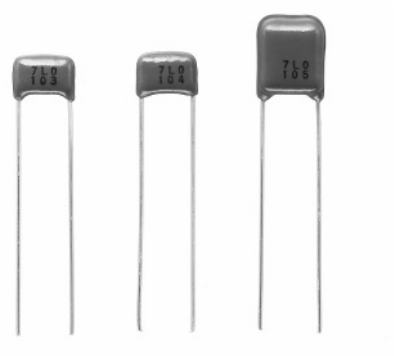
Stacked Metallized Plastic Film Capacitor

Type: ECQV(L)/(M)

Designed for high density insertion applications.



■Features
- Small size and large capacitance
- Excellent electric characteristics in non-inductive construction
- Wide range for automatic insertion
- RoHS directive compliant

■Recommended Applications
- General purpose
- Noise suppression for logic circuit

■Explanation of Part Numbers

1	2	3	4	5	6	7	8	9	10	11	12
E	C	Q	V						J		

Product code: ECQ

Dielectric & construction: V

Rated voltage:

1H	50 VDC
1J	63 VDC
1	100 VDC

Capacitance:

L	50 VDC
M	63 VDC
	100 VDC

Cap. Tol.: J

Suffix:

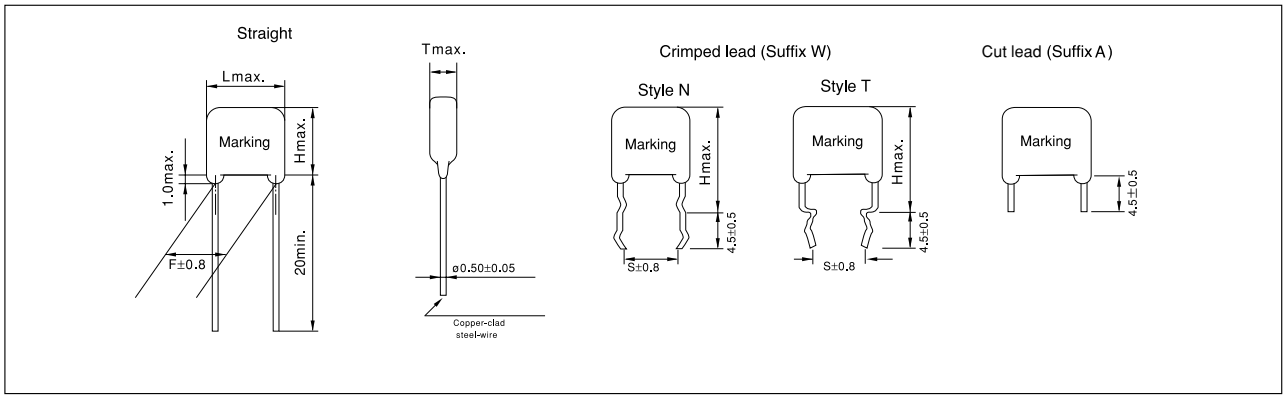
Suffix	Lead Form
Blank	Straight
W	Crimped lead
A	Cut lead
2	Straight taping (Ammo)
3	Crimped taping (Ammo)

■Specifications

Category temp. range (Including temperature-rise on unit surface)	−40 ℃ to + 105 ℃
Rated voltage	50 VDC, 63 VDC, 100 VDC (Derating of rated voltage by 2.5 %/℃ at more than 85 ℃)
Capacitance range	0.010 μF to 2.2 μF
Capacitance tolerance	± 5 %(J)
Dissipation factor (tanδ)	tanδ ≦ 1.0 % (20 ℃, 1 kHz)
Withstand voltage	Between terminals : Rated volt. (VDC) × 150 % 60 s
Insulation resistance (IR)	C ≦ 0.33 μF : IR ≧ 3000 MΩ (20 ℃, 50 VDC, 60 s ECQV1H, ECQV1J) C > 0.33 μF : IR ≧ 1000 MΩ . μF (20 ℃, 100 VDC, 60 s ECQV1)

❊ In case of applying voltage in alternating current (50 Hz or 60 Hz sine wave) to a capacitor with DC rated voltage, please refer to the page of “Permissible voltage (R.M.S) in alternating current corresponding to DC rated voltage”.

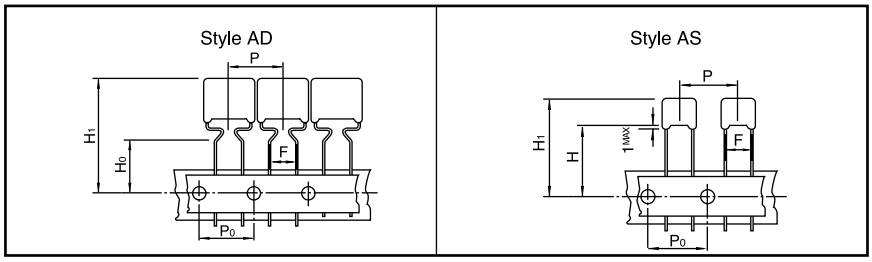
■Dimensions in mm (not to scale)



■Packaging Specifications for Bulk Package
Packing quantity:100 pcs./bag

■Taping Specifications for Automatic Insertion

●Taping style



※Refer to the page of taping specifications.

●Packaging Specifications

Type	Rated volt.	Cap. range (μF)	Taping style						Packing	suffix
			AD	AS	B	C	D	E		
ECQV (L)	50 VDC	0.010 to 2.2	○						Ammo	JL3
		0.010 to 1.0		○					Ammo	JL2
ECQV (M)	63 VDC	0.010 to 1.0	○						Ammo	JM3
		0.010 to 0.15		○					Ammo	JM2
	100 VDC	0.010 to 0.47	○						Ammo	JM3
		0.010 to 0.10		○					Ammo	JM2

●Lead Spacing

Style	Lead Spacing
AD	5.0 mm
AS	5.0 mm

※See the column "Rating, Dimensions & Quantity Box" for packing quantity.

