

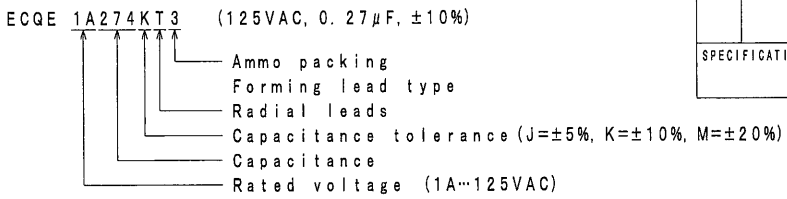
THIRD ANGLE PROJECTION

ITEM CODE	RATED VOLTAGE	CAP. (μ F)	DIMENSIONS				
			*L	*T	*H	*d	*H ₁
ECQE1A274 () T3	125VAC	0.27	19.0	6.3	12.0	0.6	33.5
" 1A334 () T3	"	0.33	"	6.9	12.5	"	34.0
" 1A394 () T3	"	0.39	"	7.4	13.0	"	34.5
" 1A474 () T3	"	0.47	"	7.5	15.3	"	36.8

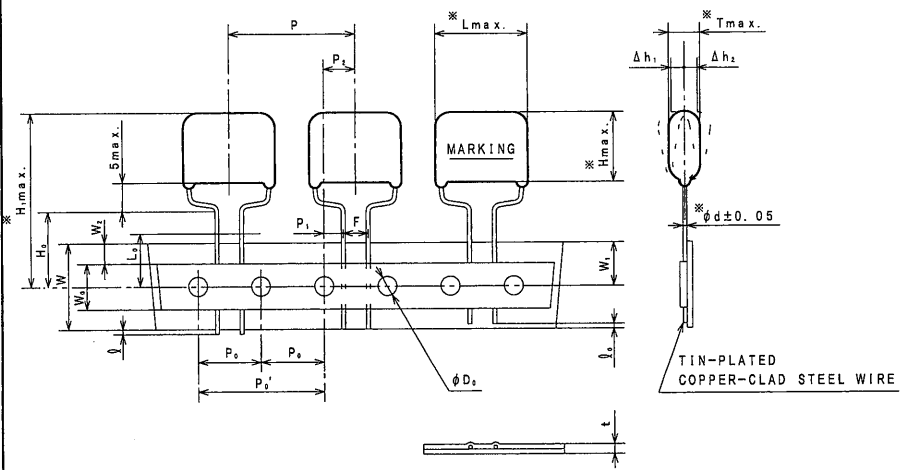
TOL. SYMBOL (J or K or M)

ALTERATION		
ISSUE	DESCRIPTION	DATE
△	Change: category temperature range (-40°C~+85°C--40°C~+105°C)	Dec. 21 2010
△	Company name changed	Apr. 1 2012
△	Company name changed	Apr. 1 2013
△	Company name changed	Apr. 1 2015

ITEM CODE NUMBER STRUCTURE



SPECIFICATIONS No.



SYMBOL	ITEM	DIMENSION	REMARKS
P	Pitch of component	25.4 \pm 1.0	Tilt of component and curvature of leads shall be included.
P ₁	Feed hole pitch	25.4 \pm 0.2	
P ₂	"	12.7 \pm 0.2	
P ₁	Feed hole center to lead	3.85 \pm 0.5	
P ₂	Hole center to comp. center	6.35 \pm 1.3	Tilt of component due to curvature of leads shall be included.
F	Lead-to-lead distance	5.0 \pm 0.2	
Δ h _{1,2}	Component alignment	0~2.0	Tilt of component due to curvature of leads shall be included.
W	Paper backing width	18.0 \pm 0.5	
W _a	Adhesive tape width	12.5min.	The hold down tape shall not protrude beyond the carrier tape.
W ₁	Hole position	9.0 \pm 0.5	
W ₂	Hold-down tape position	0~3.0	
H ₂	Lead-wire clinch height	16.0 \pm 0.5	
g	Lead-wire protrusion	0max.	
g ₂	Lead-wire depression	7.0max.	
ϕ D ₂	Feed hole diameter	4.0 \pm 0.2	
t	Total tape thickness	0.7 \pm 0.2	Total thickness including the hold down tape.
L	Length of snipped lead	11.0max.	

