

5. Key Points of Reliability and Quality in Manufacturing

5.1 Control items and influencing characteristics by kinds of products and processes

• Foil electrode tab structure (JIS Code: CQ 921)

Process	Control items	Influencing characteristics
Coiling	Weld strength	Capacity open
		Small capacity due to broken foil
		Short-circuiting due to weld burrs
	Offset in coiling	Short-circuiting
Application of remover	Applied condition	Soldering
Pressing	Temperature	Short-circuiting
	Pressure	Small capacity due to broken foil
Resin impregnation	Degree of vacuum	Lowering of withstand voltage due to voids
Resin curing	Temperature	Large $\tan \delta$
	Time	Large $\tan \delta$

• Evaporated electrode extended foil structure (JIS Code: CF 922, CFS 922)

Process	Control items	Influencing characteristics
Coiling	Offset margin	Capacity open
		Large $\tan \delta$
		Large $\tan \delta$
Film flaws	Temperature	IR, short-circuiting
	Pressure	IR, short-circuiting
Metallicon	Conditions	Large $\tan \delta$
		Short-circuiting
	Thickness	Large $\tan \delta$ (welding)
Voltage processing	Voltage	IR, capacity open, large $\tan \delta$
Lead welding	Welded condition	Large $\tan \delta$
		Capacity open
Application of remover	Applied condition	Soldering

