Metallized Polypropylene Film Capacitors

Type:MKP for DC-link EZPE 800VDC Series



Non-inductive construction using metalized polypropylene film with flame retardant epoxy resin and case.

■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
- ●Resonance circuit for power supply
- ●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 Numbers

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	Suffix	Suffix

80	800 VDC

L	2-pin type
M	4-pin type

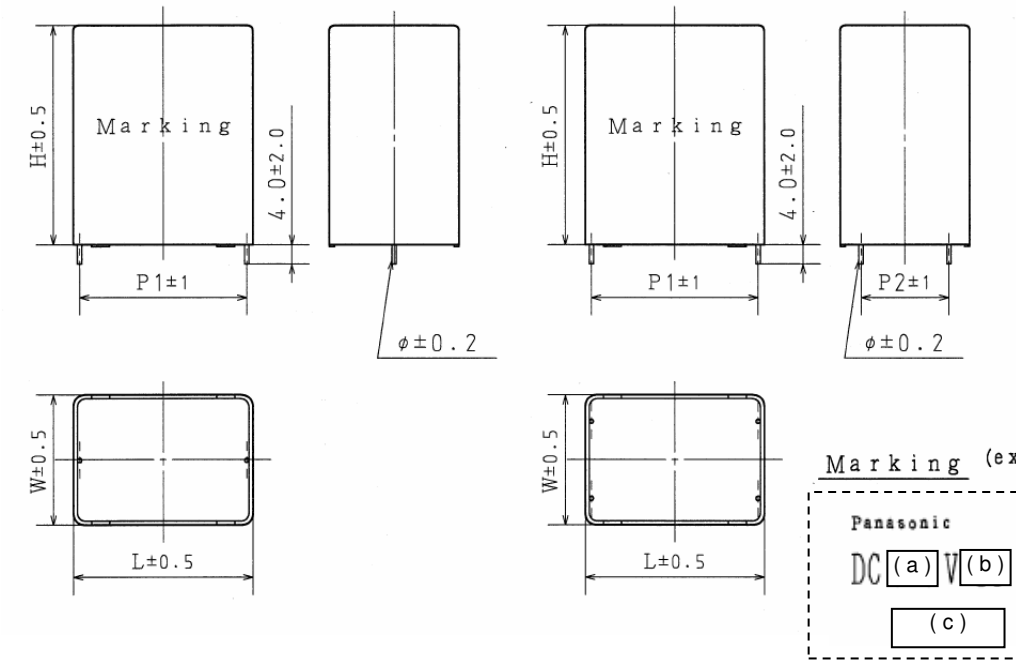
■Specifications

Category temperature range (T_C) (*1)	− 40 ℃ to + 85 ℃
Rated voltage (V_R) (*2)	800 VDC (700 VDC at 85 ℃ ; Derating of rated voltage at more than 70 ℃ (*3))
Rated capacitance (C_R)	10 µF to 60 µF
Capacitance tolerance	± 10 %
Withstanding DC voltage	Between terminals : Rated voltage (VDC) × 150 % 10 s Terminal to case : 2110 VAC (50 Hz or 60 Hz) 10 s
Insulation resistance (CR)	CR ≧ 10,000 Ω･F (20 ℃, 500 VDC, 60 s)

*1 : The temperature of capacitor surface (case)
*2 : Use for DC voltage only
*3 : Refer to the page of " DC voltage derating "

Design, Specifications are subject to change without notice. Ask factory for technical specifications before purchase and/or use.
Whenever a doubt about safety arises from this product, please inform us immediately for technical consultation without fail.