CONSTRUCTION

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

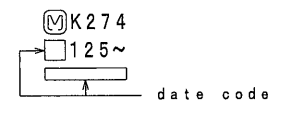
MARKING

Marking comprises capacitance, capacitance tolerance, rated voltage and date code.

PROPERTIES

Capacitance : See table at 1kHz
 Capacitance tolerance : \pm 5% (J), \pm 10% (K), \pm 20% (M) at 1kHz
 Rated voltage : 125VAC
 Withstand voltage (terminal-terminal) : 125VAC \times 230% for 60s
 (terminal-enclosure) : 150VAC for 60s
 Insulation resistance : \geq 2000M Ω at 500VDC, 20°C for 60s
 Dissipation factor : \leq 1.0% at 1kHz, 20°C
 Category temperature range : Δ From -40°C to +105°C
 (including temperature rise on unit surface)

MARKING EXAMPLE

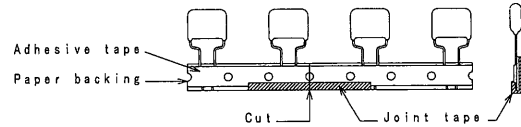


Reference

DESIGN	M. Anabada	
CHECKED	R. Osaki	
APPROVAL	Y. Takata	
ESTABLISHMENT	Oct. 4. 2010	
TYPE NAME	ECQE1A*** () T3	
NAME	Metallized Polyester Film Capacitor	
DRAWING NAME	PRODUCT DRAWING	
DRAWING No.	0040M-J-E (1/2)	

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation

- Note 1. No more than 2 consecutive missing is permitted.
 Note 2. A tape conjunction and a tape discrepancy specify as follows.

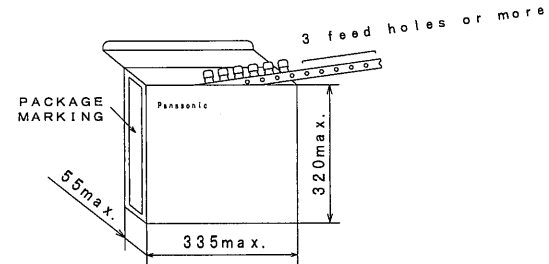


A tape sliding shall not exceed in an allowance of "P_s" dimension.
 A joint tape put on the back side of paper backing, and turn up the lower part to the front.

- Note 3. A tape trailer having at least 3 feed holes is required at the end of the tape.
 Note 4. Marking on components may not be the same side.
 Note 5. The tape adhesion is more than 3.92N (400gf) / 25mm.

Packing specification

1. Case size
Ammo pack



2. Packing quantity

Capacitance range	Packing quantity
0.27 μ F	600
0.33~0.47 μ F	500

3. Handling notes

- 1) One package must be packed one product only.
- 2) The storage must be stacked 5 boxes or less (surface printed placing upward).
 (For prevention from displacement of capacitors and damage of lead crimping.)
- 3) The packing box must be handled with care and never thrown out.

Reference

TYPE NAME	ECQE1A*** () T3
DRAWING No.	0040M-J-E (2/2)

