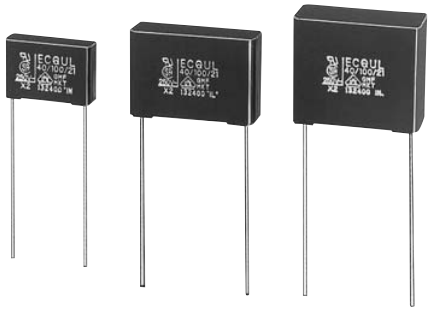
Metallized Polyester Film Capacitor

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

1	2	3	4	5	6	7	8	9	10	11	12
E	C	Q	U	2	A					L	A
Product code		Dielectric & construction		Rated voltage		Capacitance			Cap.tol.	Suffix	Cut lead

K	±10 %
M	±20 %

■Applicable Standard

UL	UL 1414	Across - The - Line Capacitors Antenna - Coupling and Line - By - Pass Components	(0.0010 µF to 1.0 µF)
	UL 1283	Electromagnetic Interference Filters	(1.2 µF to 2.2 µF)
CSA	CAN/CSA E60384-14	Class Y2/X2	(0.0010 µF to 0.0068 µF)
		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)
VDE	IEC60384-14 EN60384-14	Class Y2/X2	(0.0010 µF to 0.0068 µF)
		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

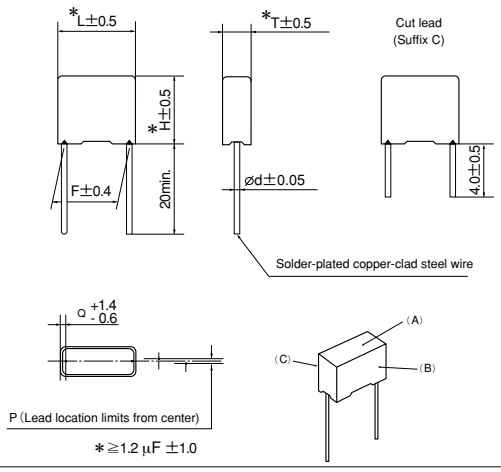
✻This capacitor is recognized for European standards by VDE only. But, there are no problems using this capacitor in a device which will get approvals from certification bodies in Europe, SEMKO, DEMKO, NEMKO, FIMKO and SEV etc. except VDE.

■Specifications

Category temp. range	-40 ˚C to +100 ˚C (85 ˚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 µF to 2.2 µF
Capacitance tolerance	± 10 % (K), ± 20 %(M)
Dissipation factor (tanδ)	tanδ≦1.0 % (20 ˚C, 1 kHz)
Withstand voltage	Between terminals: 575 VAC, 1768 VDC 60 s (0.0082 µF to 2.2 µF) Between terminals: 1500 VAC, 2121 VDC 60 s (0.0010 µF to 0.0068 µF) Between terminals to enclosure:2050 VAC 60 s
Insulation resistance (IR)	C≦0.33 µF : IR≧15000 MΩ (20 ˚C, 100 VDC, 60 s) C>0.33 µF : IR≧5000 MΩ · µF (20 ˚C, 100 VDC, 60 s) IR≧2000 MΩ (20 ˚C, 500 VDC, 60 s)

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

■Dimensions in mm (not to scale)



Marking Example

STYLE	A side	B side	C side
1 0.0010 µF to 0.0068 µF	Ⓜ.001 µF K	ECQUL 275 V～Y2/X2 250 V～ 40/100/21□	GMF MKT 132400
2 0.0082 µF to 0.047 µF	Ⓜ.033 µF K	ECQUL 275 V～X2 250 V～ 40/100/21□	GMF MKT 132400
3 0.056 µF to 1.0 µF	Ⓜ.068 µF K 275 V～	ECQUL 40/100/21 GMF MKT 250 V～ X2 132400□	
4 1.2 µF to 2.2 µF	Ⓜ.15 µF K 275 V～	1283 8X ECQUL 40/100/21 GMF MKT 250 V～ X2 132400□	

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

■Rating & Dimensions

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

Part No.	Cap. (µF)	Dimensions (mm)						
		L	T	H	F	φd	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

Cap. tol. code