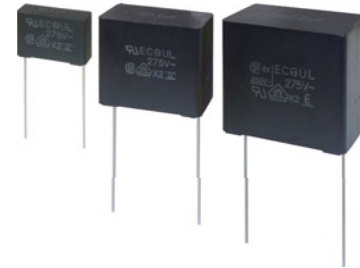


Metalized Polypropylene Film Capacitor

Type : **ECQUL** [Class X2]
[Class Y2/X2]



In accordance with UL/CSA and European safety regulation class X2 or class Y2/X2

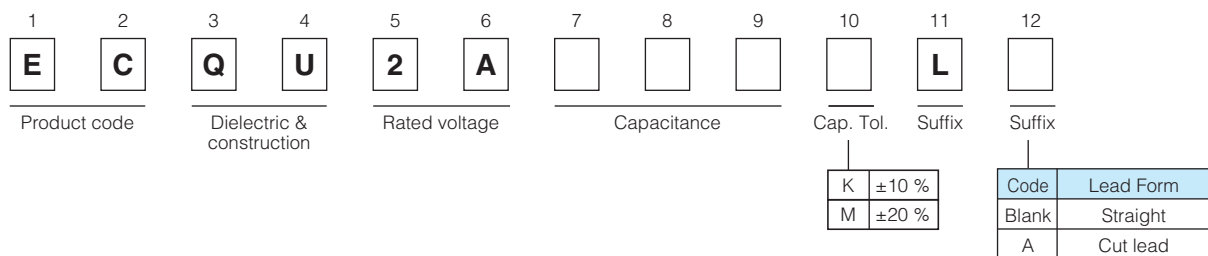
Features

- Compact
- Flame-retardant plastic case and non-combustible resin
- RoHS directive compliant

Recommended applications

- Interference suppressors

Explanation of part number



Applicable standard

* It is certified as type ECQUL in the following approval.

Approval		Class	Capacitance range	Certification organization
UL	UL60384-14	Class Y2/X2	(0.0010 μF to 0.0068 μF)	UL
		Class X2	(0.0082 μF to 2.2 μF)	
CSA	CAN/CSA E60384-14	Class Y2/X2	(0.0010 μF to 0.0068 μF)	CSA
		Class X2	(0.0082 μF to 2.2 μF)	
	CSA C22.2 No.8-M1986	Electromagnetic Interference (EMI) Filters	(1.2 μF to 2.2 μF)	
Europe	EN60384-14	Class Y2/X2	(0.0010 μF to 0.0068 μF)	VDE
		Class X2	(0.0082 μF to 2.2 μF)	
International	IEC60384-14	Class Y2/X2	(0.0010 μF to 0.0068 μF)	VDE
		Class X2	(0.0082 μF to 2.2 μF)	

* When applying this capacitor to European and American safety standards, please use type designation and rating such as ECQUL, 0.1 μF.

* Approval number (File No.) of safety regulations are subject to revision without notice. Ask factory for a copy of the latest file No.

* This capacitor is recognized for European standards by VDE only. But, there are no problems using this capacitor in a device which will get approvals from certification bodies in Europe, SEMKO, DEMKO, NEMKO, FIMKO and SEV etc. except VDE.

Specifications

Category temperature range	-40 °C to +100 °C (85 °C max. on CSA C22.2 No.8 spec.)
Rated voltage	275 V.AC (250 V.AC on CSA C22.2 No.8 spec.)
Rated capacitance	0.0010 μF to 2.2 μF
Capacitance tolerance	±10 % (K), ±20 % (M)
Dissipation factor (tan δ)	tan δ ≤ 1.0 % (20 °C, 1 kHz)
Withstand voltage	Between terminals : 575 V.AC, 1768 V.DC, 60 s (0.0082 μF to 2.2 μF) Between terminals : 500 V.AC, 2121 V.DC, 60 s (0.0010 μF to 0.0068 μF) Between terminals to enclosure : 2050 V.AC, 60 s
Insulation resistance (IR)	C ≤ 0.33 μF : IR ≥ 15000 MΩ (20 °C, 100 V.DC, 60 s) C > 0.33 μF : IR ≥ 5000 MΩ · μF (20 °C, 100 V.DC, 60 s) IR ≥ 2000 MΩ (20 °C, 500 V.DC, 60 s)

* Use of this capacitor is limited to AC voltage (50 Hz or 60 Hz sine wave).