Toyama-Matsue Plant
 Device Solutions Business Division
 Panasonic Corporation

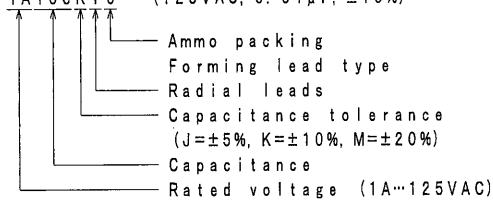
THIRD ANGLE PROJECTION

ITEM CODE	RATED VOLTAGE	CAP. (μ F)	DIMENSIONS			
			\times L	\times T	\times H	\times d
ECQE1A103 () T6	125VAC	0.01	11.0	4.5	7.5	0.6
" 1A123 () T6	"	0.012	"	4.4	"	"
" 1A153 () T6	"	0.015	"	"	"	"
" 1A183 () T6	"	0.018	"	"	"	"
" 1A223 () T6	"	0.022	"	"	"	"
" 1A273 () T6	"	0.027	"	"	"	"
" 1A333 () T6	"	0.033	"	4.5	7.8	"
" 1A393 () T6	"	0.039	"	"	"	"
" 1A473 () T6	"	0.047	"	5.5	8.0	"
" 1A563 () T6	"	0.056	"	5.9	8.5	"
" 1A683 () T6	"	0.068	"	6.3	9.4	"
" 1A823 () T6	"	0.082	"	6.5	9.8	"
" 1A104 () T6	"	0.1	"	"	11.8	"

TOL. SYMBOL (J or K or M)

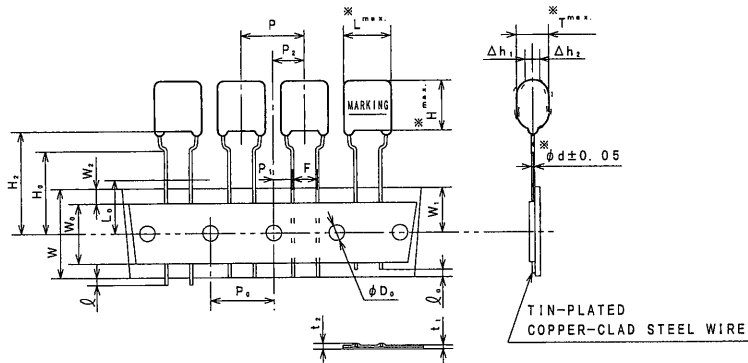
ITEM CODE NUMBER STRUCTURE

ECQE 1A103KT6 (125VAC, 0.01 μ F, \pm 10%)



ALTERATION		
ISSUE	DESCRIPTION	DATE
①	Company name changed	Oct. 1 2004
②	Company name changed	Apr. 1 2005
③	Company name changed	Apr. 1 2006
④	Company name changed	Apr. 1 2008
⑤	Change: category temperature range (-40 $^{\circ}$ C~+85 $^{\circ}$ C~+105 $^{\circ}$ C)	Dec. 21 2010
⑥	Company name changed	Apr. 1 2012
⑦	Company name changed	Apr. 1 2013
⑧	Company name changed	Apr. 1 2015

SPECIFICATIONS No.



SYMBOL	ITEM	DIMENSION	REMARKS
P	Pitch of component	12.7 \pm 1.0	Tilt of component and curvature of leads shall be included.
P ₁	Feed hole pitch	12.7 \pm 0.2	
P ₂	Feed hole center to lead	3.85 \pm 0.5	
F	Lead-to-lead distance	5.0 \pm 0.5	
H _{1,2}	Component alignment	0~2.0	Tilt of component due to curvature of leads shall be included.
W	Paper backing width	18.0 \pm 0.5	
W ₂	Adhesive tape width	9.5min.	The hold down tape shall not protrude beyond the carrier tape.
W ₁	Hole position	9.0 \pm 0.5	
W ₂	Hold-down tape position	0~3.0	
H ₁	Component height	22.0 \pm 0.75	
H ₂	Lead-wire clinch height	16.0 \pm 0.5	
f	Lead-wire protrusion	0max.	
g	Lead-wire depression	7.0max.	
phi D ₀	Feed hole diameter	4.0 \pm 0.2	
t ₁	Total tape thickness	0.7 \pm 0.2	Total thickness including the hold down tape.
t ₂	Total thickness	1.5max.	
L ₃	Length of snipped lead	11.0max.	