■Dimensions in mm (not to scale)



■Rating, Dimensions & Quantity / Ammo Box

●Type EZPE Rated voltage : 800 VDC at 70 ℃ (700VDC at 85 ℃)

Part Number	C_R [μF]	Dimensions [mm]						dv/dt [V/μs]	Permissible current		ESR_{typ} [mΩ] (*3)	tanδ [%] (*4)	Mass [g]	MOQ [pcs] (*5)
		W	H	L	P1	P2	φ		Peak Current [A_{o-p}] (*1)	RMS Current [A_{rms}] (*2)				
EZPE80106LTA	10	20	42	41.5	37.5	-	1.2	22	220	7.0	15.8	0.22	44	600
EZPE80156MTA	15	20	42	41.5	37.5	10.2	1.2	22	330	9.0	10.5	0.22	43	600
EZPE80206MTA	20	30	51	41.5	37.5	10.2	1.2	22	440	11.0	7.7	0.22	82	400
EZPE80256MTA	25	30	51	41.5	37.5	10.2	1.2	22	550	13.0	6.4	0.22	80	400
EZPE80306MTA	30	30	51	41.5	37.5	20.3	1.2	22	660	15.0	5.3	0.22	78	400
EZPE80356MTA	35	30	51	57.5	52.5	10.2	1.2	15	525	12.0	9.7	0.33	110	200
EZPE80406MTA	40	30	51	57.5	52.5	20.3	1.2	15	600	13.0	8.3	0.33	107	200
EZPE80456MTA	45	30	51	57.5	52.5	20.3	1.2	15	675	14.0	7.0	0.33	104	200
EZPE80506MTA	50	35	56	57.5	52.5	20.3	1.2	15	750	15.0	6.3	0.33	140	200
EZPE80556MTA	55	35	56	57.5	52.5	20.3	1.2	15	825	16.0	5.9	0.33	138	200
EZPE80606MTA	60	35	56	57.5	52.5	20.3	1.2	15	900	17.0	5.6	0.33	136	200

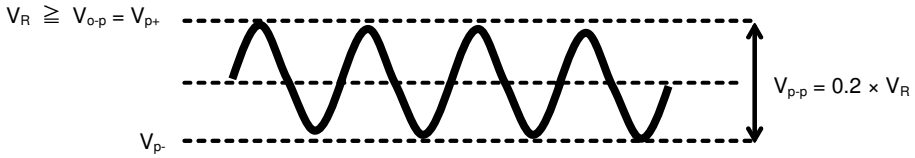
*1 : When rising temperature of capacitor surface by continuous peak current (included pulse current), use within limit specified for temperature of capacitor surface and self heating temperature rise.
*2 : Maximum RMS current @ 70 ℃, 10 kHz
Use within limit for self heating temperature rise at capacitor 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.

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■Permissible Conditions

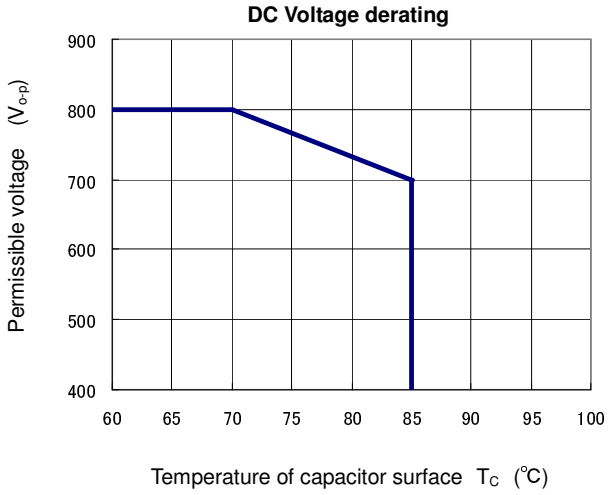
●Permissible Voltage

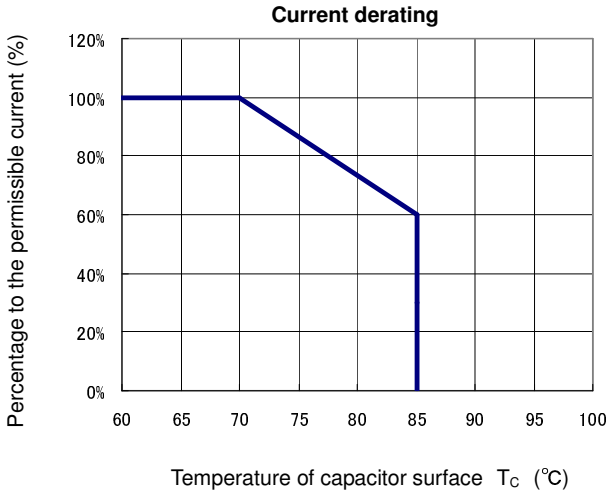
- These capacitors are designed only for DC voltage, so should not be used for AC line.
- Use the peak voltage ($V_{o\text{-}p}$) within the rated voltage.
- Use the peak to peak voltage ($V_{p\text{-}p}$) within 0.2 x V_R .



