Metallized Polypropylene Film Capacitor (For Automotive)

Type **ECQUA [Class X2]**

NEW

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

Features

- AEC-Q200 compliant
- High safety (safety function installed)
- High humidity resistance (THB test : 85 °C, 85 %, 240 V.AC, 1000 h)
- High Thermal shock resistance (-40 ⇔ 85℃, 1000 cycles)
- Flame-retardant plastic case and non-combustible resin
- RoHS compliant

Recommended applications

- Interference suppressors for automotive

Explanation of part number

1	2	3	4	5	6	7	8	9	10	11	12
E	C	Q	U	A	A	F					
Product		Dielectric & construction			Rated		Capacitance			Suffix 1	Suffix 2

Code	Cap. Tol.
T	±10%(K)
S	±20%(M)

Code	Lead
1	Straight
A	Cut lead

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	

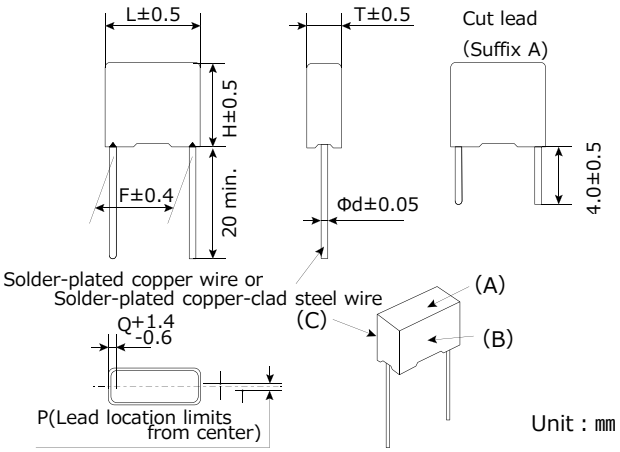
＊When applying this capacitor to European and American safety standards, please use type designation and rating such as ECQUA, 0.1 μF.
＊Approval number (File No.) of safety regulations are subject to revision without notice. Ask factory for a copy of the latest file No.

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.
＊＊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 ofthe power supply.
Basic nominal voltage is considered as 240 V.AC.
This maximum AC voltae 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.

Dimensions



Marking Example

(A) side	(B) or (C)side
ECQUA104 275V ~ X2	K

Note : Only ±10 % as cap. tol. be marked as "K".

Note: Date code.

Rating · Dimensions · Quantity

Part No.	Capacitance (μF)	Dimensions (mm)							Min. order Q'ty	
		L	T	H	F	Φd	P	Q	Straight	Cut lead
ECQUAAF104T( )	0.10	17.5	5.0	12.0	15.0	0.6	0±0.8	1.3	1000	1000
ECQUAAF104S( )										
ECQUAAF154T( )	0.15	17.5	6.0	13.0	15.0	0.6	0±0.8	1.3		
ECQUAAF154S( )										
ECQUAAF224T( )	0.22	17.5	7.5	14.0	15.0	0.6	0±0.8	1.3		
ECQUAAF224S( )										
ECQUAAF334T( )	0.33	17.5	9.0	16.0	15.0	0.6	0±0.8	1.3		800
ECQUAAF334S( )										
ECQUAAF474T( )	0.47	26.0	8.5	15.0	22.5	0.8	0±0.8	1.8	600	
ECQUAAF474S( )										
ECQUAAF684T( )	0.68	26.0	10.0	17.0	22.5	0.8	0±0.8	1.8	500	500
ECQUAAF684S( )										
ECQUAAF105T( )	1.0	26.0	12.0	19.0	22.5	0.8	0±0.8	1.8	300	300
ECQUAAF105S( )										
ECQUAAF155T( )	1.5	31.0	12.0	22.0	27.5	0.8	0±0.8	1.8	200	200
ECQUAAF155S( )										
ECQUAAF225T( )	2.2	31.0	14.5	24.5	27.5	0.8	0±0.8	1.8		
ECQUAAF225S( )										
ECQUAAF335T( )	3.3	31.0	19.0	29.0	27.5	0.8	0±0.8	1.8	150	150
ECQUAAF335S( )										
ECQUAAF475T( )	4.7	31.0	23.0	33.0	27.5	0.8	0±0.8	1.8	100	100
ECQUAAF475S( )										

＊ ( ) : Suffix for lead form