CONSTRUCTION

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

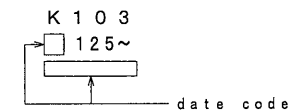
MARKING

Marking comprises capacitance, capacitance tolerance, rated voltage and date code.

PROPERTIES

Capacitance : See table at 1kHz
 Capacitance tolerance : \pm 5% (J), \pm 10% (K), \pm 20% (M) at 1kHz
 Rated voltage : 125VAC
 Withstand voltage (terminal-terminal) : 125VAC \times 230% for 60s
 (terminal-enclosure) : 1500VAC for 60s
 Insulation resistance : \geq 2000M Ω at 500VDC, 20 $^{\circ}$ C for 60s
 Dissipation factor : \leq 1.0% at 1kHz, 20 $^{\circ}$ C
 Category temperature range : Δ From -40 $^{\circ}$ C to +105 $^{\circ}$ C
 (including temperature rise on unit surface)

MARKING EXAMPLE



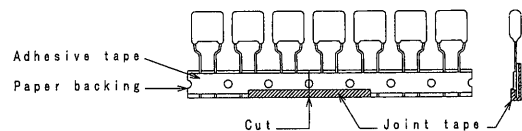
DO NOT SCALE DRAWING REVISIONS INDICATED BY Δ ALL DIMENSIONS ARE IN MILLIMETERS

Reference

DESIGN	<i>M. Yoshida</i>
CHECKED	<i>K. Otsuki</i>
APPROVAL	<i>Y. Takata</i>
ESTABLISHMENT	Sep. 13, 2002
TYPE NAME	ECQE1A*** () T6
NAME	Metallized Polyester Film Capacitor
DRAWING NAME	PRODUCT DRAWING
DRAWING No.	2126M-J-E (1/2)

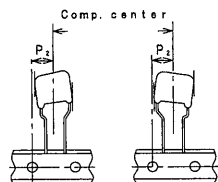
Toyama-Matsue Plant
 Device Solutions Business Division
 Panasonic Corporation

- Note 1. No more than 3 consecutive missing is permitted.
 Note 2. A tape conjunction and a tape discrepancy specify as follows.



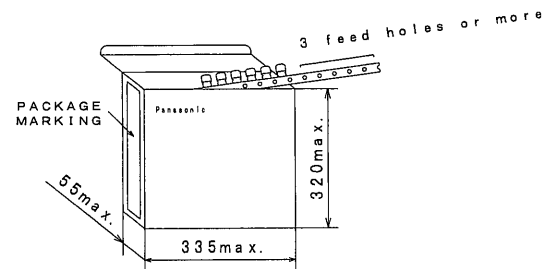
A tape sliding shall not exceed in an allowance of "P₂" dimension.
 A joint tape put on the back side of paper backing, and turn up the lower part to the front.

- Note 3. Marking on components may not be the same side.
 Note 4. The tape adhesion is more than 3.92N (400gf) / 25mm.
 Note 5. A tape trailer having at least 3 feed holes is required at the end of the tape.
 Note 6. 1) The P₁ and P₂ dimension shall be measured as shown in the figure after the adhesive tape placing upward.
 (measuring from the center of sprocket hole to the right.)
 2) The P₂ dimension shall be measured between center of a vertical projection plane for tape plane and center of sprocket hole.



Packing specification

1. Case size
Ammo pack



2. Packing quantity

Capacitance range	Packing quantity
0.01~0.047μF	1500
0.056~0.1μF	1000

3. Handling notes

- 1) One package must be packed one product only.
- 2) The storage must be stacked 5 boxes or less (surface printed placing upward).
 (For prevention from displacement of capacitors and damage of lead crimping.)
- 3) The packing box must be handled with care and never thrown out.

