

Metallized Polypropylene Film Capacitor

Type : EZPE Series



Features

- High safety, Self-healing and Self-protecting function built-in
- Long product life, High reliability
- Low loss, Low ESR
- Flame retardant (Case and sealing resin)
- RoHS directive compliant

Recommended applications

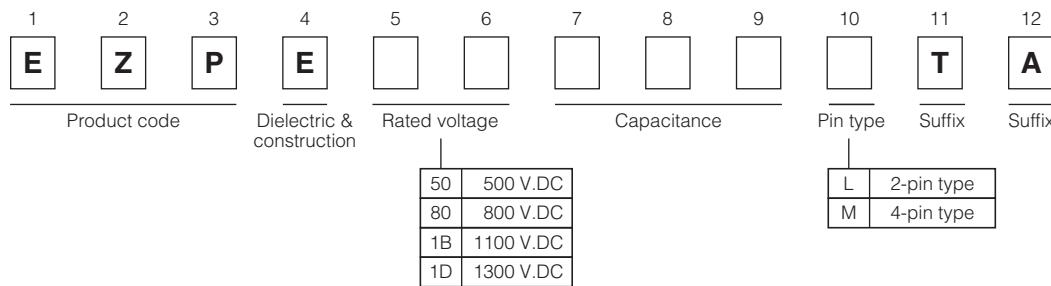
For DC filtering, DC link circuit

- Solar inverters
- Wind power generation
- Industrial power supplies
- Inverter circuit in appliances (Air Conditioners etc.)

Construction

- Dielectric : Polypropylene film
- Electrodes : Metallized dielectric with segmented pattern
- Plastic case : UL94 V-0
- Sealing : UL94 V-0
- Terminals : Tinned wires, 2-pin and 4-pin versions

Explanation of part number



Specifications

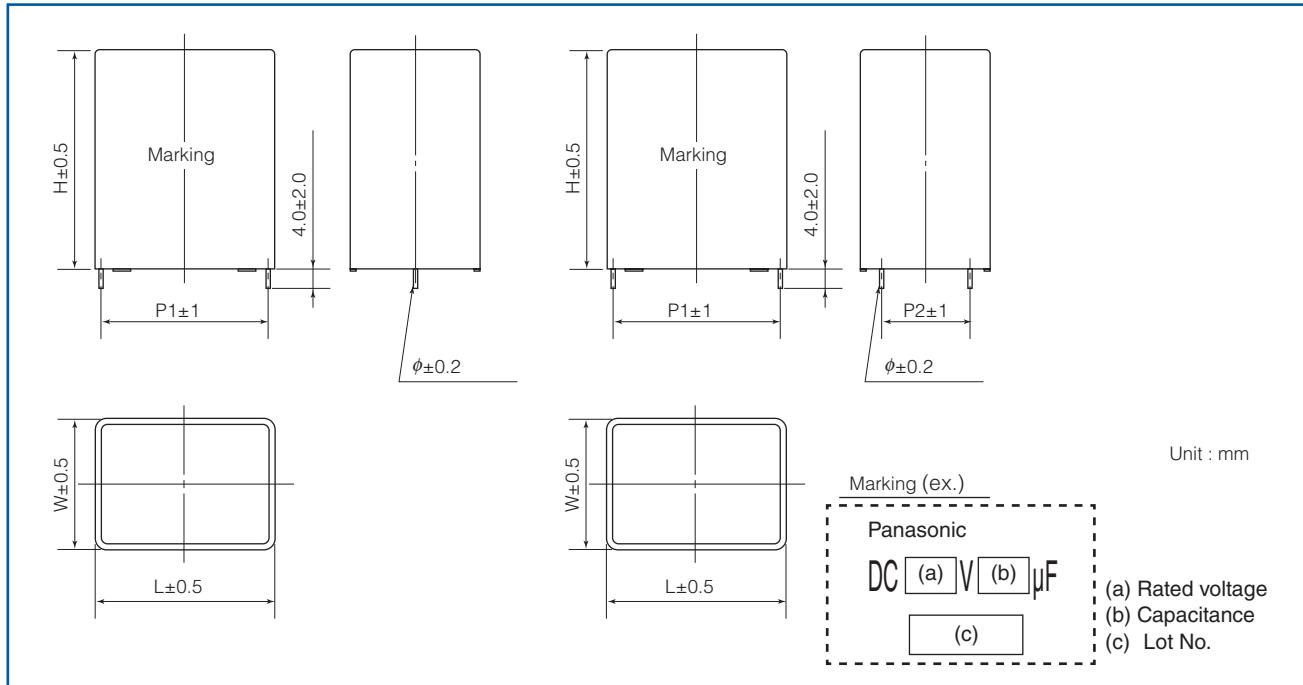
Category temperature range (T_c) *1	-40 °C to +85 °C	
Rated voltage(V_R) *2	500 V.DC, 800 V.DC, 1100 V.DC, 1300 V.DC (Derating of rated voltage by more than 70 °C *3)	
Rated capacitance (C_R)	500 V.DC	10 μF to 110 μF
	800 V.DC	10 μF to 60 μF
	1100 V.DC	10 μF to 40 μF
	1300 V.DC	10 μF to 25 μF
Capacitance tolerance	±10 %	
Withstanding DC voltage	Between terminals : Rated voltage. (V.DC) × 150 %, 10 s Terminal to case : 2110 V.AC (50 Hz or 60 Hz), 10 s	
Insulation resistance (CR)	CR ≥ 10000 Ω · F (20 °C, 500 V.DC, 60 s)	

