

THIRD ANGLE PROJECTION

Type designation	Part No.	Cap.		Dimensions							MARKING STYLE
		(μ F)	(*)	L	T	H	F	d	P	Q	
ECQUA	ECQUAAF822 () A	0.0082 (822)		15.3	5.0	11.5	12.5	0.6	0 \pm 0.8	1.5	1
"	" AF103 () A	0.01 (103)		"	"	"	"	"	"	"	"
"	" AF123 () A	0.012 (123)		"	"	"	"	"	"	"	"
"	" AF153 () A	0.015 (153)		"	"	"	"	"	"	"	"
"	" AF183 () A	0.018 (183)		"	"	"	"	"	"	"	"
"	" AF223 () A	0.022 (223)		"	"	"	"	"	"	"	"
"	" AF273 () A	0.027 (273)		"	"	"	"	"	"	"	"
"	" AF333 () A	0.033 (333)		"	"	"	"	"	"	"	"
"	" AF393 () A	0.039 (393)		"	"	"	"	"	"	"	"
"	" AF473 () A	0.047 (473)		"	6.0	13.0	"	"	"	"	"
"	" AF563 () A	0.056 (563)		17.5	5.0	12.0	15.0	"	"	1.3	"
"	" AF683 () A	0.068 (683)		"	"	"	"	"	"	"	"
"	" AF823 () A	0.082 (823)		"	"	"	"	"	"	"	"
"	" AF104 () A	0.1 (104)		"	"	"	"	"	"	"	2
"	" AF124 () A	0.12 (124)		"	6.0	13.0	"	"	"	"	1
"	" AF154 () A	0.15 (154)		"	"	"	"	"	"	"	2
"	" AF184 () A	0.18 (184)		"	7.5	14.0	"	"	"	"	1
"	" AF224 () A	0.22 (224)		"	"	"	"	"	"	"	2
"	" AF274 () A	0.27 (274)		"	9.0	16.0	"	"	"	"	1
"	" AF334 () A	0.33 (334)		"	"	"	"	"	"	"	2
"	" AF394 () A	0.39 (394)		26.0	8.5	15.0	22.5	0.8	"	1.8	1
"	" AF474 () A	0.47 (474)		"	"	"	"	"	"	"	2
"	" AF564 () A	0.56 (564)		"	10.0	17.0	"	"	"	"	1
"	" AF684 () A	0.68 (684)		"	"	"	"	"	"	"	2
"	" AF824 () A	0.82 (824)		"	12.0	19.0	"	"	"	"	1
"	" AF105 () A	1.0 (105)		"	"	"	"	"	"	"	2
"	" AF125 () A	1.2 (125)		31.0	12.0	22.0	27.5	"	"	"	1
"	" AF155 () A	1.5 (155)		"	"	"	"	"	"	"	2
"	" AF185 () A	1.8 (185)		"	14.5	24.5	"	"	"	"	1
"	" AF225 () A	2.2 (225)		"	"	"	"	"	"	"	2
"	" AF275 () A	2.7 (275)		"	19.0	29.0	"	"	"	"	1
"	" AF335 () A	3.3 (335)		"	"	"	"	"	"	"	2
"	" AF475 () A	4.7 (475)		"	23.0	33.0	"	"	"	"	"
"	" AF685 () A	6.5 (685)		41.0	23.0	37.5	37.5	1.0	"	"	3
"	" AF106 () A	10.0 (106)		"	28.0	42.5	"	"	"	"	"

ALTERATION		
ISSUE	DESCRIPTION	DATE
SPECIFICATIONS No.		

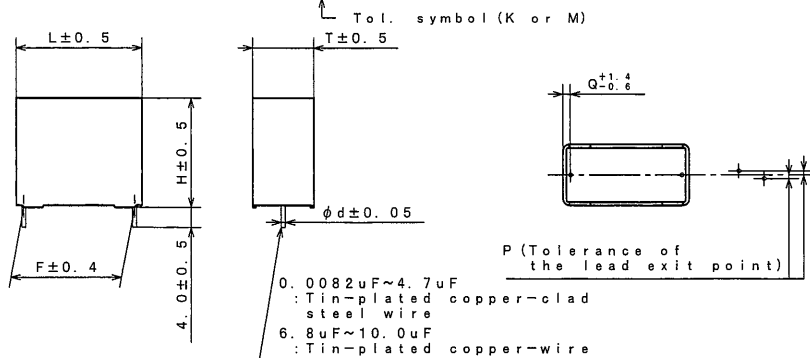
PACKING QUANTITY

Capacitance range (μ F)	Quantity (pcs.)
0.0082~0.1	1600
0.12 ~0.15	1200
0.18 ~0.22	1000
0.27 ~0.47	800
0.56 ~0.68	500
0.82 ~1.0	300
1.2 ~2.2	200
2.7 ~3.3	150
4.7	100
6.8	60
10.0	50