Reference

TYPE NAME	ECQE1A*** () T6
DRAWING No.	2126M-J-E (2/2)

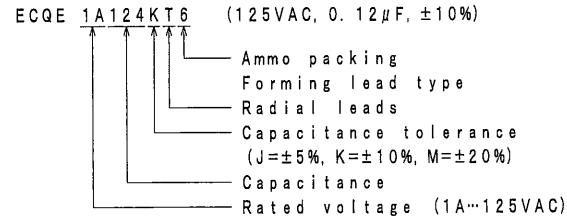
Toyama-Matsue Plant
 Device Solutions Business Division
 Panasonic Corporation

THIRD ANGLE PROJECTION

ITEM CODE	RATED VOLTAGE	CAP. (μ F)	DIMENSIONS			
			*L	*T	*H	*d
ECQE1A124 () T6	125VAC	0.12	13.0	5.9	11.5	0.6
" 1A154 () T6	"	0.15	"	6.5	12.0	"
" 1A184 () T6	"	0.18	"	7.0	12.5	"
" 1A224 () T6	"	0.22	"	7.5	13.4	"

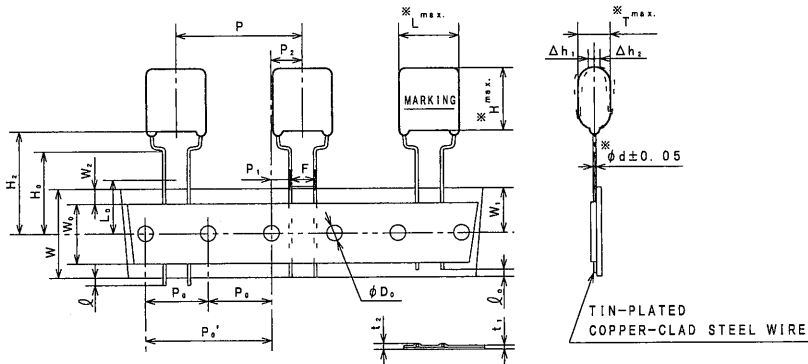
*TOL. SYMBOL (J or K or M)

ITEM CODE NUMBER STRUCTURE



ALTERATION		
ISSUE	DESCRIPTION	DATE
①	Company name changed	Oct. 1 2004
②	Company name changed	Apr. 1 2005
③	Company name changed	Apr. 1 2006
④	Company name changed	Apr. 1 2008
⑤	Change: category temperature range (-40°C~+85°C--40°C~+105°C)	Dec. 21 2010
⑥	Company name changed	Apr. 1 2012
⑦	Company name changed	Apr. 1 2013
⑧	Company name changed	Apr. 1 2015

SPECIFICATIONS No.



SYMBOL	ITEM	DIMENSION	REMARKS
P	Pitch of component	25.4 \pm 1.0	Tilt of component and curvature of leads shall be included.
P ₁	Feed hole pitch	25.4 \pm 0.2	
P ₂	"	12.7 \pm 0.2	
P ₁	Feed hole center to lead	3.85 \pm 0.5	
P ₂	Hole center to comp. center	6.35 \pm 1.3	Tilt of component due to curvature of leads shall be included.
F	Lead-to-lead distance	5.0 \pm 0.2	
$\Delta h_{1,2}$	Component alignment	0~2.0	Tilt of component due to curvature of leads shall be included.
W	Paper backing width	18.0 \pm 0.5	
W ₁	Adhesive tape width	12.5min.	The hold down tape shall not protrude beyond the carrier tape.
W ₁	Hole position	9.0 \pm 0.5	
W ₂	Hold-down tape position	0~3.0	
H ₁	Component height	22.0 \pm 0.75	
H ₂	Lead-wire clinch height	16.0 \pm 0.5	
l	Lead-wire protrusion	0max.	
l ₁	Lead-wire depression	7.0max.	
ϕD_2	Feed hole diameter	4.0 \pm 0.2	
t ₁	Total tape thickness	0.7 \pm 0.2	Total thickness including the hold down tape.
t ₂	Total thickness	1.5max.	
L ₂	Length of snapped lead	11.0max.	

