5	-	0.8	FCS2KDS505*BIC2700BE3
	9	50	450	10.5	10	32	33	18	27.5	-	0.8	FCS2KDS905*BIF2700BE3
	10	50	500	9.5	11.5	32	37	22	27.5	-	0.8	FCS2KDS106*BIC2700BE3
	15	30	450	8.0	10	42.5	40	20	37.5	10.2	1.2	FCS2KDS156*AF23710DE3
	15	30	450	6	15	57.5	43.5	29.5	52.5	20.3	1.2	FCS2KDS156*AHG5220DE3
	20	30	600	7.0	12	42.5	37	28	37.5	10.2	1.2	FCS2KDS206*AF13710DE3
	22	30	660	6.0	14	42.5	44	24	37.5	10.2	1.2	FCS2KDS226*AF93710DE3
	25	30	750	5.5	14	42.5	45	30	37.5	20.3	1.2	FCS2KDS256*AFF3720DE3
	25	30	750	7.1	16.8	42.5	35.5	33.5	37.5	20.3	1.2	FCS2KDS256*AFC3720DE3
	30	15	450	11.5	10	57.5	43.5	29.5	52.5	20.3	1.2	FCS2KDS306*AHG5220DE3
	30	30	900	4.5	16	42.5	45	30	37.5	20.3	1.2	FCS2KDS306*AFF3720DE3
	35	15	525	6.5	14.2	57.5	45	30	52.5	20.3	1.2	FCS2KDS356*AHH5220DE3
	40	15	600	6.0	14	57.5	45	30	52.5	20.3	1.2	FCS2KDS406*AHH5220DE3
	45	15	675	5.5	15.5	57.5	45	30	52.5	20.3	1.2	FCS2KDS456*AHH5220DE3
	47	15	705	5.0	17.5	57.5	50	35	52.5	20.3	1.2	FCS2KDS476*AHL5220DE3
	50	15	750	5.0	16	57.5	50	35	52.5	20.3	1.2	FCS2KDS506*AHL5220DE3
	55	15	825	4.6	17	57.5	50	35	52.5	20.3	1.2	FCS2KDS556*AHL5220DE3
	60	30	1800	3.2	37.7	42,0	60	45	37.5	20.3	1.2	FCS2KDS606*BFW3720DE3
	65	15	975	4.0	19	57.5	60	35	52.5	20.3	1.2	FCS2KDS656*AH65220DE3
	65	15	975	4.0	20	57.5	55	45	52.5	20.3	1.2	FCS2KDS656*AHS5220DE3
	70	15	1050	3.8	20	57.5	55	45	52.5	20.3	1.2	FCS2KDS706*AHS5220DE3
	75	15	1125	3.8	20	57.5	55	45	52.5	20.3	1.2	FCS2KDS756*AHS5220DE3
	80	15	1200	3.5	22	57.5	53	50	52.5	20.3	1.2	FCS2KDS806*AHA5220DE3
	90	15	1350	3.5	24	57.5	53	50	52.5	20.3	1.2	FCS2KDS906*AHA5220DE3
	90	15	1350	4.2	28.3	57	55	45	52.5	20.3	1.2	FCS2KDS906*AHS5220DE3
900V$_{DC}$ R2	2	60	120	25.0	3	32	20	11	27.5	-	0.8	FCSR2DS205*BI42700BE3
	3	60	180	18.5	5	32	22	13	27.5	-	0.8	FCSR2DS305*BIK2700BE3
	3.3	60	198	18.5	5	32	24.5	15	27.5	-	0.8	FCSR2DS335*BIJ2700BE3
	5	60	300	12.5	7	32	28	18	27.5	-	0.8	FCSR2DS505*BID2700BE3
	6	60	360	11.0	8	32	33	18	27.5	-	0.8	FCSR2DS605*BIF2700BE3
	8	60	480	10.0	10.5	32	37	22	27.5	-	0.8	FCSR2DS805*BII2700BE3
	10	60	600	10.0	12	32	37	22	27.5	-	0.8	FCSR2DS106*BIF2700BE3
	10	35	350	12.0	8.5	42.5	40	20	37.5	-	1.0	FCSR2DS106*BF23700CE3
	10	35	350	11.5	9.5	42.5	40	20	37.5	10.2	1.2	FCSR2DS106*AF23710DE3