■Rating, Dimensions & Quantity/Ammo Box or Reel

●Type ECQV(L) Rated voltage : 50 VDC

Part No.	Cap. (μF)	Dimensions (mm)							Min. order Q'ty	
		$L^{max.}$	$T^{max.}$	$H^{max.}$		F	S	ød	Taping	Bulk
				Straight	Crimped lead	Straight	Crimped lead			
ECQV1H103JL( )	0.010	7.3	3.2	5.0	9.0	5.0	5.0	0.50	2000	500
ECQV1H123JL( )	0.012	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H153JL( )	0.015	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H183JL( )	0.018	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H223JL( )	0.022	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H273JL( )	0.027	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H333JL( )	0.033	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H393JL( )	0.039	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H473JL( )	0.047	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H563JL( )	0.056	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H683JL( )	0.068	7.3	3.2	5.0	9.0	5.0	5.0	0.50		
ECQV1H823JL( )	0.082	7.3	3.6	5.0	9.0	5.0	5.0	0.50		
ECQV1H104JL( )	0.10	7.3	4.0	5.0	9.0	5.0	5.0	0.50		
ECQV1H124JL( )	0.12	7.3	4.0	5.0	9.0	5.0	5.0	0.50		
ECQV1H154JL( )	0.15	7.3	4.4	5.5	9.5	5.0	5.0	0.50	1000	
ECQV1H184JL( )	0.18	7.3	4.5	5.5	9.5	5.0	5.0	0.50		
ECQV1H224JL( )	0.22	7.3	4.8	5.5	9.5	5.0	5.0	0.50		
ECQV1H274JL( )	0.27	7.3	4.6	7.0	11.0	5.0	5.0	0.50		
ECQV1H334JL( )	0.33	7.3	5.2	7.0	11.0	5.0	5.0	0.50		
ECQV1H394JL( )	0.39	7.3	5.7	7.3	11.3	5.0	5.0	0.50		
ECQV1H474JL( )	0.47	7.3	6.0	7.3	11.3	5.0	5.0	0.50		
ECQV1H564JL( )	0.56	7.3	5.8	10.0	14.0	5.0	5.0	0.50		
ECQV1H684JL( )	0.68	7.3	6.5	10.0	14.0	5.0	5.0	0.50		
ECQV1H824JL( )	0.82	7.3	6.8	10.0	14.0	5.0	5.0	0.50		
ECQV1H105JL( )	1.0	7.3	8.0	11.0	15.0	5.0	5.0	0.50		
ECQV1H125JL( )	1.2	10.2	6.5	10.0	14.0	7.5	5.0	0.50		
ECQV1H155JL( )	1.5	10.2	7.2	10.0	14.0	7.5	5.0	0.50		
ECQV1H185JL( )	1.8	10.2	7.2	12.0	16.5	7.5	5.0	0.50		
ECQV1H225JL( )	2.2	10.2	7.9	12.0	16.5	7.5	5.0	0.50		

↑ Suffix for lead crimped or taped type

Style N:0.010 μF to 1.0 μF
Style T:1.2 μF to 2.2 μF

■Rating, Dimensions & Quantity/Ammo Box or Reel

●Type ECQV(M) Rated voltage : 63 VDC

	Cap. (μF)	Dimensions (mm)							Min. order Q'ty	
		$L^{max.}$	$T^{max.}$	$H^{max.}$		F	S	ød	Taping	Bulk
				Straight	Crimped lead	Straight	Crimped lead			
ECQV1J103JM( )	0.010	7.5	3.2	6.8	10.8	5.0	5.0	0.50	2000	500
ECQV1J123JM( )	0.012	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J153JM( )	0.015	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J183JM( )	0.018	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J223JM( )	0.022	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J273JM( )	0.027	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J333JM( )	0.033	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J393JM( )	0.039	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J473JM( )	0.047	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J563JM( )	0.056	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J683JM( )	0.068	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J823JM( )	0.082	7.5	3.2	6.8	10.8	5.0	5.0	0.50		
ECQV1J104JM( )	0.10	7.5	3.2	7.0	11.0	5.0	5.0	0.50		
ECQV1J124JM( )	0.12	7.5	3.8	7.0	11.0	5.0	5.0	0.50		
ECQV1J154JM( )	0.15	7.5	4.1	7.0	11.0	5.0	5.0	0.50		
ECQV1J184JM( )	0.18	10.2	3.5	9.0	14.0	7.5	5.0	0.50		
ECQV1J224JM( )	0.22	10.2	3.5	9.0	14.0	7.5	5.0	0.50		
ECQV1J274JM( )	0.27	10.2	3.5	9.0	14.0	7.5	5.0	0.50		
ECQV1J334JM( )	0.33	10.2	3.8	9.0	14.0	7.5	5.0	0.50		
ECQV1J394JM( )	0.39	10.2	4.0	9.0	14.0	7.5	5.0	0.50		
ECQV1J474JM( )	0.47	10.2	4.5	9.0	14.0	7.5	5.0	0.50	1000	
ECQV1J564JM( )	0.56	10.2	4.9	9.0	14.0	7.5	5.0	0.50		
ECQV1J684JM( )	0.68	10.2	5.5	10.0	15.0	7.5	5.0	0.50		
ECQV1J824JM( )	0.82	10.2	6.1	10.0	15.0	7.5	5.0	0.50		
ECQV1J105JM( )	1.0	10.2	6.9	10.0	15.0	7.5	5.0	0.50		

