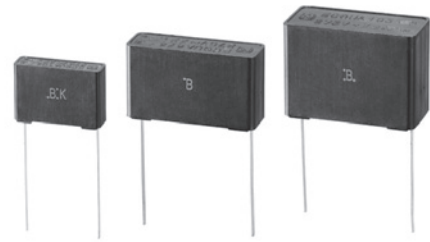


Metallized Polypropylene Film Capacitor

Series : **ECQUA [Class X2]**

In accordance with UL/CSA and European safety regulation class X2
Equipped with a safety mechanism



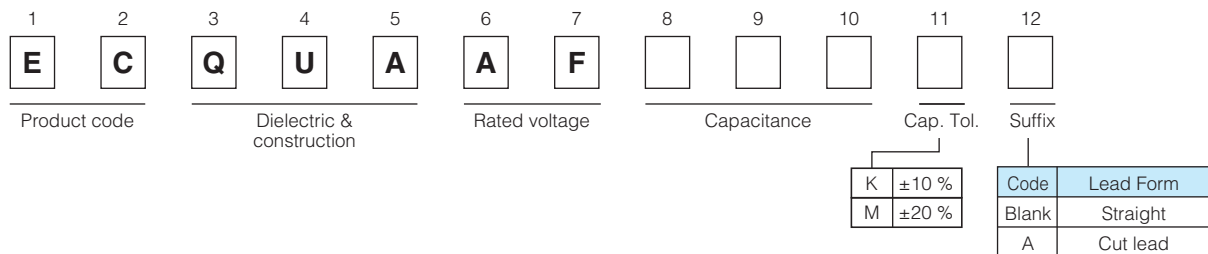
Features

- High humidity resistance
(THB test : 85 °C/85 %/240 V.AC/1000 h (C ≤ 1.0 μF))
- High safety (safety function installed)
- 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 ECQUA in the following approval.

Approval		Class	Certification organization
UL	UL60384-14	Class X2	UL
CSA	CAN/CSA E60384-14	Class X2	
Europe	EN60384-14	Class X2	VDE
International	IEC60384-14	Class X2	

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

Specifications

Category temperature range	-40 °C to +110 °C
Rated voltage	275 V.AC
Rated capacitance	0.10 μF to 4.7 μF
Capacitance tolerance	±10 % (K), ±20 % (M)
Dissipation factor (tan δ)	C ≤ 1.0 μF : tan δ ≤ 0.1 % (20 °C, 1 kHz) C > 1.0 μF : tan δ ≤ 0.2 % (20 °C, 1 kHz)
Withstand voltage	Between terminals : 633 V.AC, 1183 V.DC, 60 s 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) C ≤ 0.47 μF : IR ≥ 2000 MΩ (20 °C, 500 V.DC, 60 s)
Maximum AC voltage *	310 V.AC

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

* A faint corona discharge may occur inside of the capacitor element at rated voltage, however there is no influence on the reliability of the capacitor. (Suitable for series to the mains usage - for more details, please contact your Panasonic contact person.)

* Maximum AC voltage including line voltage fluctuation is 310 V.AC.

310 V.AC is not nominal continuous applied voltage, but only indicates maximum value including in the voltage of the power supply. Basic nominal voltage is considered as 240 V.AC.

This maximum AC voltage is specified in only ECQUA type, not specified in other types.

Please refer to individual product specification, and contact us for further questions regarding design life.

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.

Should a safety concern arise regarding this product, please be sure to contact us immediately.

Dimensions

Marking Example

(A) side	(B) or (C) side

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

Note : Date code.

Unit : mm

Rating · Dimensions · Quantity

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

Part No.	Cap. (μF)	Dimensions (mm)							Min. order Q'ty	
		L	T	H	F	ϕd	P	Q	Straight	Cut lead
ECQUAAF104□()	0.10	17.5	5.0	12.0	15.0	0.6	0 \pm 0.8	1.3	1000	1000
ECQUAAF154□()	0.15	17.5	6.0	13.0	15.0	0.6	0 \pm 0.8	1.3		
ECQUAAF224□()	0.22	17.5	7.5	14.0	15.0	0.6	0 \pm 0.8	1.3		
ECQUAAF334□()	0.33	17.5	9.0	16.0	15.0	0.6	0 \pm 0.8	1.3	600	800
ECQUAAF474□()	0.47	26.0	8.5	15.0	22.5	0.8	0 \pm 0.8	1.8		
ECQUAAF684□()	0.68	26.0	10.0	17.0	22.5	0.8	0 \pm 0.8	1.8	500	500
ECQUAAF105□()	1.0	26.0	12.0	19.0	22.5	0.8	0 \pm 0.8	1.8	300	300
ECQUAAF155□()	1.5	31.0	12.0	22.0	27.5	0.8	0 \pm 0.8	1.8	200	200
ECQUAAF225□()	2.2	31.0	14.5	24.5	27.5	0.8	0 \pm 0.8	1.8		
ECQUAAF335□()	3.3	31.0	19.0	29.0	27.5	0.8	0 \pm 0.8	1.8	150	150
ECQUAAF475□()	4.7	31.0	23.0	33.0	27.5	0.8	0 \pm 0.8	1.8	100	100

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

本网站中记载的本公司商品及技术信息等用户使用时的 要求及注意事项

- 如将本规格书刊上的产品用于特殊质量以及有可靠性要求, 因其故障或误动作有可能会直接威胁生命或对人体造成危害等用途时 (例: 宇宙/航天设备, 运输/交通设备, 燃烧设备, 医疗设备, 防灾/防范设备, 安全装置等), 需要针对该用途进行规格确认, 请务必向弊司担当垂询。
- 本规格书记载了单个零部件的品质和性能。在使用时, 请务必在贴装在贵司产品上并在实际的使用环境下进行评估和确认。
- 无论任何用途, 如需用于高可靠性要求的设备时, 建议在采用保护电路及冗长电路等措施, 保护设备安全的同时, 请顾客进行安全性测试。
- 本规格书刊登的产品及其规格, 为了得到进一步的改进, 完善, 将会在没有预告的情况下进行更改, 请予以谅解。为此, 在最终设计, 购买或使用, 无论任何用途, 请事先申请并确认最新, 最详细的产品规格书。
- 本规格书刊登的技术信息中的产品典型动作, 应用电路等示例并不保证没有侵犯本公司或第三方的知识产权, 同时也不意味是对实施权的认可。
- 在出口或向非日本居住者提供本规格书刊登的产品, 产品规格, 技术信息时, 请遵守该国家的相关法律, 尤其是应遵守有关安全保障出口管理方面的法律法规。

关于EU RoHS指令 / REACH规定符合确认书

- 对应RoHS指令 / REACH规定的产品切换时期因产品而异。
- 如果使用库存品不确定是否对应RoHS指令 / REACH规定的话, 请通过「咨询表格」选择「业务咨询」向弊司垂询。

如果脱离本规格书擅自使用弊司产品的话, 弊司不承担一切责任。