Panasonic
INDUSTRY

Plastic Film Capacitors

Metallized Polypropylene Film Capacitor

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 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

1	2	3	4	5	6	7	8	9	10	11	12
E	Z	P	E							T	A
Product code			Dielectric & construction	Rated voltage		Capacitance			Pin type	Case type	Suffix

Code	R.voltage [DC]
50	500 V
80	800 V
1B	1100 V
1D	1300 V

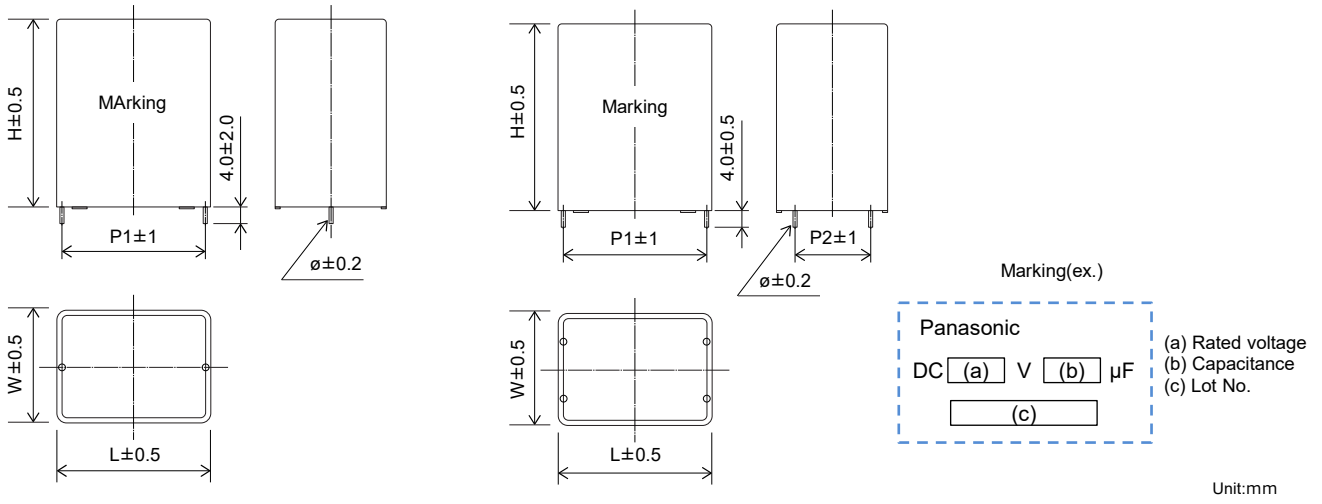
Code	Pin type
L	2 pin type
M	4 pin type

Specifications

Category temperature range*1	−40 ℃ to +85 ℃	
Rated voltag*2 [DC]	500 V, 800 V, 1100 V, 1300 V (Derating of rated voltage by more than 70 ℃*3)	
Rated capacitance	500 V	10 μF to 110 μF
	800 V	10 μF to 60 μF
	1100 V	10 μF to 40 μF
	1300 V	10 μF to 25 μF
Capacitance tolerance	±10 %	
Withstand voltage	Between terminals : Rated voltage (V) × 150 % 10 s Terminal to case : 2110 V [AC] (50 Hz or 60 Hz), 10 s	
Insulation resistanc (IR)	CR ≧ 10,000 Ω･F (20 ℃, 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 [DC] : 500 V at 70 ℃ (450 V at 85 ℃)

Part No.	Capaci-tance (μF)	Dimensions (mm)						dv/dt [V/μs]	Permissible current		ESR*3 (mΩ)	tan δ*4 (%)	Mass (g)	Min. order Q'ty*5 (PCS)
		W	H	L	P1	P2	ø		Peak current*1 (A_{o-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	400
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	
EZPE50656MTA	65	30	51	57.5	52.5	10.2	1.2	14	910	15.0	6.8	0.44	111	200
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 ℃, 10 kHz
Use within limit for self heating temperature rise at capacitor surface.

*3 : Typical values @ 20 ℃, 10 kHz ESR : less than 2.5×ESR typ

*4 : Maximum dissipation factor @ 20 ℃, 1 kHz

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

Rating · Dimensions · Quantity

■ Rated voltage [DC] : 800 V at 70 ℃ (700 V at 85 ℃)

Part No.	Capacitance (μF)	Dimensions (mm)						dv/dt [V/μs]	Permissible current		ESR*3 (mΩ)	tan δ*4 (%)	Mass (g)	Min. order Q'ty*5 (PCS)
		W	H	L	P1	P2	ø		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	400
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	200
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 [DC] : 1100 V at 70 ℃ (920 V at 85 ℃)

Part No.	Capacitance (μF)	Dimensions (mm)						dv/dt [V/μs]	Permissible current		ESR*3 (mΩ)	tan δ*4 (%)	Mass (g)	Min. order Q'ty*5 (PCS)
		W	H	L	P1	P2	ø		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	400
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	200
EZPE1B406MTA	40	35	56	57.5	52.5	20.3	1.2	35	1400	11.0	6.5	0.28	134	

■ Rated voltage [DC] : 1300 V at 70 ℃ (1100 V at 85 ℃)

Part No.	Capacitance (μF)	Dimensions (mm)						dv/dt [V/μs]	Permissible current		ESR*3 (mΩ)	tan δ*4 (%)	Mass (g)	Min. order Q'ty*5 (PCS)
		W	H	L	P1	P2	ø		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	200
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 ℃, 10 kHz
Use within limit for self heating temperature rise at capacitor surface.
*3 : Typical values @ 20 ℃, 10 kHz ESR : less than 2.5×ESR typ
*4 : Maximum dissipation factor @ 20 ℃, 1 kHz
*5 : Minimum order quantity consists of 4 packing units.