Style N: 0.010 μF to 0.15 μF
Style T: 0.18 μF to 1.0 μF

●Type ECQV(M) Rated voltage : 100 VDC

Part No.	Cap. (μF)	Dimensions (mm)							Min. order Q'ty	
		$L^{max.}$	$T^{max.}$	$H^{max.}$		F	S	ød	Taping	Bulk
				Straight	Crimped lead	Straight	Crimped lead			
ECQV1103JM( )	0.010	7.5	3.2	7.0	12.0	5.0	5.0	0.50	2000	500
ECQV1123JM( )	0.012	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1153JM( )	0.015	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1183JM( )	0.018	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1223JM( )	0.022	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1273JM( )	0.027	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1333JM( )	0.033	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1393JM( )	0.039	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1473JM( )	0.047	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1563JM( )	0.056	7.5	3.2	7.0	12.0	5.0	5.0	0.50		
ECQV1683JM( )	0.068	7.5	4.0	7.0	12.0	5.0	5.0	0.50		
ECQV1823JM( )	0.082	7.5	4.1	7.0	12.0	5.0	5.0	0.50	1000	
ECQV1104JM( )	0.10	7.5	4.5	7.0	12.0	5.0	5.0	0.50		
ECQV1124JM( )	0.12	10.2	3.3	9.0	14.0	7.5	5.0	0.50	2000	
ECQV1154JM( )	0.15	10.2	3.3	9.0	14.0	7.5	5.0	0.50		
ECQV1184JM( )	0.18	10.2	3.6	9.0	14.0	7.5	5.0	0.50		
ECQV1224JM( )	0.22	10.2	4.0	9.0	14.0	7.5	5.0	0.50		
ECQV1274JM( )	0.27	10.2	4.2	9.0	14.0	7.5	5.0	0.50	1000	
ECQV1334JM( )	0.33	10.2	4.8	10.0	15.0	7.5	5.0	0.50		
ECQV1394JM( )	0.39	10.2	5.5	10.0	15.0	7.5	5.0	0.50		
ECQV1474JM( )	0.47	10.2	6.8	10.5	15.5	7.5	5.0	0.50		

Suffix for lead crimped or taped type

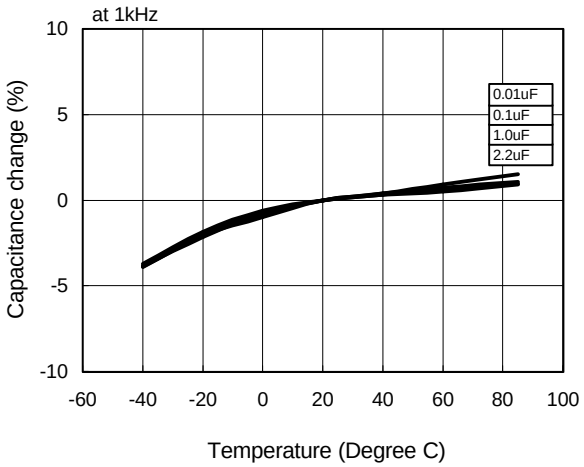
Style N: 0.010 μF to 0.10 μF
Style T: 0.12 μF to 0.47 μF

Panasonic

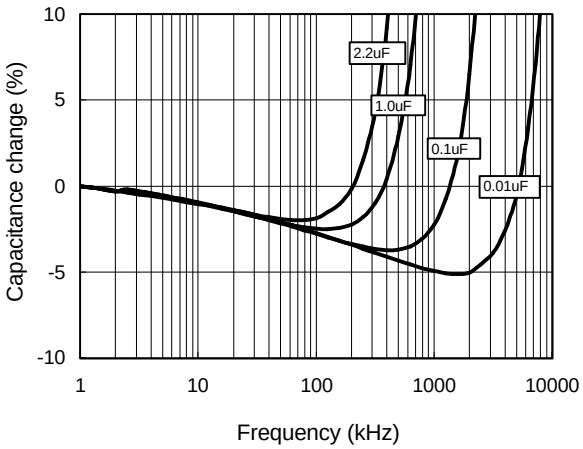
ECQV(L) Type 50VDC Series (Polyester Film)

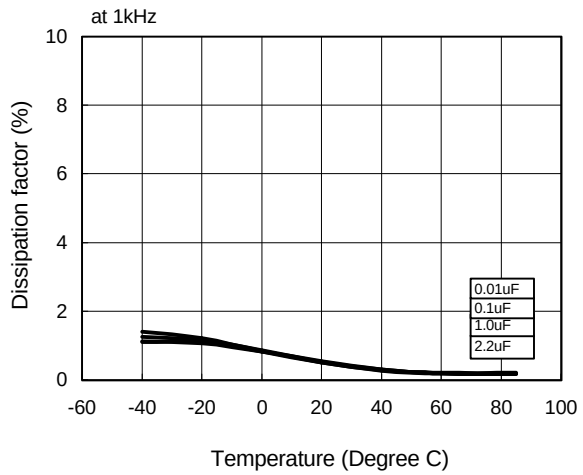
Erectrical Characteristics <Typical Data>