CONSTRUCTION

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

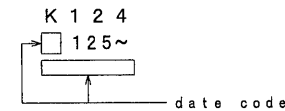
MARKING

Marking comprises capacitance, capacitance tolerance, rated voltage and date code.

PROPERTIES

Capacitance : See table at 1kHz
 Capacitance tolerance : \pm 5% (J), \pm 10% (K), \pm 20% (M) at 1kHz
 Rated voltage : 125VAC
 Withstand voltage (terminal-terminal) : 125VAC \times 230% for 60s
 (terminal-enclosure) : 1500VAC for 60s
 Insulation resistance : \geq 2000M Ω at 500VDC, 20°C for 60s
 Dissipation factor : \leq 1.0% at 1kHz, 20°C
 Category temperature range : Δ From -40°C to +105°C (including temperature rise on unit surface)

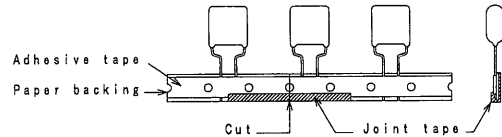
MARKING EXAMPLE



DESIGN	<i>M. Thekka</i>
CHECKED	<i>R. Bando</i>
APPROVAL	<i>Y. Takata</i>
ESTABLISHMENT	Sep. 13, 2002
TYPE NAME	ECQE1A*** () T6
NAME	Metallized Polyester Film Capacitor
DRAWING NAME	PRODUCT DRAWING
DRAWING No.	2127M-J-E (1/2)

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation

- Note 1. No more than 2 consecutive missing is permitted.
 Note 2. A tape conjunction and a tape discrepancy specify as follows.

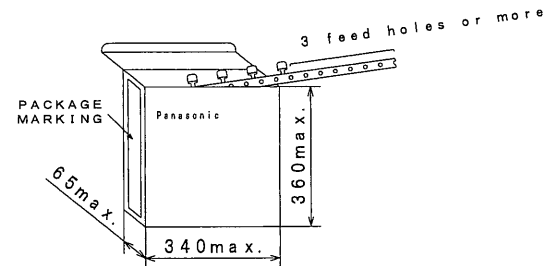


A tape sliding shall not exceed in an allowance of "P₀" dimension.
 A joint tape put on the back side of paper backing, and turn up the lower part to the front.

- Note 3. Marking on components may not be the same side.
 Note 4. The tape adhesion is more than 3.92N (400gf) / 25mm.
 Note 5. A tape trailer having at least 3 feed holes is required at the end of the tape.

Packing specification

1. Case size
Ammo pack



2. Packing quantity

Capacitance range	Packing quantity
0.12~0.15 μ F	600
0.18~0.22 μ F	500

3. Handling notes

- 1) One package must be packed one product only.
- 2) The storage must be stacked 5 boxes or less (surface printed placing upward). (For prevention from displacement of capacitors and damage of lead crimping.)
- 3) The packing box must be handled with care and never thrown out.

Reference

TYPE NAME	ECQE1A*** () T6
DRAWING No.	2127M-J-E (2/2)

Toyama-Matsue Plant
 Device Solutions Business Division
 Panasonic Corporation

THIRD ANGLE PROJECTION

ITEM CODE	RATED VOLTAGE	CAP. (μ F)	DIMENSIONS				
			*L	*T	*H	*d	*H ₁
ECQE1A274R () T	125VAC	0.27	19.0	6.3	12.0	0.6	34.0
" 1A334R () T	"	0.33	"	6.9	12.5	"	34.5
" 1A394R () T	"	0.39	"	7.4	13.0	"	35.0
" 1A474R () T	"	0.47	"	7.5	15.3	"	37.3