Safety and Legal Matters to Be Observed

Product specifications and applications

■ Please be advised that this product and product specifications are subject to change without notice for improvement purposes. Therefore, please request and confirm the latest delivery specifications that explain the specifications in detail before the final design, or purchase or use of the product, regardless of the application. In addition, do not use this product in any way that deviates from the contents of the company's delivery specifications.

■ Unless otherwise specified in this catalog or the product specifications, this product is intended for use in general electronic equipment (AV products, home appliances, commercial equipment, office equipment, information and communication equipment, etc.).
When this product is used for the following special cases, the specification document suited to each application shall be signed/sealed (with Panasonic Industry and the user) in advance..These include applications requiring special quality and reliability, wherein their failures or malfunctions may directly threaten human life or cause harm to the human body (e.g.: space/aircraft equipment, transportation/traffic equipment, combustion equipment, medical equipment, disaster prevention/crime prevention equipment, safety equipment, etc.).

Safety design and product evaluation

■ Please ensure safety through protection circuits, redundant circuits, etc., in the customer's system design so that a defect in our company's product will not endanger human life or cause other serious damage.

■ This catalog shows the quality and performance of individual parts. The durability of parts varies depending on the usage environment and conditions. Therefore, please ensure to evaluate and confirm the state of each part after it has been mounted in your product in the actual operating environment before use.
If you have any doubts about the safety of this product, then please notify us immediately, and be sure to conduct a technical review including the above protection circuits and redundant circuits at your company.

Laws / Regulations / Intellectual property

■ The transportation of dangerous goods as designated by UN numbers, UN classifications, etc., does not apply to this product. In addition, when exporting products, product specifications, and technical information described in this catalog, please comply with the laws and regulations of the countries to which the products are exported, especially those concerning security export control.

■ Each model of this product complies with the RoHS Directive (Restriction of the use of hazardous substances in electrical and electronic equipment) (2011/65/EU and (EU) 2015/863). The date of compliance with the RoHS Directive and REACH Regulation varies depending on the product model.
Further, if you are using product models in stock and are not sure whether or not they comply with the RoHS Directive or REACH Regulation, please contact us by selecting "Sales Inquiry" from the inquiry form.

■ During the manufacturing process of this product and any of its components and materials to be used, Panasonic Industry does not intentionally use ozone-depleting substances stipulated in the Montreal Protocol and specific bromine-based flame retardants such as PBBs (Poly-Brominated Biphenyls) / PBDEs (Poly-Brominated Diphenyl Ethers). In addition, the materials used in this product are all listed as existing chemical substances based on the Act on the Regulation of Manufacture and Evaluation of Chemical Substances.

■ With regard to the disposal of this product, please confirm the disposal method in each country and region where it is incorporated into your company's product and used.

■ The technical information contained in this catalog is intended to show only typical operation and application circuit examples of this product. This catalog does not guarantee that such information does not infringe upon the intellectual property rights of Panasonic Industry or any third party, nor imply that the license of such rights has been granted.

■ Design, materials, or process related to technical owned by Panasonic Industry are subject to change without notice.

Panasonic Industry will assume no liability whatsoever if the use of our company's products deviates from the contents of this catalog or does not comply with the precautions. Please be advised of these restrictions.

Matters to Be Observed When Using This Product
(Film capacitor : Automotive/Industrial)

Response to anomalies and handling conditions

■ Because the capacitor described herein is made of a combustible material, it may generate smoke or even ignite when exposed to excessive heat. We therefore recommend you cover the capacitor with a fire-resistant material or fire-resistant case.

■ When a different component in the same circuit has short-circuited or developed an open failure, see to it that a voltage or current higher than the rated voltage or current or excessive heat is not applied to the capacitor.

Reliability

A capacitor conforming to "AEC-Q200" refers to a capacitor having passed some or all of evaluation test items defined in AEC-Q200.
To know the detailed specifications of each capacitor or specific evaluation test scores, please contact us.
We issue a delivery specification sheet for each product ordered. Please confirm the delivery specification sheet when you place an order with us.

Reference information

Guidelines

Before using the capacitor, make sure to acquire our delivery specification sheet and confirm service conditions.
If you find measurement values exceeding specified values in the specification sheet or have any question, feel free to contact us. We also advise you to refer to RCR-1001B "Safety Application Guide on Components for Use in Electronic and Electrical Equipment" and JEITA RCR-2350D "Safety Application Guide for Fixed Plastic Film Capacitors for Use in Electronic Equipment."

Intellectual property

Panasonic Group provides customers with safe products and services. We are also making great efforts to protect our intellectual property rights for Panasonic Group products. Typical patents related to this product are as follows. (Hybrid type)

[U.S. patent]
USP Nos. 7027286, 8315031, 8861177, 9240279, 10475585

[Japanese patent]
Japanese Patent No. 4784464, 4930099, 4946618, 5391797

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