*1 : The temperature of capacitor surface (case)

*2 : Use for DC voltage only

*3 : Refer to the page of "DC voltage derating"

Dimensions



Rating · Dimensions · Quantity

- Rated voltage : 500 V.DC at 70 °C (450 V.DC at 85 °C)

Part No.	Cap. C _R (μF)	Dimensions (mm)						dv/dt [V/μs]	Permissible current		ESR _{typ} *3 (mΩ)	tan δ *4 (%)	Mass (g)	Min. order Q'ty *5 (pcs)
		W	H	L	P1	P2	ϕ		Peak Current *1 (A _{0-p})	RMS Current *2 (A _{rms})				
EZPE50106LTA	10	20	42	41.5	37.5	—	1.2	21	210	5.0	22.0	0.28	45	600
EZPE50156LTA	15	20	42	41.5	37.5	—	1.2	21	315	7.5	14.8	0.28	45	
EZPE50206LTA	20	20	42	41.5	37.5	—	1.2	21	420	9.5	11.0	0.28	44	
EZPE50256LTA	25	20	42	41.5	37.5	—	1.2	21	525	11.0	8.8	0.28	43	
EZPE50306MTA	30	20	42	41.5	37.5	10.2	1.2	21	630	12.5	7.0	0.28	43	
EZPE50356MTA	35	30	51	41.5	37.5	10.2	1.2	21	735	13.5	6.2	0.28	83	
EZPE50406MTA	40	30	51	41.5	37.5	10.2	1.2	21	840	14.5	5.4	0.28	82	
EZPE50456MTA	45	30	51	41.5	37.5	10.2	1.2	21	945	15.2	4.9	0.28	81	
EZPE50506MTA	50	30	51	41.5	37.5	20.3	1.2	21	1050	16.0	4.4	0.28	80	
EZPE50556MTA	55	30	51	41.5	37.5	20.3	1.2	21	1155	16.3	4.1	0.28	79	
EZPE50606MTA	60	30	51	41.5	37.5	20.3	1.2	21	1260	16.5	3.9	0.28	77	400
EZPE50656MTA	65	30	51	57.5	52.5	10.2	1.2	14	910	15.0	6.8	0.44	111	
EZPE50706MTA	70	30	51	57.5	52.5	10.2	1.2	14	980	15.5	6.5	0.44	109	
EZPE50756MTA	75	30	51	57.5	52.5	20.3	1.2	14	1050	16.0	6.0	0.44	108	
EZPE50806MTA	80	30	51	57.5	52.5	20.3	1.2	14	1120	16.5	5.7	0.44	106	
EZPE50856MTA	85	35	56	57.5	52.5	20.3	1.2	14	1190	16.7	5.4	0.44	142	
EZPE50906MTA	90	35	56	57.5	52.5	20.3	1.2	14	1260	17.0	5.1	0.44	141	
EZPE50956MTA	95	35	56	57.5	52.5	20.3	1.2	14	1330	17.5	4.9	0.44	140	
EZPE50107MTA	100	35	56	57.5	52.5	20.3	1.2	14	1400	18.0	4.7	0.44	139	
EZPE50117MTA	110	35	56	57.5	52.5	20.3	1.2	14	1540	18.5	4.4	0.44	138	

*1 : When rising temperature of capacitor surface by continuous peak current (included pulse current), use within limit specified for temperature of capacitor surface and self heating temperature rise.