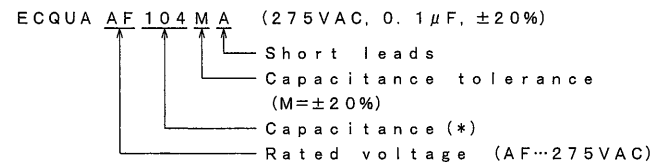
QUANTITY of MINIMUM ORDER

Capacitance range (μ F)	Quantity (pcs.)
0.0082~0.22	1000
0.27 ~0.47	800
0.56 ~0.68	500
0.82 ~1.0	300
1.2 ~2.2	200
2.7 ~3.3	150
4.7	100
6.8	60
10.0	50

Reference



ITEM CODE NUMBER STRUCTURE



F: Regulation of the root
DO NOT SCALE DRAWING

REVISIONS INDICATED BY Δ

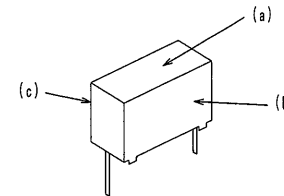
ALL DIMENSIONS ARE IN MILLIMETERS

DESIGN	K. Murakami
CHECKED	K. Oshiki
APPROVAL	K. Takemitsu
ESTABLISHMENT	Dec. 5. 2019
TYPE NAME	ECQUAAF*** () A
NAME	Safety Standard approval
	Metallized Capacitor
DRAWING NAME	PRODUCT DRAWING
DRAWING No.	J043B-J-E (1/2)

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation

THIRD ANGLE PROJECTION

STYLE	(a) SIDE	(b) or (c) SIDE
1	(M) ECQUA103K	 15 275V~ X2 cRUus [] ↑ date code
2	(M) ECQUA104 10 275V~ X2 cRUus	 [] K ↑ date code
3		 (M) ECQUA106 15 275V~ X2 cRUus [] K ↑ date code



Note When applying for the agency, designate the capacitor in the following form, "ECQUA, 0.33μF"
The part number need not be specified.

North America UL60384-14
CAN/CSA-E60384-14

Europe IEC60384-14
EN60384-14

CLASS X2

(Note) Only ±10% as capacitance tolerance to be marked as "K"

CONSTRUCTION

The capacitor is of non-inductive construction, wound with metallized polypropylene film dielectric.
The capacitor is enclosed in non-combustible polybutylene terephthalate case, filled with non-combustible epoxy resin and has two leads.

MARKING

Marking comprises capacitance, capacitance tolerance (K only), rated voltage, type designation, capacitor classification, manufacturer's trademark, recognition mark and date code.

PROPERTIES

Capacitance	: See table	at 1kHz
Capacitance tolerance	: ±10% (K), ±20% (M)	at 1kHz
Rated voltage	: 275VAC	
Withstand voltage (terminal-terminal)	: 633VAC or 1183VDC	} for 60s
(terminal-enclosure)	: 2050VAC	
Insulation resistance	: ≥15000MΩ (C≤0.33μF)	} at 100VDC for 60s, 20°C
	: ≥5000MΩ·μF (C>0.33μF)	
	: ≥2000MΩ (C≤0.47μF)	at 500VDC for 60s, 20°C
Dissipation factor	: ≤0.1% (C≤1.0μF)	} at 1kHz, 20°C
	: ≤0.2% (C>1.0μF)	
Category temperature range	: From -40°C to +110°C	

Reference

TYPE NAME
ECQUAAF*** () A
DRAWING No.
J043B-J-E (2/2)

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation

THIRD ANGLE PROJECTION

Type designation	Part No.	Cap.		Dimensions						
		(μ F)	(*)	L	T	H	F	d	P	Q
ECQUA	ECQUAAF335**	3.3	(335)	41.0	15.0	30.0	37.5	1.0	0 \pm 0.8	1.8
"	" AF475**	4.7	(475)	"	18.0	33.0	"	"	"	"

ED \pm 10% (K)
LD \pm 20% (M)

ALTERATION		
ISSUE	DESCRIPTION	DATE
SPECIFICATIONS No.		