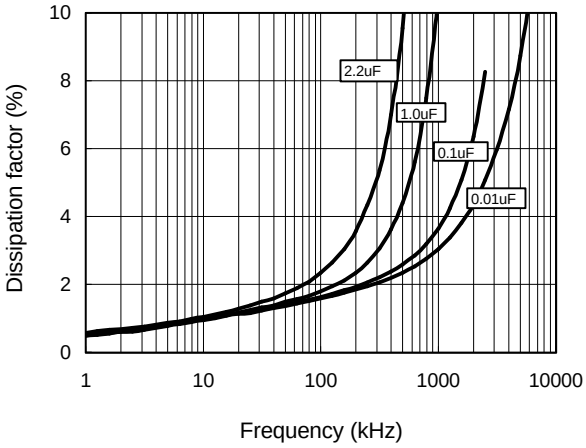
Temperature Characteristics

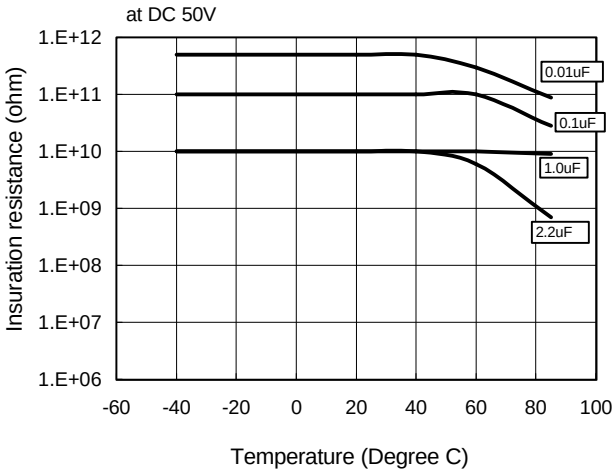


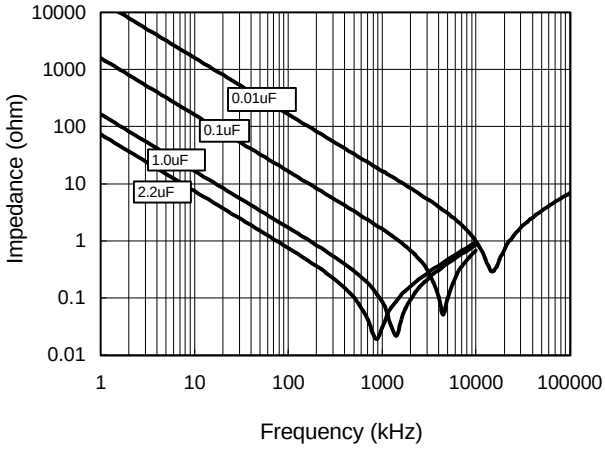
Frequency Characteristics









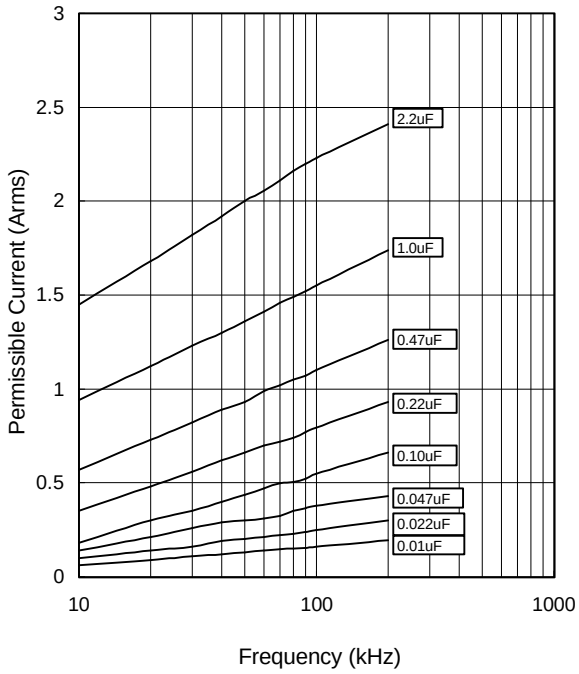


Panasonic

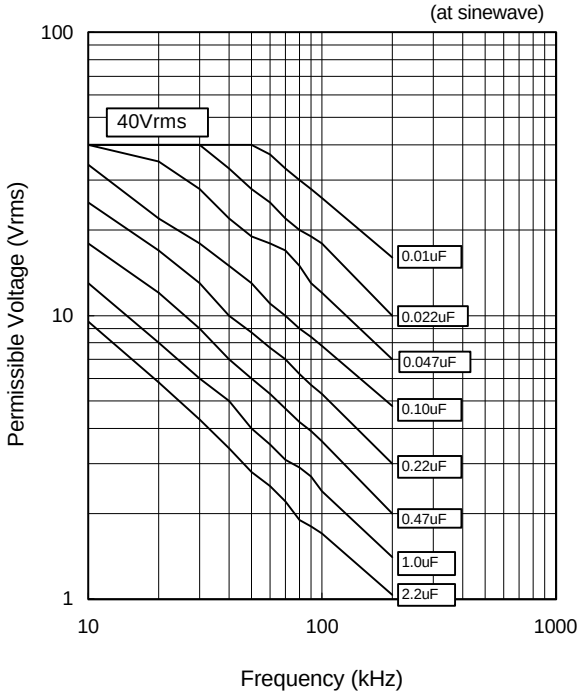
ECQV(L) Type 50VDC Series (Polyester Film)

