

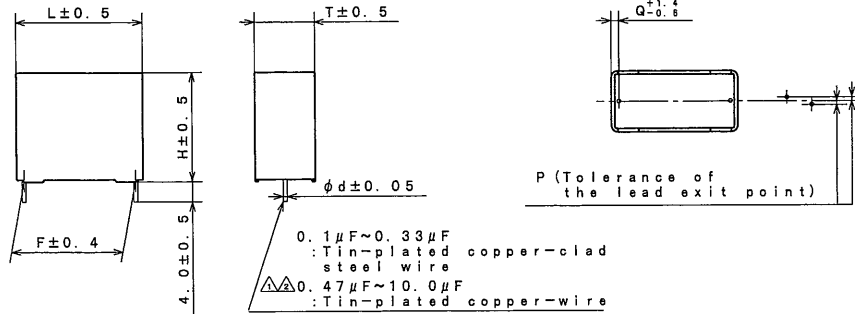
THIRD ANGLE PROJECTION

Type designation	Part No.	Cap.		Dimensions								MARKING STYLE
		(μ F)	(*)	L	T	H	F	d	P	Q		
ECQUA	ECQUAAF104**	0.1	(104)	17.5	5.0	12.0	15.0	0.6	0 \pm 0.8	1.3	1	
"	" AF154**	0.15	(154)	"	6.0	13.0	"	"	"	"	"	
"	" AF224**	0.22	(224)	"	7.5	14.0	"	"	"	"	"	
"	" AF334**	0.33	(334)	"	9.0	16.0	"	"	"	"	"	
"	" AF474**	0.47	(474)	26.0	8.5	15.0	22.5	0.8	"	1.8	"	
"	" AF684**	0.68	(684)	"	10.0	17.0	"	"	"	"	"	
"	" AF105**	1.0	(105)	"	12.0	19.0	"	"	"	"	"	
"	" AF155**	1.5	(155)	31.0	12.0	22.0	27.5	"	"	"	"	
"	" AF225**	2.2	(225)	"	14.5	24.5	"	"	"	"	"	
△	" AF335**	3.3	(335)	"	19.0	29.0	"	"	"	"	"	
△	" AF475**	4.7	(475)	"	23.0	33.0	"	"	"	"	"	
△	" AF685**	6.8	(685)	41.0	23.0	37.5	37.5	1.0	"	"	2	
△	" AF106**	10.0	(106)	"	28.0	42.5	"	"	"	"	"	

TA=±10% (K)
SA=±20% (M)

ITEM CODE NUMBER STRUCTURE

ECQUA AF 104 SA (275VAC, 0.1 μ F, ±20%)
 Short leads
 Capacitance tolerance (TA=±10%, SA=±20%)
 Capacitance (*)
 Rated voltage (AF...275VAC)



F: Regulation of the root

PACKING QUANTITY

Capacitance range (μ F)	Quantity (pcs.)
0.1	1600
0.15	1200
0.22	1000
0.33~0.47	800
0.68	500
1.0	300
1.5, 2.2	200
△ 3.3	150
△ 4.7	100
△ 6.8	60
△ 10.0	50

QUANTITY of MINIMUM ORDER

Capacitance range (μ F)	Quantity (pcs.)
0.1 ~ 0.22	1000
0.33 ~ 0.47	800
0.68	500
1.0	300
1.5, 2.2	200
△ 3.3	150
△ 4.7	100
△ 6.8	60
△ 10.0	50

ALTERATION		
ISSUE	DESCRIPTION	DATE
△	Addition Capacitance (335~475)	Jun. 5 2018
△	Addition Capacitance (685~106)	Mar. 25 2019

SPECIFICATIONS No.

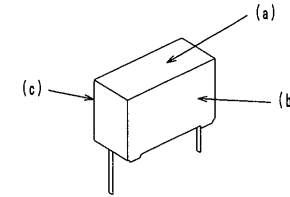
For Automotive Reference

DESIGN	K. Murakami
CHECKED	K. Ozaki
APPROVAL	K. Takumitsu
ESTABLISHMENT	Mar. 16. 2018
TYPE NAME	ECQUAAF***TA ECQUAAF***SA
NAME	Safety Standard approval Metallized Capacitor
DRAWING NAME	PRODUCT DRAWING
DRAWING No.	H003B-J-E (1/2)

