

Metallized Polyester Film Capacitor

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

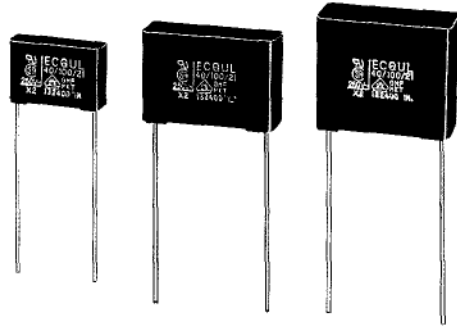
In accordance with UL/CSA and European safety regulation class X2 or class Y2/X2

■ Features

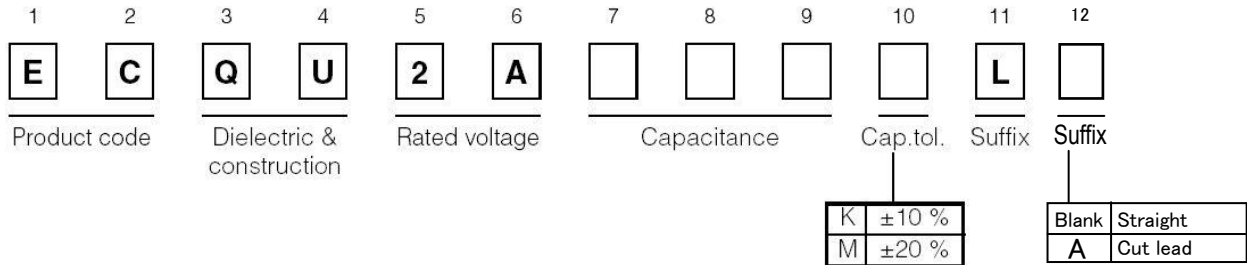
- Compact
- Flame-retardant plastic case and non-combustible resin
- RoHS directive compliant

■ Recommended Applications

- interference suppressors



■ Explanation of Part Numbers



■ Applicable Standard

UL	UL 1414	Across-The-Line Capacitors Antenna-Coupling and Line-By-Pass Components	(0.0010 μ F to 1.0 μ F)
	UL 1283	Electromagnetic Interference Filters	(1.2 μ F to 3.3 μ F)
CSA	CAN/CSA E60384-14	Class Y2/X2	(0.0010 μ F to 0.0068 μ F)
		Class X2	(0.0082 μ F to 3.3 μ F)
	CSA C22.2 No.8-M 1986	Electromagnetic Interference (EMI) Filters	(1.2 μ F to 3.3 μ F)
VDE	IEC60384-14	Class Y2/X2	(0.0010 μ F to 0.0068 μ F)
	EN132400	Class X2	(0.0082 μ F to 2.2 μ F)

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

* 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 temp. range	-40 $^{\circ}$ C to +100 $^{\circ}$ C (85 $^{\circ}$ C max. on UL/CSA C22.2 No.8 spec.)
Rated voltage	275 VAC (IEC60384-14, CAN/CSA E60384-14), 250 VAC (UL/CSA C22.2 No.8)
Capacitance range	0.0010 to 3.3 μ F
Capacitance tolerance	\pm 10 % (K), \pm 20 % (M)
Dissipation factor (tan δ)	tan δ \leq 1.0 % (20 $^{\circ}$ C, 1 kHz)
Withstand voltage	Between terminals: 575 VAC, 1768 VDC 60 s (0.0082 μ F to 3.3 μ F) Between terminals: 1500 VAC, 2121 VDC 60 s (0.0010 μ F to 0.0068 μ F) Between terminals to enclosure: 2050 VAC 60 s
Insulation resistance (IR)	C \leq 0.33 μ F : IR \geq 15000 M Ω (20 $^{\circ}$ C, 100 VDC, 60 s) C > 0.33 μ F : IR \geq 5000 M Ω \cdot μ F (20 $^{\circ}$ C, 100 VDC, 60 s) IR \geq 2000 M Ω (20 $^{\circ}$ C, 500 VDC, 60 s)

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

■ Dimensions in mm (not to scale)

Solder-plated copper-clad steel wire

P (Lead location limits from center)

※ ≥ 1.2 μF ± 1.0

Marking Example

STYLE	(A) side	(B) side	(C) side
1 0.001 to 0.0068 μF	M .001 μF K	ECQUL 275V~Y2/X2 250V~ 40/100/21 □	GMF MKT 132400
2 0.0082 to 0.047 μF	M .033 μF K	ECQUL 275V~X2 250V~ 40/100/21 □	GMF MKT 132400
3 0.056 to 1.0 μF	M .068 μF K 275V~	ECQUL 40/100/21 250V~ X2 GMF MKT 132400 □	
4 1.2 to 3.3 μF	M 1.5 μF K 275V~	1283 8X 250V~ X2 ECQUL 40/100/21 GMF MKT 132400 □	

Note : only ± 10 % as cap. tol. be marked as "K". Note Data Code.

■ Rating & Dimensions

● Capacitance tolerance : ±10 % (K), ±20 % (M)

Part No.	Cap. (μF)	Dimensions(mm)							Min. order Q'ty
		L	T	H	F	φ d	P	Q	
ECQU2A102□L()	0.0010	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A122□L()	0.0012	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A152□L()	0.0015	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A182□L()	0.0018	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A222□L()	0.0022	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A272□L()	0.0027	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A332□L()	0.0033	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A392□L()	0.0039	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A472□L()	0.0047	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A562□L()	0.0056	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A682□L()	0.0068	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A822□L()	0.0082	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A103□L()	0.010	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A123□L()	0.012	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A153□L()	0.015	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A183□L()	0.018	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A223□L()	0.022	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A273□L()	0.027	15.0	5.0	11.5	12.5	0.60	0±0.5	1.3	
ECQU2A333□L()	0.033	15.0	6.0	13.0	12.5	0.60	0±0.5	1.3	
ECQU2A393□L()	0.039	15.0	6.0	13.0	12.5	0.60	0±0.5	1.3	
ECQU2A473□L()	0.047	15.0	6.0	13.0	12.5	0.60	0±0.5	1.3	
ECQU2A563□L()	0.056	17.5	4.5	11.5	15.0	0.60	0±0.5	1.3	
ECQU2A683□L()	0.068	17.5	4.5	11.5	15.0	0.60	0±0.5	1.3	
ECQU2A823□L()	0.082	17.5	5.5	12.0	15.0	0.60	0±0.5	1.3	
ECQU2A104□L()	0.10	17.5	5.5	12.0	15.0	0.60	0±0.5	1.3	
ECQU2A124□L()	0.12	17.5	6.5	14.5	15.0	0.60	0±0.5	1.3	
ECQU2A154□L()	0.15	17.5	6.5	14.5	15.0	0.60	0±0.5	1.3	
ECQU2A184□L()	0.18	17.5	8.0	16.0	15.0	0.60	0±0.5	1.3	
ECQU2A224□L()	0.22	17.5	8.0	16.0	15.0	0.60	0±0.5	1.3	
ECQU2A274□L()	0.27	17.5	9.5	17.5	15.0	0.80	0±0.5	1.3	
ECQU2A334□L()	0.33	17.5	9.5	17.5	15.0	0.80	0±0.5	1.3	
ECQU2A394□L()	0.39	25.5	8.5	17.5	22.5	0.80	0±0.75	1.5	
ECQU2A474□L()	0.47	25.5	8.5	17.5	22.5	0.80	0±0.75	1.5	
ECQU2A564□L()	0.56	25.5	10.5	19.5	22.5	0.80	0±0.75	1.5	
ECQU2A684□L()	0.68	25.5	10.5	19.5	22.5	0.80	0±0.75	1.5	
ECQU2A824□L()	0.82	25.5	12.0	22.0	22.5	0.80	0±0.75	1.5	
ECQU2A105□L()	1.0	25.5	12.0	22.0	22.5	0.80	0±0.75	1.5	
ECQU2A125□L()	1.2	30.5	16.5	26.0	27.5	0.80	0±0.75	1.5	
ECQU2A155□L()	1.5	30.5	16.5	26.0	27.5	0.80	0±0.75	1.5	
ECQU2A185□L()	1.8	30.5	19.0	29.5	27.5	0.80	0±0.75	1.5	
ECQU2A225□L()	2.2	30.5	19.0	29.5	27.5	0.80	0±0.75	1.5	
ECQU2A335□L()	3.3	30.5	23.0	34.0	27.5	0.80	0±0.75	1.5	

Cap. tol. code

500