Applicable Specifications

Permissible Current



Permissible Voltage

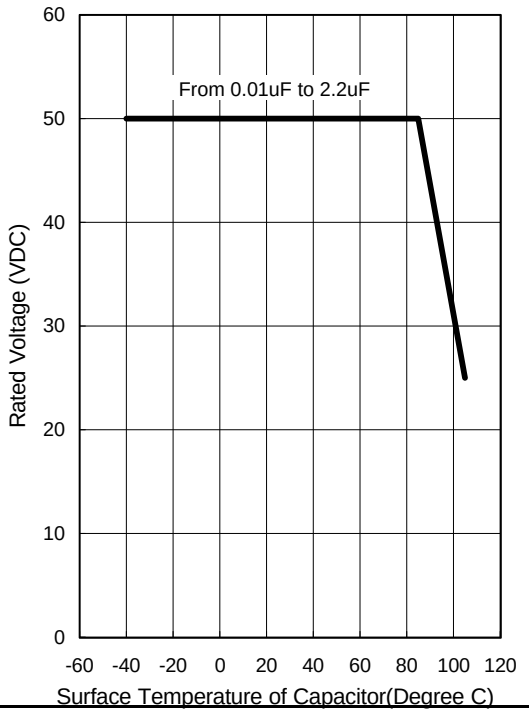


Pulse Handling Capability (dV/dt)

(Max 10000cycles)

Rating Voltage	Capacitance Value(uF)	Code	dV/dt(V/us)	Current(o-p) (A)
50VDC	0.010	103	37	0.37
	0.015	153		0.56
	0.022	223		0.81
	0.033	333		1.22
	0.047	473		1.74
	0.068	683		2.52
	0.100	104	32	3.20
	0.150	154		4.80
	0.220	224		7.04
	0.330	334		10.56
	0.470	474		15.04
	0.680	684		21.76
	1.000	105		32.00
	1.500	155	12	18.00
	2.200	225		26.40

Voltage Derating by Temperature



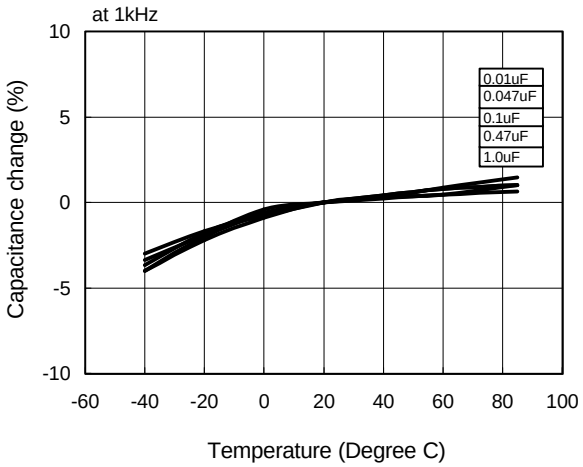
* Please consult Panasonic if your condition exceeds the above spec.

Panasonic

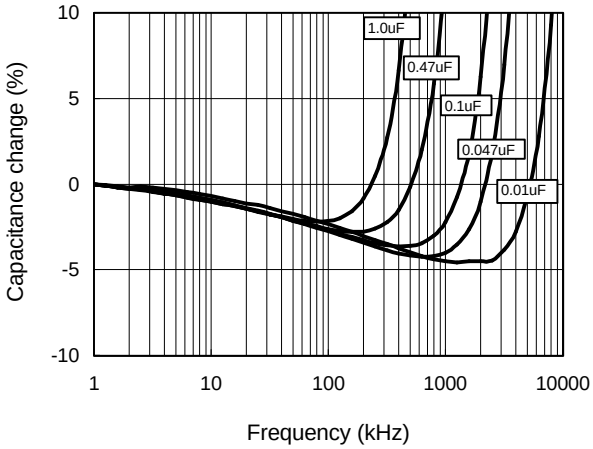
ECQV(M) Type 63VDC Series (Polyester Film)

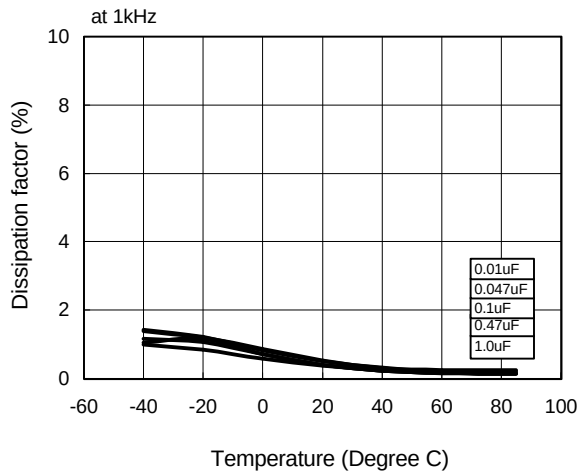
Erectrical Characteristics <Typical Data>