Dimensions

$L \pm 0.5^*$
 $T \pm 0.5^*$
 $H \pm 0.5^*$
 $F \pm 0.4$
 20 min.
 $\phi d \pm 0.05$
 4.0 ± 0.5
 $Q \pm 1.4$
 P (Lead location limits from center)
 $\geq 1.2 \mu\text{F} \pm 1.0$

Cut lead (Suffix A)
 Solder-plated copper-clad steel wire
 Unit : mm

Marking example		
STYLE	(A) side	(B) side
1 0.0010 μF to 0.0068 μF	$\text{M} .001 \mu\text{F} \text{ K}$	ECQUL 275V~ X2
2 0.0082 μF to 1.0 μF	$\text{M} .0082 \mu\text{F} \text{ K}$	ECQUL 275V~ X2
3 1.2 μF to 2.2 μF	$\text{M} 1.5 \mu\text{F} \text{ K}$	ECQUL 275V~ X2

Note : Only $\pm 10\%$ as cap. tol. be marked as "K".
 Note : Date code.

Rating · Dimensions · Quantity

- Capacitance tolerance : $\pm 10\%$ (K), $\pm 20\%$ (M)

Part No.	Capacitance (μF)	Dimensions (mm)							Min. order Q'ty
		L	T	H	F	ϕd	P	Q	
ECQU2A102□L ()	0.0010	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	500
ECQU2A122□L ()	0.0012	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A152□L ()	0.0015	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A182□L ()	0.0018	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A222□L ()	0.0022	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A272□L ()	0.0027	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A332□L ()	0.0033	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A392□L ()	0.0039	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A472□L ()	0.0047	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A562□L ()	0.0056	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A682□L ()	0.0068	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A822□L ()	0.0082	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A103□L ()	0.010	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A123□L ()	0.012	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A153□L ()	0.015	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A183□L ()	0.018	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A223□L ()	0.022	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A273□L ()	0.027	15.0	5.0	11.5	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A333□L ()	0.033	15.0	6.0	13.0	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A393□L ()	0.039	15.0	6.0	13.0	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A473□L ()	0.047	15.0	6.0	13.0	12.5	0.6	0 \pm 0.50	1.3	
ECQU2A563□L ()	0.056	17.5	4.5	11.5	15.0	0.6	0 \pm 0.50	1.3	
ECQU2A683□L ()	0.068	17.5	4.5	11.5	15.0	0.6	0 \pm 0.50	1.3	
ECQU2A823□L ()	0.082	17.5	5.5	12.0	15.0	0.6	0 \pm 0.50	1.3	
ECQU2A104□L ()	0.10	17.5	5.5	12.0	15.0	0.6	0 \pm 0.50	1.3	
ECQU2A124□L ()	0.12	17.5	6.5	14.5	15.0	0.6	0 \pm 0.50	1.3	
ECQU2A154□L ()	0.15	17.5	6.5	14.5	15.0	0.6	0 \pm 0.50	1.3	
ECQU2A184□L ()	0.18	17.5	8.0	16.0	15.0	0.6	0 \pm 0.50	1.3	
ECQU2A224□L ()	0.22	17.5	8.0	16.0	15.0	0.6	0 \pm 0.50	1.3	
ECQU2A274□L ()	0.27	17.5	9.5	17.5	15.0	0.8	0 \pm 0.50	1.3	
ECQU2A334□L ()	0.33	17.5	9.5	17.5	15.0	0.8	0 \pm 0.50	1.3	
ECQU2A394□L ()	0.39	25.5	8.5	17.5	22.5	0.8	0 \pm 0.75	1.5	
ECQU2A474□L ()	0.47	25.5	8.5	17.5	22.5	0.8	0 \pm 0.75	1.5	
ECQU2A564□L ()	0.56	25.5	10.5	19.5	22.5	0.8	0 \pm 0.75	1.5	
ECQU2A684□L ()	0.68	25.5	10.5	19.5	22.5	0.8	0 \pm 0.75	1.5	
ECQU2A824□L ()	0.82	25.5	12.0	22.0	22.5	0.8	0 \pm 0.75	1.5	
ECQU2A105□L ()	1.0	25.5	12.0	22.0	22.5	0.8	0 \pm 0.75	1.5	
ECQU2A125□L ()	1.2	30.5	16.5	26.0	27.5	0.8	0 \pm 0.75	1.5	
ECQU2A155□L ()	1.5	30.5	16.5	26.0	27.5	0.8	0 \pm 0.75	1.5	
ECQU2A185□L ()	1.8	30.5	19.0	29.5	27.5	0.8	0 \pm 0.75	1.5	
ECQU2A225□L ()	2.2	30.5	19.0	29.5	27.5	0.8	0 \pm 0.75	1.5	

* □ : Capacitance tolerance code
 () : Suffix for lead form