●DC Voltage, Peak current and RMS current derating

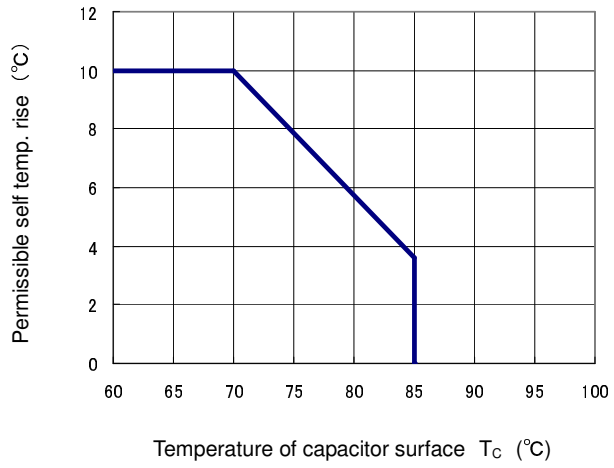
Derating of voltage ($V_{o\text{-}p}$), RMS current (A_{rms}), and peak current ($A_{o\text{-}p}$) according to the following diagram when the temperature of the capacitor surface exceeds 70 ℃.





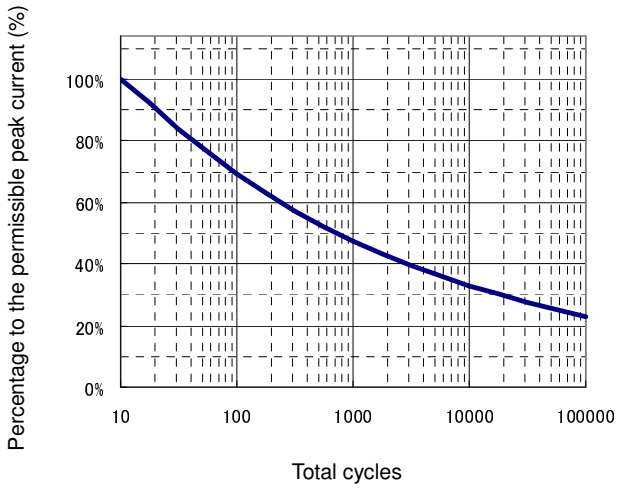
●Permissible self heating temperature rise

Permissible self heating temperature rise is within following diagram when the temperature of the capacitor surface exceeds 70 ℃.



●Total cycles applied peak current

Total cycles applied peak current ($A_{o\text{-}p}$) (including pulse current) are within following diagram.



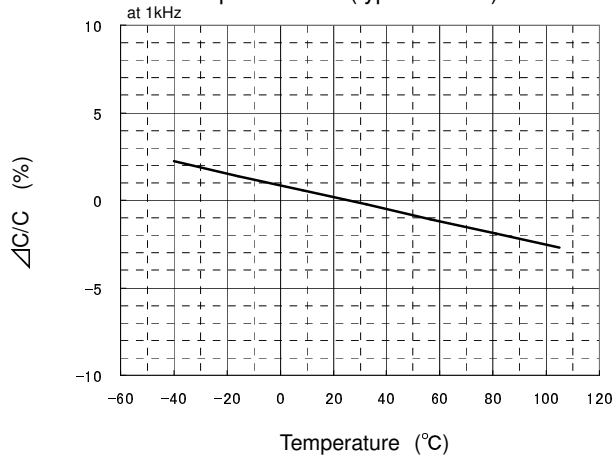
Please consult Panasonic if your condition exceeds the above spec.

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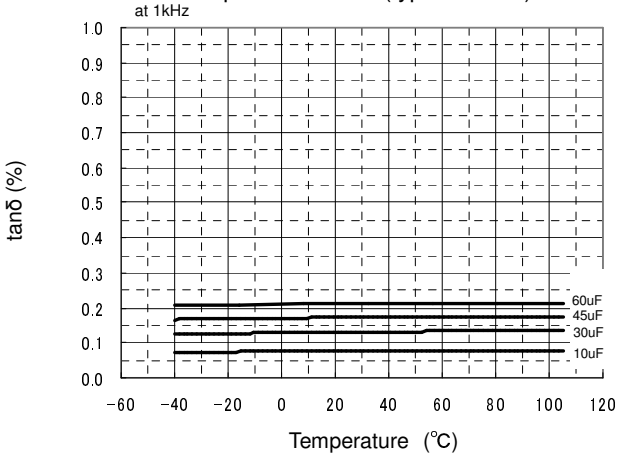
■Characteristics ＜Reference＞

●Temperature Characteristics

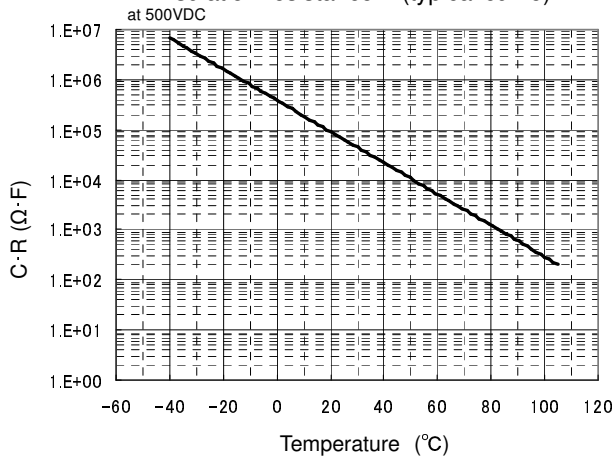
Capacitance (typical curve)



Dissipation factor (typical curve)

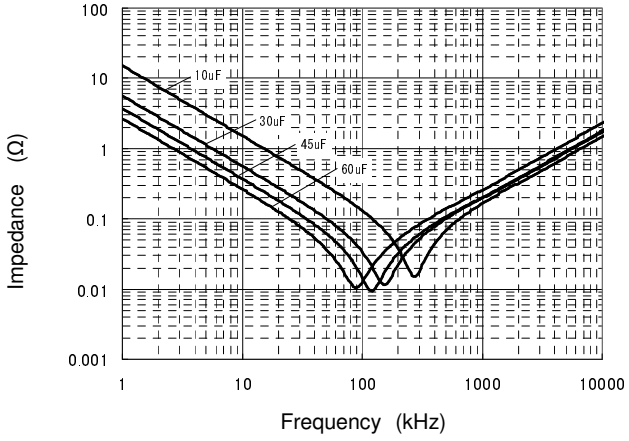


Insulation resistance (typical curve)



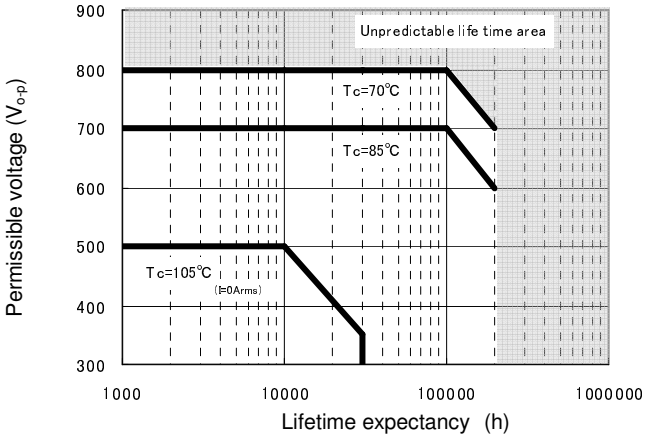
●Frequency Characteristics

Impedance vs. Frequency (typical curve)



●Lifetime expectancy

Lifetime expectancy



* Life time : reach ⊿C/C = - 10 % , Judgement of Panasonic