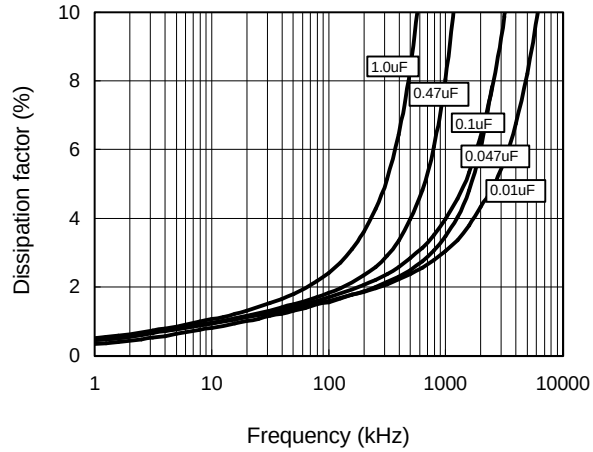
Temperature Characteristics

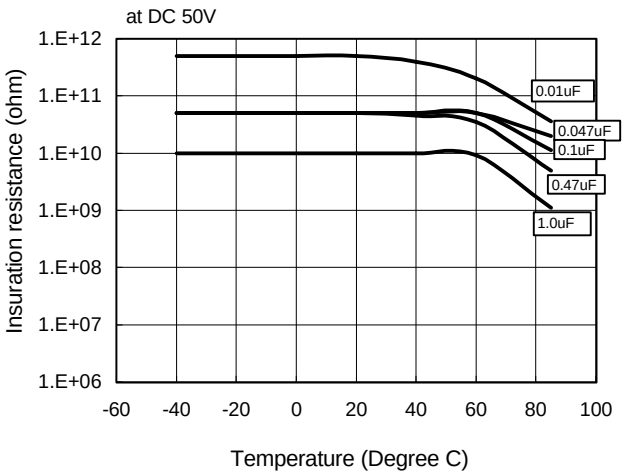


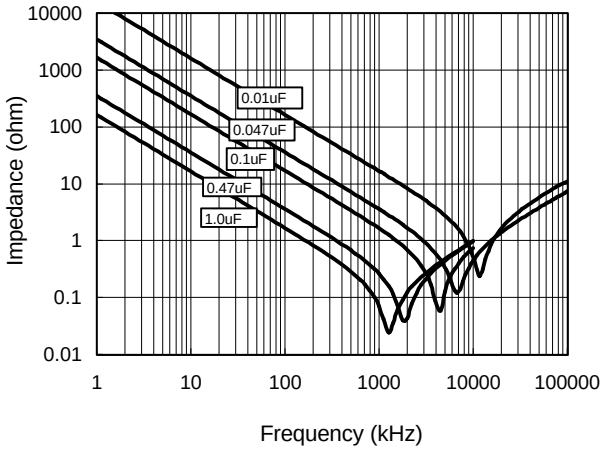
Frequency Characteristics









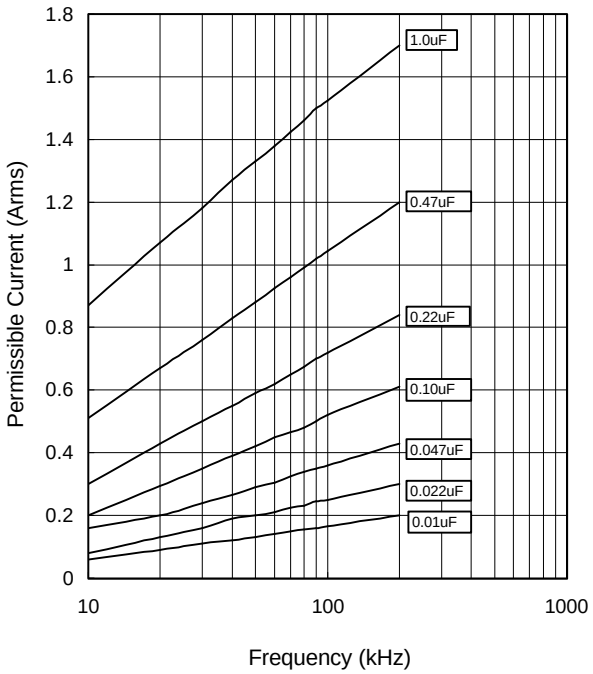


Panasonic

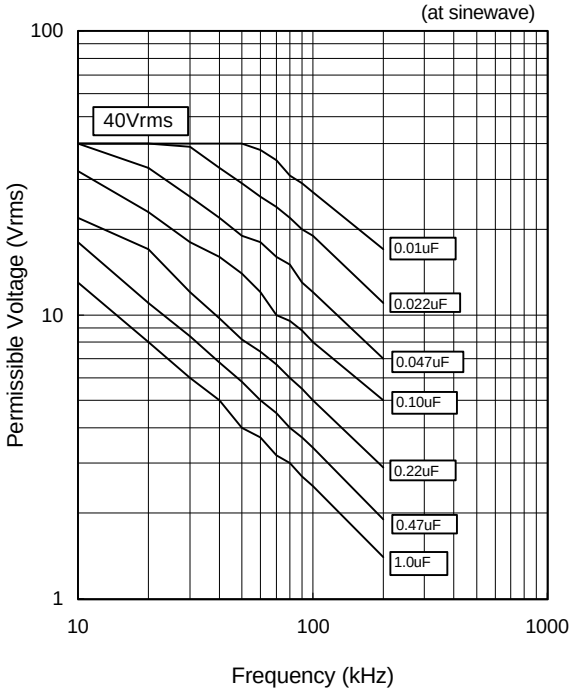
ECQV(M) Type 63VDC Series (Polyester Film)

Applicable Specifications

Permissible Current



Permissible Voltage

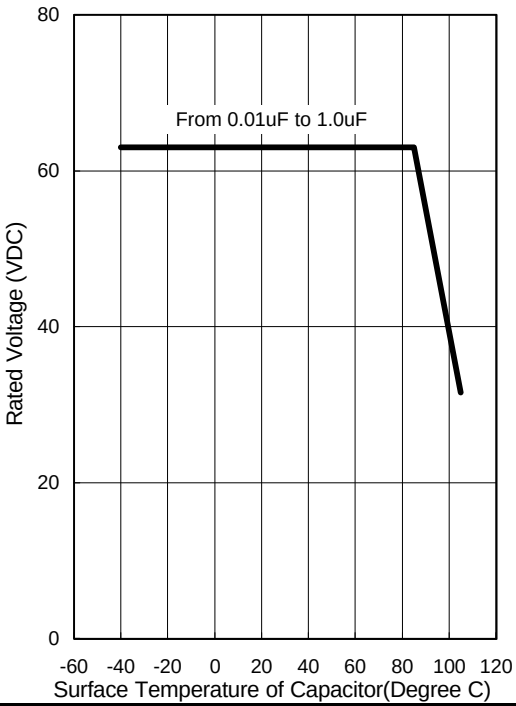


Pulse Handling Capability (dV/dt)

(Max 10000cycles)

Rating Voltage	Capacitance Value(uF)	Code	dV/dt(V/us)	Current(o-p) (A)
63VDC	0.010	103	49	0.49
	0.015	153		0.74
	0.022	223		1.08
	0.033	333		1.62
	0.047	473		2.30
	0.068	683		3.33
	0.100	104		4.90
	0.150	154		7.35
	0.220	224	45	9.90
	0.330	334		14.85
	0.470	474		21.15
	0.680	684		30.60
	1.000	105	33	33.00

Voltage Derating by Temperature



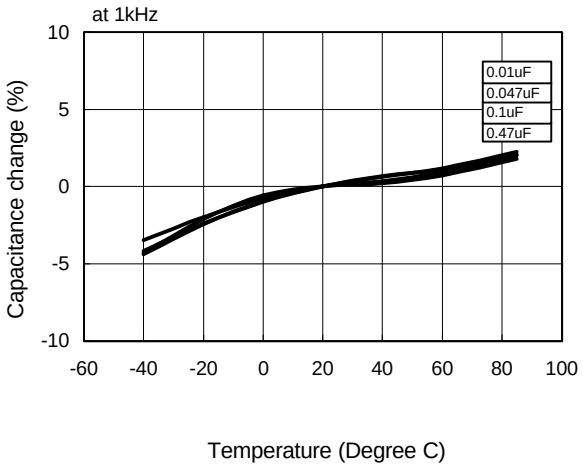
* Please consult Panasonic if your condition exceeds the above spec.

Panasonic

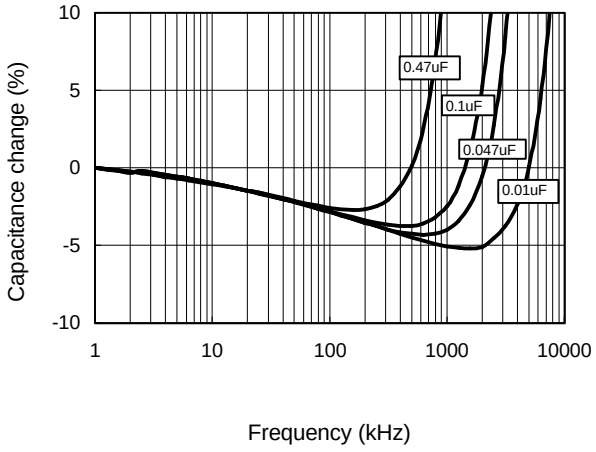
ECQV(M) Type 100VDC Series (Polyester Film)

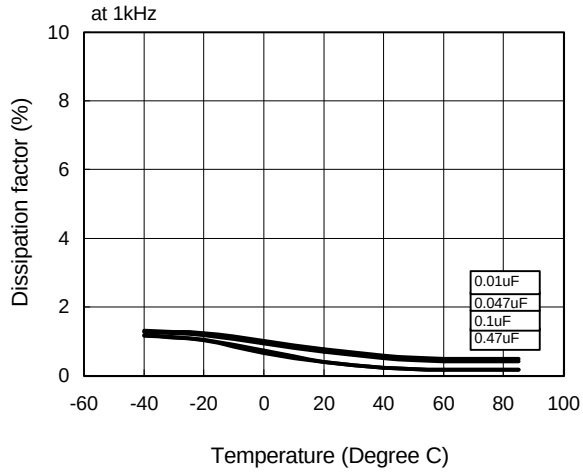
Erectrical Characteristics <Typical Data>

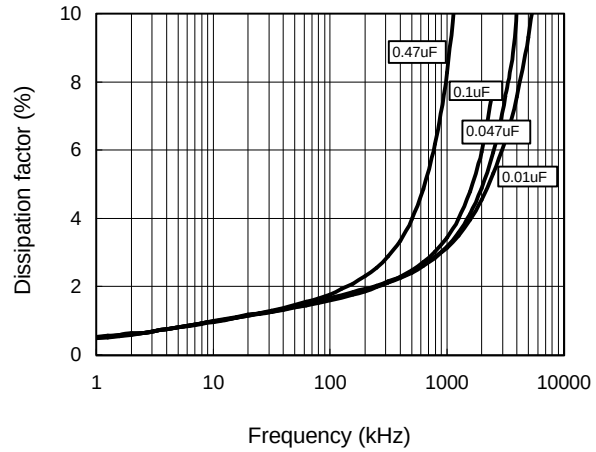
Temperature Characteristics

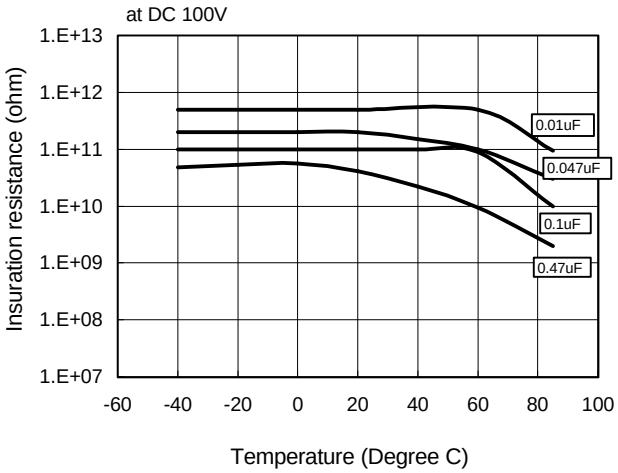


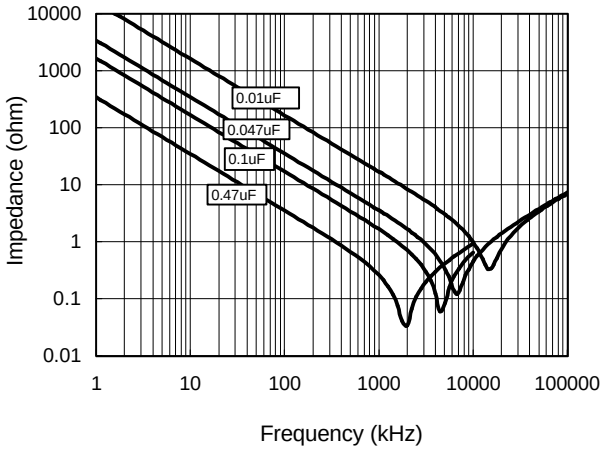
Frequency Characteristics









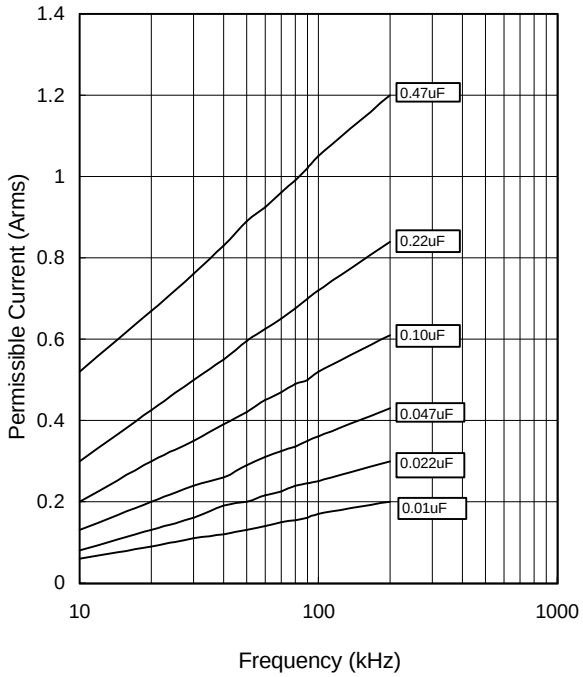


Panasonic

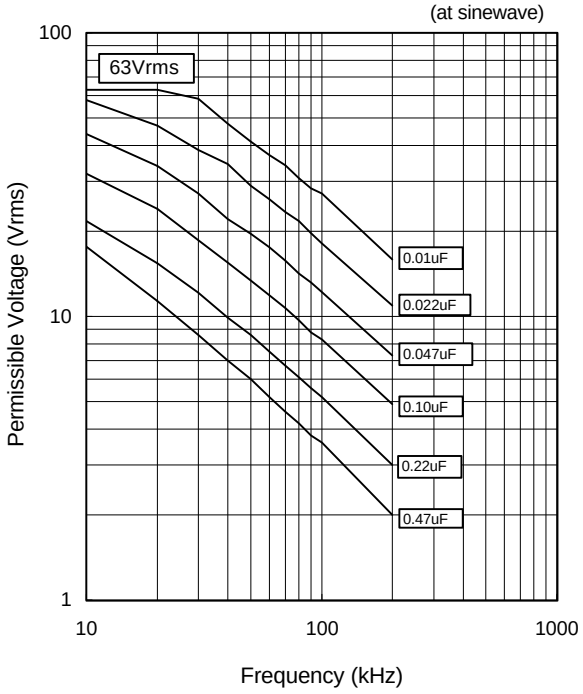
ECQV(M) Type 100VDC Series (Polyester Film)

Applicable Specifications

Permissible Current



Permissible Voltage

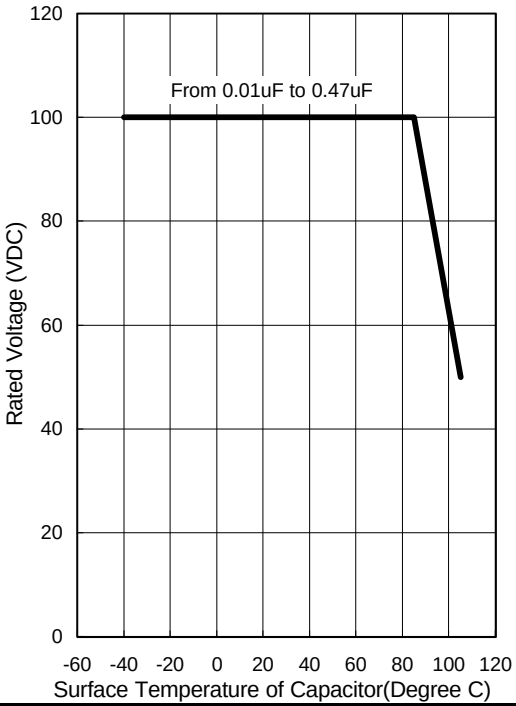


Pulse Handling Capability (dV/dt)

(Max 10000cycles)

Rating Voltage	Capacitance Value(uF)	Code	dV/dt(V/us)	Current(o-p) (A)
100VDC	0.010	103	55	0.55
	0.015	153		0.83
	0.022	223		1.21
	0.033	333		1.82
	0.047	473		2.59
	0.068	683		3.74
	0.100	104		5.50
	0.150	154	43	6.45
	0.220	224		9.46
	0.330	334		14.19
	0.470	474		20.21

Voltage Derating by Temperature



* Please consult Panasonic if your condition exceeds the above spec.