*2 : Maximum RMS current @70 °C, 10 kHz

Use within limit for self heating temperature rise at capacitor surface.

*3 : Typical values @ 20 °C, 10 kHz ESR : less than 2.5×ESR_{typ}

*4 : Maximum dissipation factor @ 20 °C, 1 kHz

*5 : Minimum order quantity consists of 4 packing units.

Rating · Dimensions · Quantity

● Rated voltage : 800 V.DC at 70 °C (700 V.DC at 85 °C)

Part No.	Cap. C _R (μF)	Dimensions (mm)						dv/dt [V/μs]	Permissible current		ESR _{typ} *3 (mΩ)	tan δ *4 (%)	Mass (g)	Min. order Q'ty *5 (pcs)
		W	H	L	P1	P2	ϕ		Peak Current *1 (A _{o-p})	RMS Current *2 (A _{rms})				
EZPE80106LTA	10	20	42	41.5	37.5	—	1.2	22	220	7	15.8	0.22	44	600
EZPE80156MTA	15	20	42	41.5	37.5	10.2	1.2	22	330	9	10.5	0.22	43	
EZPE80206MTA	20	30	51	41.5	37.5	10.2	1.2	22	440	11	7.7	0.22	82	
EZPE80256MTA	25	30	51	41.5	37.5	10.2	1.2	22	550	13	6.8	0.22	80	
EZPE80306MTA	30	30	51	41.5	37.5	20.3	1.2	22	660	15	5.3	0.22	78	
EZPE80356MTA	35	30	51	57.5	52.5	10.2	1.2	15	525	12	9.7	0.33	110	
EZPE80406MTA	40	30	51	57.5	52.5	20.3	1.2	15	600	13	8.3	0.33	107	
EZPE80456MTA	45	30	51	57.5	52.5	20.3	1.2	15	675	14	7.0	0.33	104	
EZPE80506MTA	50	35	56	57.5	52.5	20.3	1.2	15	750	15	6.3	0.33	140	
EZPE80556MTA	55	35	56	57.5	52.5	20.3	1.2	15	825	16	5.9	0.33	138	
EZPE80606MTA	60	35	56	57.5	52.5	20.3	1.2	15	900	17	5.6	0.33	136	

● Rated voltage : 1100 V.DC at 70 °C (920 V.DC at 85 °C)

Part No.	Cap. C _R (μF)	Dimensions (mm)						dv/dt [V/μs]	Permissible current		ESR _{typ} *3 (mΩ)	tan δ *4 (%)	Mass (g)	Min. order Q'ty *5 (pcs)
		W	H	L	P1	P2	ϕ		Peak Current *1 (A _{o-p})	RMS Current *2 (A _{rms})				
EZPE1B106MTA	10	20	42	41.5	37.5	10.2	1.2	54	540	7.0	12.3	0.20	43	600
EZPE1B156MTA	15	30	51	41.5	37.5	10.2	1.2	54	810	8.5	8.2	0.20	80	
EZPE1B206MTA	20	30	51	41.5	37.5	20.3	1.2	54	1080	10.0	6.3	0.20	76	
EZPE1B256MTA	25	30	51	57.5	52.5	10.2	1.2	35	875	8.0	10.7	0.28	107	
EZPE1B306MTA	30	30	51	57.5	52.5	20.3	1.2	35	1050	9.0	8.5	0.28	103	
EZPE1B356MTA	35	35	56	57.5	52.5	20.3	1.2	35	1225	10.0	7.2	0.28	137	
EZPE1B406MTA	40	35	56	57.5	52.5	20.3	1.2	35	1400	11.0	6.5	0.28	134	

● Rated voltage : 1300 V.DC at 70 °C (1100 V.DC at 85 °C)