(1) Maximum permissible peak current
(2) Series resistance at 20°C ambient temperature at 10kHz
(3) Maximum permissible r.m.s. ripple current at 10kHz

"*" to be defined, see ordering code table
Customized products are available on request

U_R (V)	C_R (µF)	dV/dt 20 °C (V/µS)	$\hat{I}$(1) (A)	R_S(2) (mΩ)	I_{max}(3) 70 °C (A)	W ±1.0 (mm)	H ±1.0 (mm)	T ±1.0 (mm)	P_1 ±1.0 (mm)	P_2 ±1.0 (mm)	ød ±0.05 (mm)	Ordering Code
900V_{DC} R2	15	35	525	8.0	10.5	42.5	44	24	37.5	-	1	FCSR2DS156*BF93700CE3
	15	35	525	7.5	12	42.5	44	24	37.5	10.2	1.2	FCSR2DS156*AF93710DE3
	18	35	630	8.0	10.5	42.5	44	24	37.5	-	1	FCSR2DS186*BF93700CE3
	18	35	630	7.5	12	42.5	44	24	37.5	10.2	1.2	FCSR2DS186*AF93710DE3
	20	35	700	6.0	14	42.5	45	30	37.5	-	1	FCSR2DS206*BFF3700CE3
	20	35	700	5.5	15	42.5	45	30	37.5	20.3	1.2	FCSR2DS206*AFF3720DE3
	25	30	750	6.9	16.8	42.5	45	30	37.5	20.3	1.2	FCSR2DS256*AFF3720DE3
	30	35	1050	5.0	19	42.5	50	35	37.5	20.3	1.2	FCSR2DS306*AFK3720DE3
	30	15	450	5.5	15	57.5	45	30	52.5	20.3	1.2	FCSR2DS306*AHH5220DE3
	35	15	525	5.5	15.5	57.5	50	35	52.5	20.3	1.2	FCSR2DS356*AHL5220DE3
	40	15	600	6.5	16	57.5	50	35	52.5	20.3	1.2	FCSR2DS406*AHL5220DE3
	40	15	600	8.9	13.5	57.5	45	30	52.5	20.3	1.2	FCSR2DS406*AHH5220DE3
	50	15	750	7.1	16.8	57.5	50	35	52.5	20.3	1.2	FCSR2DS506*AHL5220DE3
	55	15	825	3.5	19	57.5	60	35	52.5	20.3	1.2	FCSR2DS556*AH65220DE3
	55	15	825	3.4	20	57.5	55	45	52.5	20.3	1.2	FCSR2DS556*AHS5220DE3
	60	15	900	5.5	21.9	57.5	55	40	52.5	20.3	1.2	FCSR2DS606*AHM5220DE3
	60	15	900	3.4	20	57.5	55	45	52.5	20.3	1.2	FCSR2DS606*AHS5220DE3
	70	15	1050	3.2	20	57.5	53	50	52.5	20.3	1.2	FCSR2DS706*AHA5220DE3
	80	15	1200	5	30	57.5	55	40	52.5	20.3	1.2	FCSR2DS806*AHM5220DE3
1000V_{DC} 3A	2.0	60	120	30.0	3.5	32	22	13	27.5	-	0.8	FCS3ADS205*BI72700BE3
	3.0	60	180	25.0	5	32	24.5	15	27.5	-	0.8	FCS3ADS305*BIJ2700BE3
	5.0	60	300	14.0	8	32	33	18	27.5	-	0.8	FCS3ADS505*BIF2700BE3
	8.0	60	480	12.0	10	32	37	22	27.5	-	0.8	FCS3ADS805*BII3700BE3
	10	35	350	12.0	8.5	42.5	40	20	37.5	-	1.0	FCS3ADS106*BF23700CE3
	10	35	350	11.5	9.5	42.5	40	20	37.5	10.2	1.2	FCS3ADS106*AF23710DE3
	12	35	420	9.0	10.5	42.5	44	24	37.5	10.2	1.2	FCS3ADS126*AF93710DE3
	15	35	525	8.0	10.5	42.5	44	24	37.5	-	1.0	FCS3ADS156*BF93700CE3
	15	35	525	7.5	12	42.5	44	24	37.5	10.2	1.2	FCS3ADS156*AF93710DE3
	15	35	525	7.5	14	42.5	45	30	37.5	20.3	1.2	FCS3ADS156*AFF3720DE3
	20	35	700	6.5	15	42.5	45	30	37.5	20.3	1.2	FCS3ADS206*AFF3720DE3
	25	35	875	5.5	18	42.5	50	35	37.5	20.3	1.2	FCS3ADS256*AFK3720DE3
	30	15	450	5.5	15	57.5	45	30	52.5	20.3	1.2	FCS3ADS306*AHH5220DE3
	35	15	525	5.5	16	57.5	50	35	52.5	20.3	1.2	FCS3ADS356*AHH5220DE3
	40	15	600	5.0	16	57.5	50	35	52.5	20.3	1.2	FCS3ADS406*AHH5220DE3
	40	15	600	7.8	15.5	57.5	55	40	52.5	20.3	1.2	FCS3ADS406*AHM5220DE3
	50	15	750	4.5	19	57.5	55	45	52.5	20.3	1.2	FCS3ADS506*AHS5220DE3
	60	15	900	4.0	22	57.5	53	50	52.5	20.3	1.2	FCS3ADS606*AHA5220DE3
1100V_{DC} A3	1.0	70	70	45.0	2.5	32	20	11	27.5	-	0.8	FCSA3DS105*BI42700BE3
	1.5	70	105	30.0	3.5	32	22	13	27.5	-	0.8	FCSA3DS155*BI72700BE3
	2.0	70	140	25.0	4	32	24.5	15	27.5	-	0.8	FCSA3DS205*BIJ2700BE3
	2.2	70	154	16.5	5	32	28	14	27.5	-	0.8	FCSA3DS225*BIC2700BE3
	3.3	70	231	11.5	6.5	32	28	18	27.5	-	0.8	FCSA3DS335*BID2700BE3
	4.0	70	280	10.5	8	32	33	18	27.5	-	0.8	FCSA3DS405*BIF2700BE3
	5.0	70	350	9.5	8.5	32	37	22	27.5	-	0.8	FCSA3DS505*BII2700BE3
	6.8	40	272	13.5	12	42.5	33.5	22	37.5	10.2	1.2	FCSA3DS685*AFT3710DE3