Toyama·Matsue Plant
Device Solutions Business Division
Panasonic Corporation

THIRD ANGLE PROJECTION

STYLE	(a) SIDE	(b) or (c) SIDE
1		
2	/	



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

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

Europe IEC60384-14
EN60384-14

CLASS X2

(Note) Only $\pm 10\%$ 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	: $\pm 10\%$ (K), $\pm 20\%$ (M)	at 1kHz
Rated voltage	: 275VAC	
Withstand voltage (terminal-terminal)	: 633VAC or 1183VDC	} for 60s
(terminal-enclosure)	: 2050VAC	
Insulation resistance	: $\geq 15000\Omega$ ($C \leq 0.33\mu F$)	} at 100VDC for 60s, 20°C
	: $\geq 5000\Omega \cdot \mu F$ ($C > 0.33\mu F$)	
Dissipation factor	: $\leq 0.1\%$ ($C \leq 1.0\mu F$)	} at 1kHz, 20°C
	: $\leq 0.2\%$ ($C > 1.0\mu F$)	
Category temperature range	: From -40°C to +110°C	

Reference

TYPE NAME	ECQUAAF***TA ECQUAAF***SA
DRAWING No.	H003B-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	"	"	"	"

QD=±10% (K)
RD=±20% (M)

ALTERATION		
ISSUE	DESCRIPTION	DATE
SPECIFICATIONS No.		

ITEM CODE NUMBER STRUCTURE

ECQUA AF 335 RD (275VAC, 3.3 μ F, ±20%)

ECQUA: Type designation
 AF: Rated voltage (AF...275VAC)
 335: Capacitance (*)
 RD: Capacitance tolerance (QD=±10% (K), RD=±20% (M))
 Short leads

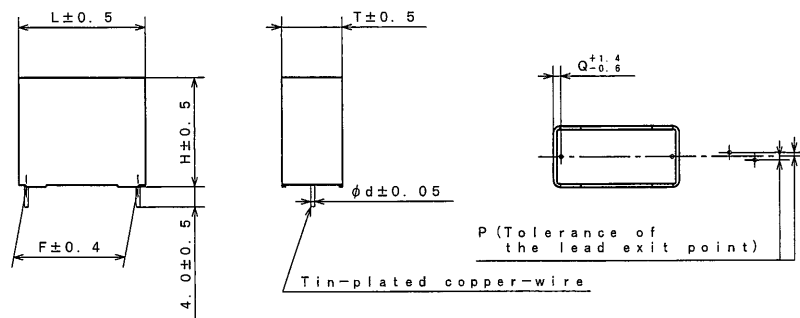
PACKING QUANTITY

Capacitance range (μ F)	Quantity (pcs.)
3.3	120
4.7	95

QUANTITY of MINIMUM ORDER

Capacitance range (μ F)	Quantity (pcs.)
3.3	120
4.7	95

For Automotive



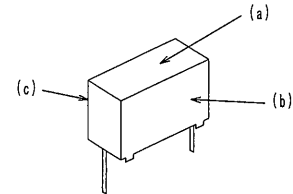
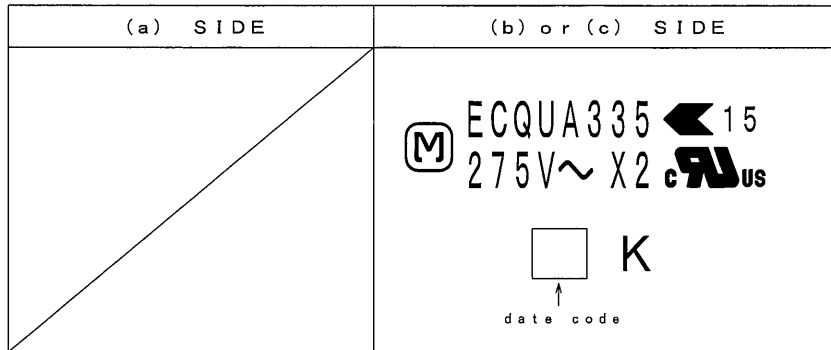
·F: Regulation of the root

Reference

DESIGN	<i>K. Oshiki</i>
CHECKED	<i>K. Oshiki</i>
APPROVAL	<i>K. Takemoto</i>
ESTABLISHMENT	Mar. 25, 2019
TYPE NAME	ECQUAAF***QD ECQUAAF***RD
NAME Safety Standard approval	Metallized Capacitor
DRAWING NAME	PRODUCT DRAWING
DRAWING No.	J012B-J-E (1/2)

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation

THIRD ANGLE PROJECTION



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

Note When applying for the agency, designate the capacitor in the following form, "ECQUA, 3.3μF"
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	: ±10% (K), ±20% (M)	at 1kHz
Rated voltage	: 275VAC	
Withstand voltage (terminal-terminal)	: 633VAC or 1183VDC	} for 60s
(terminal-enclosure)	: 2050VAC	
Insulation resistance	: ≥5000MΩ·μF	at 100VDC for 60s, 20°C
Dissipation factor	: ≤0.2%	at 1kHz, 20°C
Category temperature range	: From -40°C to +110°C	

For Automotive

Reference

TYPE NAME
ECQUAAF***QD ECQUAAF***RD
DRAWING No.
J012B-J-E (2/2)

Toyama-Matsue Plant
 Device Solutions Business Division
 Panasonic Corporation