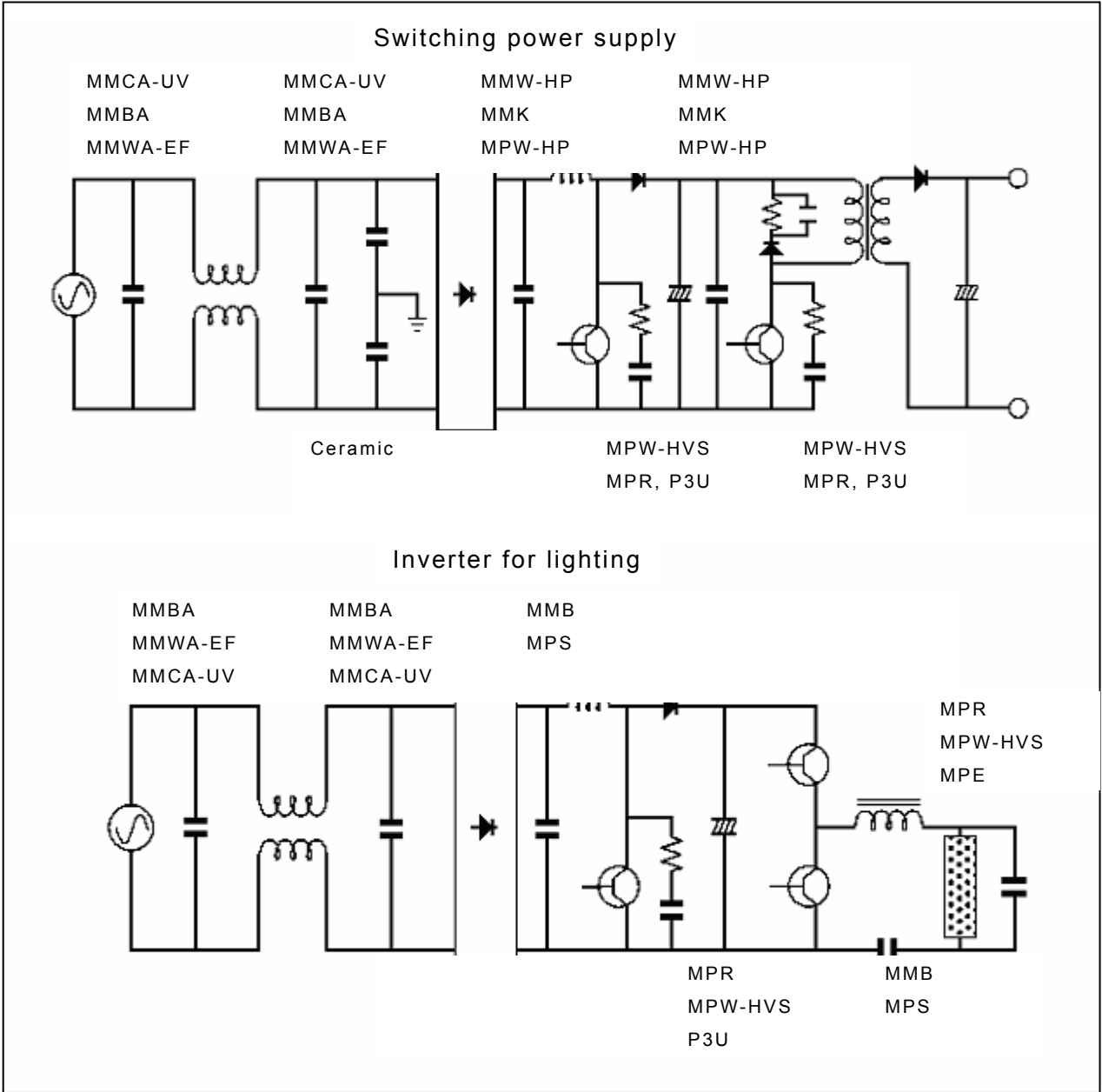
6. Applications

6.1 Outlined applications by kinds of dielectrics and electrodes

Dielectric	Electrode	Structure	By-pass coupling	Power supply filter	Anti-noise	Charging & discharging	Resonance	Differential & integral calculus	Time constant	Oscillation	Phase compensation
PET	Foil	Tab	○			△		○	○	○	○
		Extended foil	○			○	○	○	○	○	○
	Evaporation	Extended foil	○	○	○	△	○				
		Laminated	○			○	○				
PP	Foil	Tab	○					○	○	○	○
		Extended foil	○			○	○	○	○	○	○
	Evaporation	Extended foil	○	○	○	△	○				
		Laminated	○								
PPS	Foil	Tab	○					○	○	○	○
		Extended foil	○			○	○	○	○	○	○
	Evaporation	Extended foil	○			△	○				
		Laminated	○			○	○				

△: Designed for exclusive use

6.2 Concrete examples of applications



7. Precautions on Use (See 'Caution for Use' in the Film Capacitor Catalog)

- (1) Rated voltage
- (2) Allowable current depending on the frequency
- (3) Self temperature rise
- (4) Operating temperature range
- (5) In case of use for anti-noise purpose
- (6) In case of use for charging/discharging circuit
 - Reference : JIS Charging/Discharging Test Conditions (Evaporated Electrode Extended Foil Structure)

$$I_p = C \times dU/dt \text{ (Ao-p)}$$

C: Nominal electrostatic capacity (μF)

PET(JIS C 5101-2)

(V/μs)

Rated voltage (V dc)	Lead pitch (e = 2.5mm or 2.54mm)							
	2e	3e	4e	6e	9e	11e	15e	17e
40	36	20	15.5	9.2	5.7	4.6	3.4	3.0
63	41.5	23	17.5	10.5	6.6	5.3	3.9	3.4
100	69	40	34	19	11.6	9.2	6.8	5.9
250		75	54.5	30.5	18.5	14.5	10.9	9.4
400		150	108	61.5	37	29.5	21.5	19
630			192	101	59	46	33.5	29

PP(JIS C 5101-16)

(V/μs)

Rated voltage (V dc)	Lead pitch (e = 2.5mm or 2.54mm)							
	2e	3e	4e	6e	9e	11e	15e	17e
40	50	28	21.5	13	8	6.4	4.8	4.2
63	58	32.5	24.5	15	9.2	7.4	5.5	4.8
100	96.5	54	47.5	27	16	12.9	9.5	8.3
250		105	76	43	30	20.5	15.5	13
400		210	152	86	52	41	30.5	26.5
630			269	141	82.5	64.5	47	40.5

- (7) Beat noise
- (8) In case of use for the circuit requiring severe conditions for time constant, etc.
- (9) Soldering operation
- (10) Comments on washing (solvent)
- (11) Storing conditions
- (12) In case of scrapping