(1) Maximum permissible peak current
(2) Series resistance at 20°C ambient temperature at 10kHz
(3) Maximum permissible r.m.s. ripple current at 10kHz

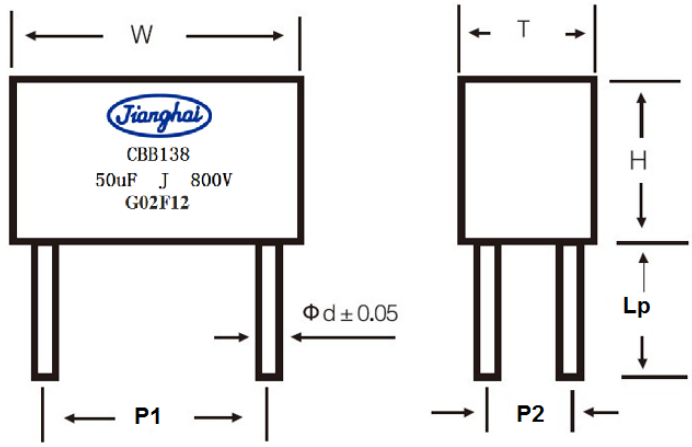
"*" to be defined, see ordering code table
Customized products are available on request

U_R (V)	C_R (µF)	dV/dt 20 °C (V/µS)	$\hat{I}$(1) (A)	R_S(2) (mΩ)	I_{max}(3) 70 °C (A)	W ±1.0 (mm)	H ±1.0 (mm)	T ±1.0 (mm)	P_1 ±0.5 (mm)	P_2 ±0.5 (mm)	ød ±0.05 (mm)	Ordering Code
1100VDC A3	8	40	320	14.0	10.5	42.5	40	20	37.5	-	1	FCSA3DS805*BF23700CE3
	8	40	320	12.5	12.5	42.5	40	20	37.5	10.2	1.2	FCSA3DS805*AF23710DE3
	10	40	400	9.0	14	42.5	44	24	37.5	-	1	FCSA3DS106*BF93700CE3
	10	40	400	8.5	15	42.5	44	24	37.5	10.2	1.2	FCSA3DS106*AF93710DE3
	10	40	400	10	12	42.5	45	30	37.5	20.3	1.2	FCSA3DS106*SFF3720DE3
	12	40	480	7.5	15.5	42.5	45	30	37.5	20.3	1.2	FCSA3DS126*AFF3720DE3
	15	40	600	9.7	8.3	42.5	45	30	37.5	20.3	1.2	FCSA3DS156*AFF3720DE3
	18	40	720	7.5	15.5	42.5	50	35	37.5	20.3	1.2	FCSA3DS186*AFK3720DE3
	20	20	400	11.6	8.4	57.5	45	30	52.5	20.3	1.2	FCSA3DS206*AHH5220DE3
	20	40	800	5	15	42.5	45	30	37.5	20.3	1.2	FCSA3DS206*CFF3720DE3
	25	20	500	11.6	8.3	57.5	45	30	52.5	20.3	1.2	FCSA3DS256*AHH5220DE3
	30	20	600	9.7	10.4	57.5	50	35	52.5	20.3	1.2	FCSA3DS306*AHL5220DE3
	40	20	800	7.8	12.4	57.5	55	40	52.5	20.3	1.2	FCSA3DS406*AHM5220DE3
	40	20	800	5.5	17	57.5	55	45	52.5	20.3	1.2	FCSA3DS406*AHS5220DE3
	50	20	1000	4.5	20	57.5	53	50	52.5	20.3	1.2	FCSA3DS506*AHA5220DE3
1200VDC 3B	1	80	80	32.5	4.5	32	20	11	27.5	-	0.8	FCS3BDS105*BI42700BE3
	2	80	160	32.5	5	32	24.5	15	27.5	-	0.8	FCS3BDS205*BIJ2700BE3
	2.2	80	176	17.0	5.5	32	28	18	27.5	-	0.8	FCS3BDS225*BID2700BE3
	3	80	240	16.0	7	32	28	18	27.5	-	0.8	FCS3BDS305*BID2700BE3
	3.3	80	264	13.5	8	32	33	18	27.5	-	0.8	FCS3BDS335*BIF2700BE3
	5	80	400	12.0	10	32	37	22	27.5	-	0.8	FCS3BDS505*BII2700BE3
	5	45	225	15.5	7.5	42.5	33.5	22	37.5	-	1	FCS3BDS505*BFT3700CE3
	6	45	270	15.5	7.5	42.5	40	20	37.5	-	1	FCS3BDS605*BF23700CE3
	8	45	360	12.5	9	42.5	44	24	37.5	10.2	1.2	FCS3BDS805*AF93710DE3
	10	45	450	10.5	10	42.5	44	24	37.5	10.2	1.2	FCS3BDS106*AF93710DE3
	10	45	450	11.1	10.8	42.5	45	30	37.5	20.3	1.2	FCS3BDS106*AFF3720DE3
	15	45	675	6.5	15	42.5	50	35	37.5	20.3	1.2	FCS3BDS156*AFK3720DE3
	20	23	460	11.9	10.0	57.5	45	30	52.5	20.3	1.2	FCS3BDS206*AHH5220DE3
	25	23	575	9.6	12.6	57.5	50	35	52.5	20.3	1.2	FCS3BDS256*AHL5220DE3
	30	23	690	5.5	17	57.5	55	45	52.5	20.3	1.2	FCS3BDS306*AHS5220DE3
	35	23	805	5.0	18	57.5	55	45	52.5	20.3	1.2	FCS3BDS356*AHS5220DE3
	35	23	805	6.8	20.1	57.5	55	40	52.5	20.3	1.2	FCS3BDS356*AHM5220DE3
	40	23	920	4.5	20	57.5	53	50	52.5	20.3	1.2	FCS3BDS406*AHA5220DE3
1300VDC O3	20	23	460	9.7	16	57.5	45	30	52.5	20.3	1.2	FCSO3DS206*AHA5220DE3
	27	23	621	7.3	19.5	57.5	50	35	52.5	20.3	1.2	FCSO3DS276*AHL5220DE3
1500VDC C3	10	50	500	11.5	10.0	42.5	45	30	37.5	20.3	1.2	FCSC3DS106*AFF3720DE3
	15	26	390	10.5	14.8	57.5	45	30	52.5	20.3	1.2	FCSC3DS156*AHA5220DE3
	25	26	650	7.5	18.7	57.5	55	40	52.5	20.3	1.2	FCSC3DS256*AHM5220DE3
1700VDC F3	12	29	348	8.3	13.9	57.5	45	35	52.5	20.3	1.2	FCSF3DS126*AHJ5220DE3

(1) Maximum permissible peak current
(2) Series resistance at 20°C ambient temperature at 10kHz
(3) Maximum permissible r.m.s. ripple current at 10kHz

"*" to be defined, see ordering code table
Customized products are available on request

Dimensions



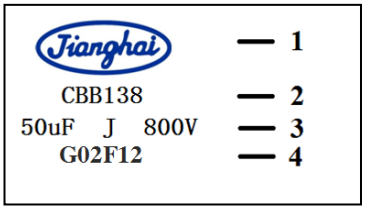
Terminal:

Style	Pinning
A	4 Pin
B	2 Pin

Lp = 5,0 +/- 1mm

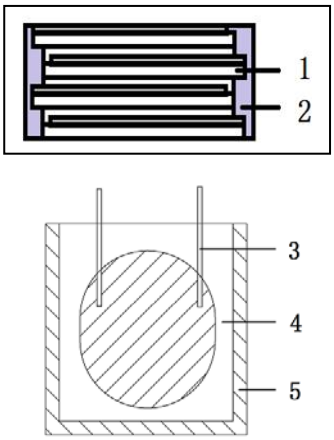
Other Styles on request.

Marking



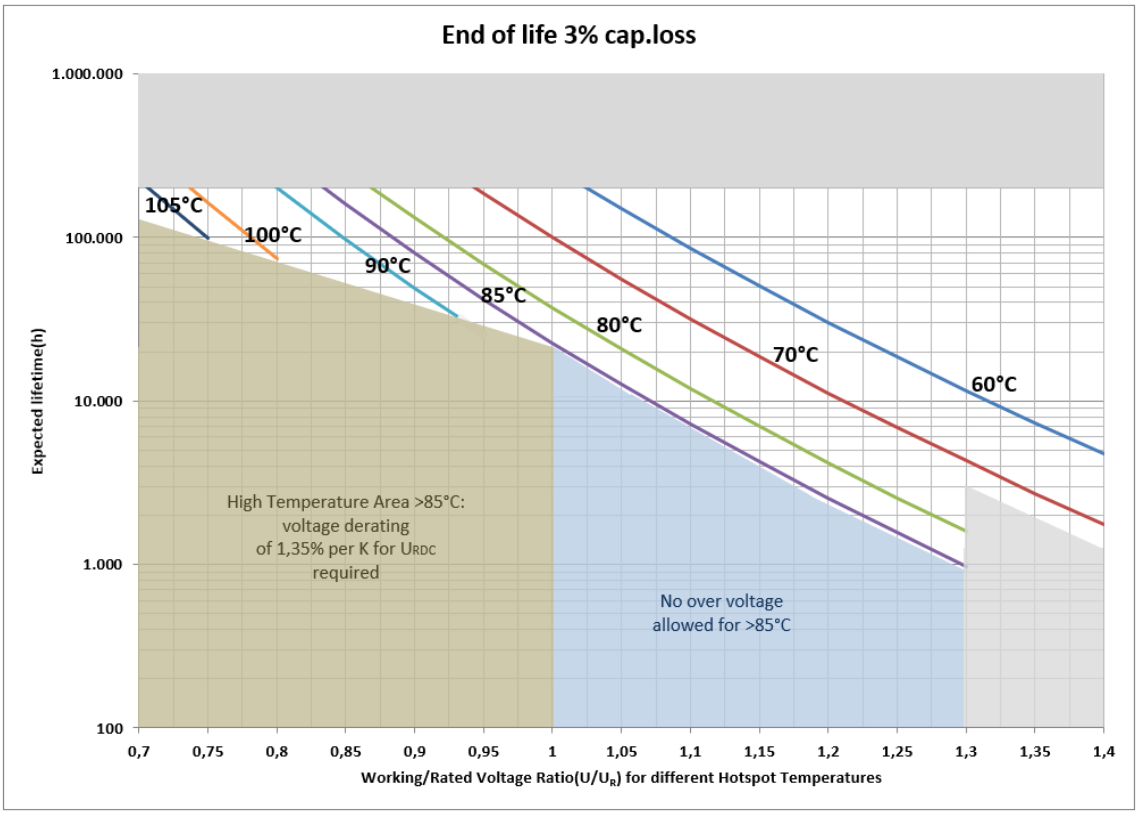
No.	Item
1	Brand
2	Series Designation
3	Capacitance, Tolerance, and Rated Voltage
4	Date Code

Internal Construction



No.	Item	Material
1	Single-sided Metallized Film	PP + Al, Zn
2	Metal Sprayed Contact	Zn + Sn/Zn
3	Terminals	Sn-coated Cu
4	Potting Compound	Epoxy
5	Case	Flame retardant PBT

Life Time Expectancy



Environmental

The products are RoHS, WEEE and REACH compliant. The detailed version please see separate "Environmental Certificates" document or www.jianghai-europe.com .

Ordering Code

1 2	3	4 5	6 7	8 9 10	11	12	13 14	15 16	17 18	19	20	21 22
FC	**S**	**3B**	**DS**	**105**	**K**	**A**	**F A**	**3 7**	**2 0**	**C**	**-**	**E 3**
Capacitor type	Product shape	DC rated voltage code (V)	Series code	Capacitance code (µF)	Capacitance tolerance	Pin Style (mm)	Dimension Code (WxHxT in mm)	Pitch P_1 (mm)	Pitch P_2 (mm)	Leadwire Diameter ød	no use	Internal use
Film cap. = FC	Square box = S	450 = 2W	CBB138 = DS	0,68 = 684	±5% = J	4 Pin, lp: 5mm = A	32x20x11 = I4	22,5 = 22	20,3 = 20	0,6 = A		
		500 = 2H		0,82 = 824	±10% = K	2 Pin, lp: 5mm = B	32x22x13 = I7	27,5 = 27	10,2 = 10	0,8 = B		
		550 = 2Y		1,0 = 105			32x28x14 = IC	37,5 = 37	- = 00	1,0 = C		
		600 = 2S		1,2 = 125			32x28x18 = ID	52,5 = 52		1,2 = D		
		700 = 2Q		2,0 = 205			32x33x18 = IF			0,5 = E		
		800 = 2K		5,0 = 505			32x37x22 = II					
		900 = R2		10 = 106			32x24,5x15 = IJ					
		1000 = 3A		20 = 206			32x22x13 = IK					
		1100 = A3					42,5x37x28 = F1					
		1200 = 3B					42,5x40x20 = F2					
		1300 = O3					42,5x44x24 = F9					
		1500 = C3					42,5x35,5x33,5 = FC					
		1700 = F3					42,5x45x30 = FF					
							42,5x45x33 = FI					
							42,5x50x35 = FK					
							42x18x24 = FL					
							42,5x33,5x22 = FT					
							42,0x60x45 = FW					
							57,5x60x35 = H6					
							57,5x30x35 = H7					
							57,5x53x50 = HA					
							57,5x45x30 = HH					
							57,5x45x35 = HJ					
							57,5x55x40 = HM					
							57,5x50x35 = HL					
							57,5x55x45 = HS					

Jianghai Film Capacitors

Warranty: The information contained in this datasheet does neither form part of any quotation nor of a contract, it is believed to be accurate, reliable and up to date. Quality data are based on the statistical evaluations of a large quantity of parts and do not constitute a guarantee in a legal sense. However, agreement on these specifications does mean that the customer may claim for replacement of individual defective capacitors within the terms of delivery. We cannot assume any liability beyond the replacement of defective components. This applies in particular to any further consequences of component failure. Furthermore it must be taken into consideration that the figures stated for lifetime, failure rates and outlier percentages refer to the average production status and are therefore to be understood as mean values (statistical expectations) for a large number of delivery lots of identical capacitors. These figures are based on application experience and data obtained from preceding tests under normal conditions, or – for purpose of accelerated aging – more severe conditions. JIANGHAI reserves the right to change these specifications without prior notice. Any application information given is advisory and does not form part of any specification. The products are not primarily designed for use in life supporting applications, devices or systems where malfunction of these products can reasonably be expected to result in personal injury. JIANGHAI customers using or selling these products for use in such applications without prior written consent of JIANGHAI do so at their own risk and agree fully to indemnify JIANGHAI for any damage resulting from such improper use or sale. This version of the datasheet supersedes all previous versions.

Rated Voltage U_R: Rated Voltage is the maximum operating peak voltage of either polarity but of a non-reversing type waveform, for which the capacitor has been designed, for continuous operation. The Rated Voltage is marked on the capacitor and defined in the datasheets as **U_R**.

Operating voltage: The plastic film capacitor varies in the maximum applicable voltage depending on the applied voltage waveform, current waveform, frequency, ambient temperature (capacitor surface temperature), capacitance value, etc. Be sure to use capacitors within the specified values by checking the voltage waveform, current waveform, and frequency applied to them (In the application of high frequency, the permissible voltage varies with the type of the capacitor. Refer to the specification for details.).

Non-recurrent surge voltage Us: Peak voltage induced by a switching or any other disturbance of the system which is allowed for a limited number of times and for durations shorter than the basic period.

- Maximum duration: 50 ms / pulse
- Maximum number of occurrences: 1000 (during load)

Maximum rate of voltage rise dV/dt: Maximum permissible repetitive rate of voltage rise of the operational voltage.

Charging and discharging: Because the charging and discharging current of capacitor is obtained by the product of voltage rise rate (dV/dt) and capacitance, low voltage charging and discharging may also cause deterioration of capacitor such as shorting and open due to sudden charging and discharging current. When charging and discharging, pass through a resistance of 20Ω/V to1000Ω/V or more to limit the current.

When connecting multiple film capacitors in parallel in withstand voltage test or life test, connect a resistance of 20Ω/V to1000Ω/V or more in series to each capacitor (For detail see the specification). In addition, capacitors must be discharged via a resistor before handling. Because the capacitors do not have any discharge resistors built-in, there is a risk of residual voltages and electric energy contents that maybe dangerous.

Operating Current: The pulse (or AC) current flowing through the capacitor is expressed as: I = C x dV/dt. Due to the fact that the dissipation factor of the capacitor is greater than zero, heat will be generated in any application where alternating currents or pulses occur. The resulting internal temperature rise may cause a severe deterioration of the capacitor's withstanding voltage, or may lead to a breakdown (even smoke or fire may result).Therefore, the safe use of capacitor must be within the rated voltage (or category voltage) and the permissible current ranges. The rated current must be considered by dividing into pulse current (peak current) and continuous current (rms current) depending on the break down mode, and when using, should make sure the both currents are within the permissible range.

Temperature range: Use film capacitors only within the specified operating temperature range.

Expected lifetime: The expected lifetime of the capacitor depends on the applied voltage and the hot spot temperature during operation. For capacitors applied in different situations, the obtainable average service lives are different. The capacitors used in DC-Link circuits will have an expected lifetime of approximately 100000 hours at rated voltage and 70℃ hot spot temperature.

Insulation voltage U_i: rms value of AC voltage designed for the insulation between terminals of the capacitor to case or earth. The insulation voltage is equal to the rated voltage of the capacitor, divided by $\sqrt{2}$, unless otherwise specified.

Voltage between terminals U_{TT}: Voltage between terminals (at 20°C, 10s): $1.5 \times U_{RDC}$

Voltage between terminals and case U_{TC}: Voltage between terminals and case (at 20°C, 10s): 2 × Ui + 1000 or 3000 (V_{AC}), whichever value is larger.

Buzzing noise: Any buzzing noise produced by a capacitor is caused by the vibration of the film due to the Coulomb force that is generated between the electrodes with opposite poles. If the wave-form with a high distortion rate or frequency is applied across the capacitor, the buzzing noise will become louder. But the buzzing noise is of no harm to the capacitor.

Surface over temperature Δ θ case: When current continuously flow through the capacitor, the temperature inside the capacitor will rise induced by dissipated heat. If the temperature exceeds the maximum allowed hot-spot temperature, it might cause a short circuit or fire. The limits described in the catalogue must not be exceeded and it's necessary to check the temperature on the capacitor's surface in operation.

Flame retardation: Although flame retarding PU resin or plastic case material is used in the coating or encapsulation of plastic film capacitors, continuous exposure to high temperature ambient or fire will break the coating layer or plastic case of the capacitor, and may lead to melting and ignition of the capacitor element.

Humid ambient: If used for a long time in a humid ambient, the capacitor might absorb humidity and oxidize the electrodes causing damage to the capacitor. In case of AC application, high humidity would increase the corona effect. This phenomenon causes a drop in capacitance and an increase of capacitor losses.

Storage conditions:

1) Capacitors must not be stored in corrosive atmospheres, particularly not when chlorides, sulfides, acids, lye, salts, organic solvents or similar substances are present.
2) It must not be stored in high temperature and/or high humidity environments. The following storage conditions must be kept (applicable only for storage in the original package):
   Temperature: ≤ 35 °C
   Humidity: ≤ 80% RH, no dew allowed on the capacitor.
   Storage time: ≤ 24 months (from the date marked on the capacitor's body or on the label sticking to the package)

Mounting: Other devices, which are mounted near the capacitor, should not touch the capacitor. Additional heat coming from other components near the capacitor may reduce the lifetime of the capacitor. Do never attempt to bend or twist the capacitor after mounting and avoid any mechanical stress on the terminals. Never exceed the max. permissible torques when tightening the terminal screws or the mounting bolt's cap nuts.

Caution during use of Capacitors: Do not touch the terminals of capacitors. Keep the capacitor free from conductive solution, such as acids, alkali and so on. Ensure that the operating environment of the equipment into which the capacitor has been built is within the specified conditions mentioned in the catalogue or specification sheets.

Definition of electrical parameters: Separate documents as application notes, equivalent circuit diagrams and so on are available on request.

Packaging: Please refer to the data book for details. Further information is available on request.