Part No.	Cap. C _R (μF)	Dimensions (mm)						dv/dt [V/μs]	Permissible current		ESR _{typ} *3 (mΩ)	tan δ *4 (%)	Mass (g)	Min. order Q'ty *5 (pcs)
		W	H	L	P1	P2	ϕ		Peak Current *1 (A _{o-p})	RMS Current *2 (A _{rms})				
EZPE1D106MTA	10	30	51	41.5	37.5	10.2	1.2	73	730	12.0	10.0	0.17	80	400
EZPE1D156MTA	15	30	51	57.5	52.5	10.2	1.2	50	750	10.0	14.5	0.22	109	
EZPE1D206MTA	20	30	51	57.5	52.5	20.3	1.2	50	1000	14.0	11.1	0.22	103	
EZPE1D256MTA	25	35	56	57.5	52.5	20.3	1.2	50	1250	17.0	8.5	0.22	136	

*1 : When rising temperature of capacitor surface by continuous peak current (included pulse current), use within limit specified for temperature of capacitor surface and self heating temperature rise.

*2 : Maximum RMS current @70 °C, 10 kHz

Use within limit for self heating temperature rise at capacitor surface.

*3 : Typical values @ 20 °C, 10 kHz ESR : less than 2.5×ESR_{typ}

*4 : Maximum dissipation factor @ 20 °C, 1 kHz

*5 : Minimum order quantity consists of 4 packing units.

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PRECAUTION AND WARNING

- Please consult us in case that demand the specification of our company without fail and do the confirmation of the use condition and that exceeds the entry value and be indistinct when you use it.
- The film capacitors contain a film based dielectric which may be flammable under certain operating conditions. When in use, they can either emit smoke and/or ignite should the product be defective. It is recommended covering the surrounding resin with flame-resistant materials or case as needed particularly.
- In the event of troubles of other parts on the circuit such as shortening and opening, provide with proper means for preventing excessive voltage, current or temperature exceeding the rating from being applied to the film capacitor.
- Prior to use, please make sure that failure of the film capacitors does not have any negative effects on other surrounding electronic circuit components and devices that would possibly cause damage. Proper safety measures should be taken using fail-safe protective circuit designs to help prevent other devices of becoming unsafe.

Example:

- a. State in which basic performance of automobiles (run, turn and stop)
- b. False operations
- c. Smoke emission/ignitions

- The Film Capacitor listed in this catalog(except for automotive series) are designed and manufactured specifically for general electronic devices, including audio-video equipment, home appliance, office equipment and data communication equipment etc.. Accordingly, it is strongly recommended that the user contact us in advance if the parts are to be used for the following devices(items 1 -12), which require having advanced security measures. The capacitor for automotive can be used for automobiles such as xEV.
 - (1) Transport Equipment (motor vehicles, airplanes, trains, ships, traffic signal controllers)
 - (2) Medical Equipment (life-support equipment, pacemakers for the heart, dialysis controllers)
 - (3) Aircraft Equipment, Aerospace Equipment (airplanes, artificial satellites, rockets, etc.)
 - (4) Submarine Equipment (submarine repeating equipment, etc.)
 - (5) Generation Control Equipment (equipment for atomic/hydraulic/heat power plants)
 - (6) Information Processing Equipment (large scale computer system)
 - (7) Electric Heating Appliance, Burning Apparatus
 - (8) Rotary Motion Equipment
 - (9) Security Systems
 - (10) Robots
 - (11) Lighting Equipment
 - (12) And any similar types of equipment
- If used in a specific appliance that requires an extremely high reliability directly relating with any life-supporting equipment like electronic aviation controllers, automotive driving controllers and engine controllers, please consult us and use within the conditions designated in the specification. However the chip type capacitor should not be used in these appliances.

Note:

1. Technical information in this catalog is intended to convey examples of typical performances and/or applications, and is not intended to convey patents rights, if any.
2. For the products, which are controlled items subject to the Foreign Exchange and Foreign Trade Control Law, the export permission according to the Law is necessary.
3. Note of ozone depleting substances of class1 (ODS) under the Montreal Protocol is used in manufacturing process of Device Solutions Business Division, Panasonic Corporation.

■ AEC-Q200 compliant

The products are tested based on all or part of the test conditions and methods defined in AEC-Q200. Please consult with Panasonic for the details of the product specification and specific evaluation test results, etc., and please review and approve Panasonic's product specification before ordering.

* **Intellectual property right**

We, Panasonic Group are providing the product and service that customers can use without anxiety, working positively on the protection of our products under intellectual property rights.

Representative patents relating to xEV Film capacitors are as follows :

US Patent No.7027286, No.8315031, No.8861177, No.9240279

JP Patent No.4784464, No.4930099, No.4946618, No.5391797