ITEM CODE NUMBER STRUCTURE

ECQUA AF 335 LD (275VAC, 3.3 μ F, \pm 20%)

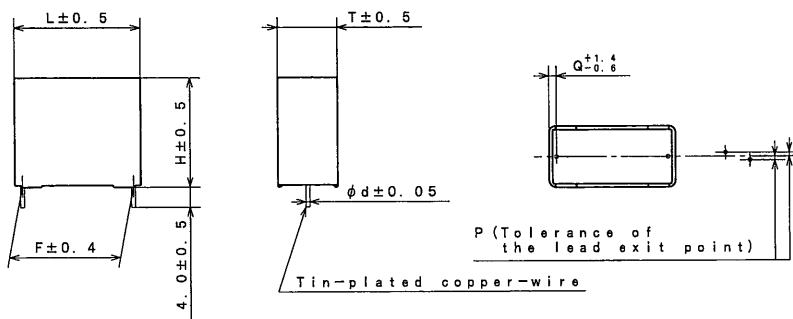
Short leads
 Capacitance tolerance
 (ED \pm 10% (K), LD \pm 20% (M))
 Capacitance (*)
 Rated voltage (AF...275VAC)

PACKING QUANTITY

Capacitance range (μ F)	Quantity (pcs.)
3.3	90
4.7	75

QUANTITY of MINIMUM ORDER

Capacitance range (μ F)	Quantity (pcs.)
3.3	90
4.7	75



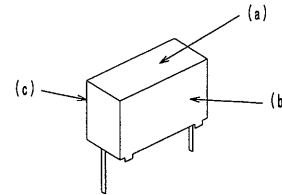
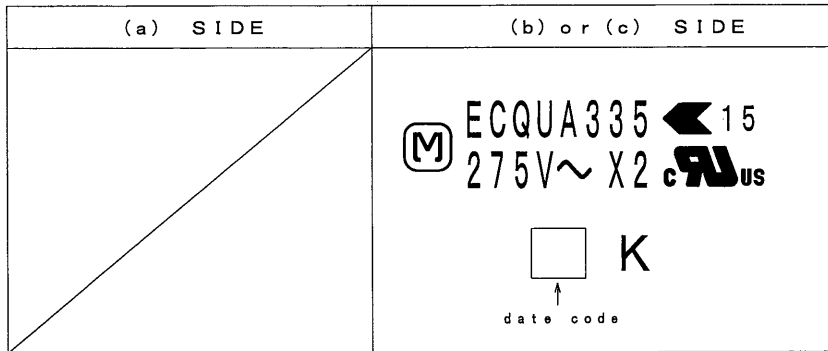
• F: Regulation of the root

Reference

DESIGN	K. Murakami
CHECKED	K. Osaki
APPROVAL	K. Ichimaru
ESTABLISHMENT	Mar. 25. 2019
TYPE NAME	ECQUAAF***ED ECQUAAF***LD
NAME	Safety Standard approval Metalized Capacitor
DRAWING NAME	PRODUCT DRAWING
DRAWING No.	J003B-J-E (1/2)

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation

THIRD ANGLE PROJECTION



(Note) Only $\pm 10\%$ as capacitance tolerance to be marked as "K"

Note When applying for the agency, designate the capacitor in the following form, "ECQUA, 3.3 μ F"
The part number need not be specified.

North America	UL60384-14 CAN/CSA-E60384-14
Europe	IEC60384-14 EN60384-14

CLASS X2

CONSTRUCTION

The capacitor is of non-inductive construction, wound with metallized polypropylene film dielectric.
The capacitor is enclosed in non-combustible polybutylene telephthalate case, filled with non-combustible epoxy resin and has two leads.

MARKING

Marking comprises capacitance, capacitance tolerance (K only), rated voltage, type designation, capacitor classification, manufacturer's trademark, recognition mark and date code.

PROPERTIES

Capacitance	: See table	at 1kHz
Capacitance tolerance	: $\pm 10\%$ (K), $\pm 20\%$ (M)	at 1kHz
Rated voltage	: 275VAC	
Withstand voltage (terminal-terminal)	: 633VAC or 1183VDC] for 60s
(terminal-enclosure)	: 2050VAC	
Insulation resistance	: $\geq 5000\text{M}\Omega \cdot \mu\text{F}$	at 100VDC for 60s, 20°C
Dissipation factor	: $\leq 0.2\%$	at 1kHz, 20°C
Category temperature range	: From -40°C to +110°C	

Reference

TYPE NAME	ECQUAAF***ED ECQUAAF***LD
DRAWING No.	J003B-J-E (2/2)

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation