PLASTIC FILM CAPACITORS

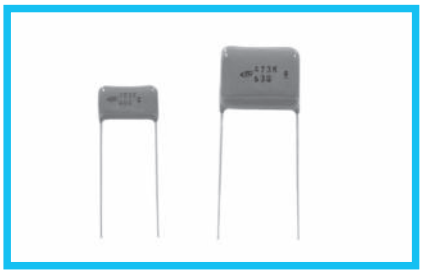
nichicon

QXT

Metallized Polypropylene Film Capacitor

(For High Frequency and Large Current Applications)

For High Frequency



- Ideal for high frequency applications due to a metallized polypropylene film dielectric which exhibits superior operative characteristics with minimal loss at high frequency.
- Electrode has minimal inductance because of non-inductive construction.
- Finished by inner dipping with liquid epoxy resin and outer coating with flame-retardant epoxy resin, those double coating gives superior characteristics against moisture.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

Applications

- High frequency & large current circuit applications (resonant circuit, change & discharge circuit & etc.)

Specifications

Item	Performance Characteristics
Category Temperature Range	–40 to +105˚C (Rated temperature : 85˚C)
Rated Voltage (U_R)	400, 630VDC
Rated Capacitance Range	0.0068 to 0.1μF
Capacitance Tolerance	±10% (K)
Directric Loss Tangent	0.1% or less (at 1kHz)
Insulation Resistance	C ≦ 0.33μF 30000 MΩ or more C > 0.33μF 10000 ΩF or more
Withstand Voltage	Between Terminals : Rated Voltage × 175%, 1 to 5 secs. Between Terminals : Rated Voltage × 200%, 1 to 5 secs.
Encapsulation	Flame retardant epoxy resin

Category voltage = U_R × 0.7

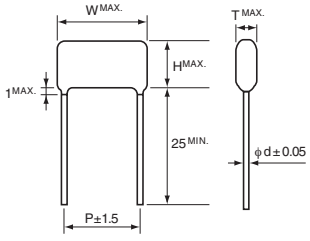
Type numbering system (Example : 630V 0.01μF)

1	2	3	4	5	6	7	8	9	10	11	12
Q	X	T	2	J	1	0	3	K	R	P	T

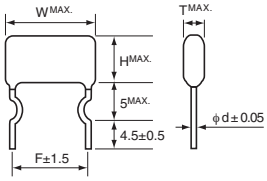
- 12: AC usage applicable, Straight lead type : T; AC usage applicable, Cut/formed lead type : (7FM, 7FR)
- 11–10: Configuration (RP : Polypropylene film, Tinned CP wire)
- 9: Capacitance tolerance (K : ±10%)
- 8–6: Rated capacitance (0.01μF)
- 5–4: Rated voltage (630V)
- 3: Series name
- 2–1: Type

Drawing

Straight lead type



Cut/formed lead type



F Size	Code
15.0	7FM
20.0	7FR

Maximum allowable voltage to high frequency range

Maximum allowable voltage differs by frequency and it is reguested to refer the graphs shown in next page. Effective values for 200 kHz sine wave is indicated in the list below.

Dimensions

Unit : mm

(μF) Cap.	V(Code) Size Code	400VDC T	W	H	d	P	F	Permissible Effective Value (200kHz) Ve(V)	Ie(A)	630VDC T	W	H	d	P	F	Permissible Effective Value (200kHz) Ve(V)	Ie(A)
0.0068	682									6.0	19	13.5	0.8	15	15	66	0.57
0.01	103	5.4	19	12.9	0.8	15	15	52	0.66	6.8	19	14.3	0.8	15	15	58	0.74
0.015	153	6.1	19	13.6	0.8	15	15	45	0.85	7.9	19	15.4	0.8	15	15	51	0.87
0.022	223	7.0	19	14.5	0.8	15	15	39	1.10	9.3	19	16.8	0.8	15	15	45	1.26
0.033	333	8.2	19	15.7	0.8	15	15	35	1.46	9.0	24	18.8	0.8	20	20	41	1.71
0.047	473	9.6	19	17.1	0.8	15	15	31	1.86	10.5	24	20.3	0.8	20	20	38	2.29
0.068	683	7.8	24	17.7	0.8	20	20	27	2.38	12.5	24	22.3	0.8	20	20	34	2.94
0.1	104	9.3	24	19.1	0.8	20	20	24	3.10								

F : lead pitch for cut / formed lead wires.

Since rating other than the above can be manufactured, please ask for detail.

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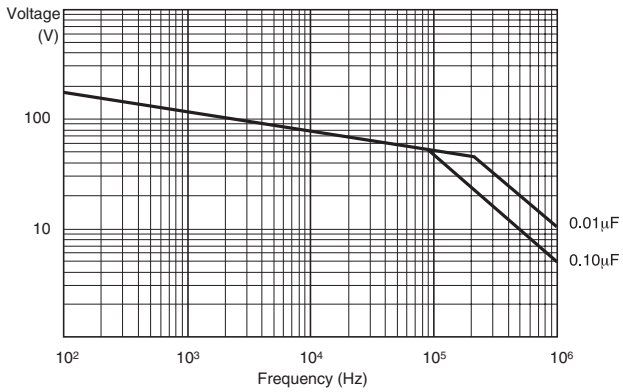
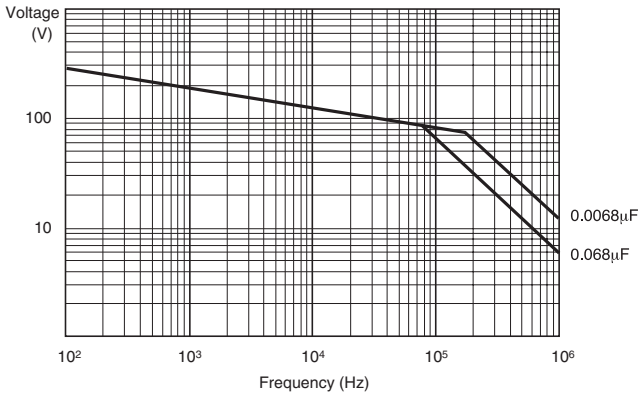
Maximum permissible voltage used at higher frequency range (Sine Wave)

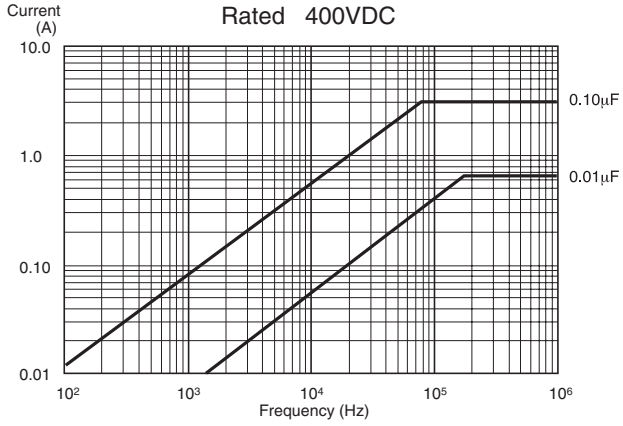
Rated 400VDC



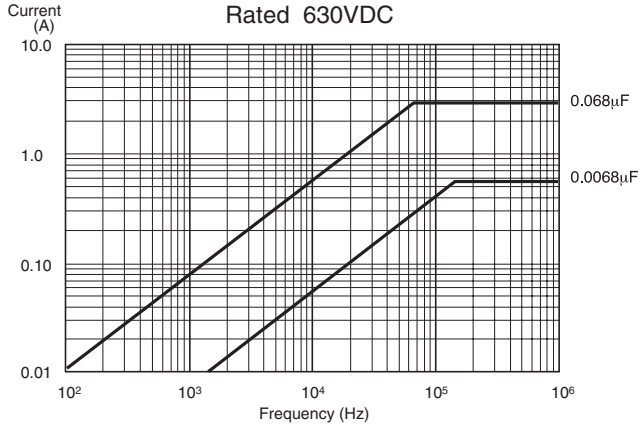
Rated 630VDC



Rated 400VDC



Rated 630VDC

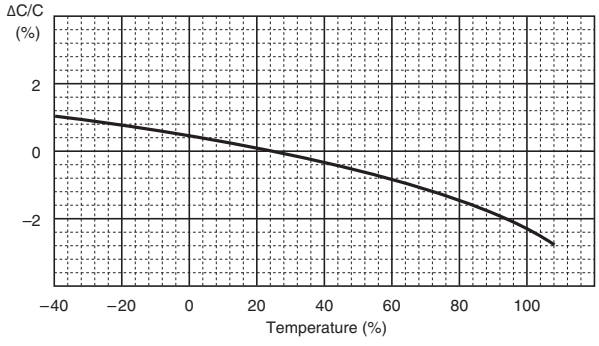


Typical Characteristic Curves

Remarks : Typical curves are as shown below.(Slightly different depending on individual rating.)

■ Temperature Characteristics

Capacitance change



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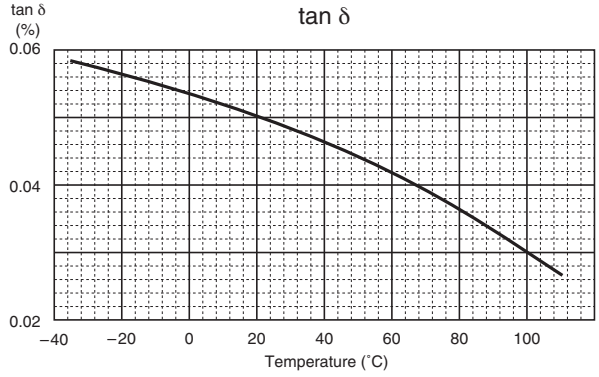
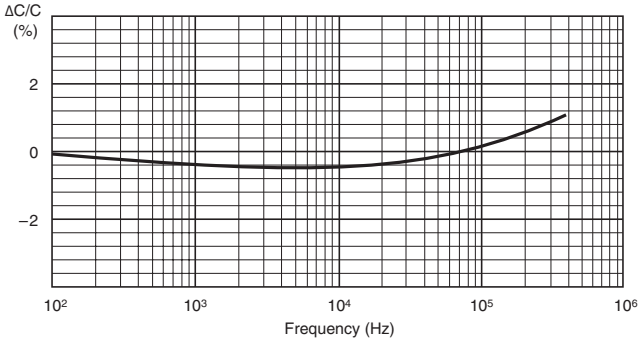


■ Frequency Characteristics

Capacitance change



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