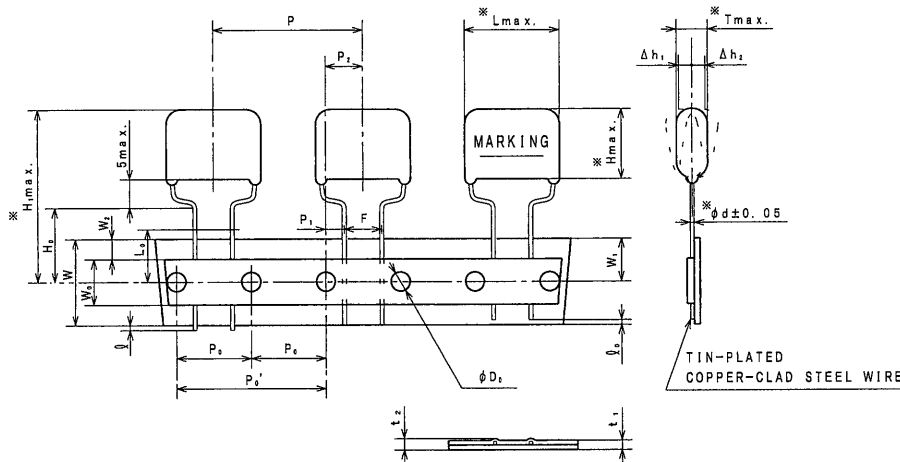
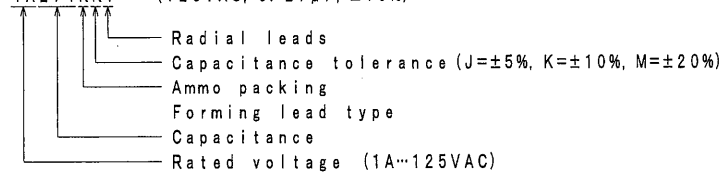
TOL. SYMBOL (J or K or M)

ALTERATION		
ISSUE	DESCRIPTION	DATE
△	Change: category temperature range (-40°C~+85°C~-40°C~+105°C)	Dec. 21 2010
△	Company name changed	Apr. 1 2012
△	Company name changed	Apr. 1 2013
△	Company name changed	Apr. 1 2015

SPECIFICATIONS No.

ITEM CODE NUMBER STRUCTURE

ECQE 1A274RKT (125VAC, 0.27 μ F, \pm 10%)



SYMBOL	ITEM	DIMENSION	REMARKS
P	Pitch of component	30.0 \pm 1.0	Tilt of component and curvature of leads shall be included.
P ₁	Feed hole pitch	30.0 \pm 0.2	
P ₂	"	18.0 \pm 0.2	
P ₁	Feed hole center to lead	3.75 \pm 0.5	
P ₂	Hole center to comp. center	7.6 \pm 1.3	Tilt of component due to curvature of leads shall be included.
F	Lead-to-lead distance	7.6 \pm 0.8	
Δ h _{1,2}	Component alignment	0~2.0	Tilt of component due to curvature of leads shall be included.
W	Paper backing width	18.0 \pm 0.5	
W ₂	Adhesive tape width	12.5min.	The hold down tape shall not protrude beyond the carrier tape.
W ₁	Hole position	9.0 \pm 0.5	
W ₂	Hold-down tape position	0~3.0	
H ₂	Lead-wire clinch height	16.0 \pm 0.5	
l	Lead-wire protrusion	0max.	
l ₂	Lead-wire depression	7.0max.	
ϕ D ₀	Feed hole diameter	4.0 \pm 0.2	
t ₁	Total tape thickness	0.7 \pm 0.2	Total thickness including the hold down tape.
t ₂	Total thickness	1.5max.	
L ₂	Length of snapped lead	11.0max.	

CONSTRUCTION

The capacitor is of non-inductive construction, wound with metallized polyester film dielectric.

The capacitor is enclosed in non-combustible epoxy resin and has two leads.

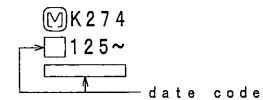
MARKING

Marking comprises capacitance, capacitance tolerance, rated voltage, manufacturer's trademark and date code.

PROPERTIES

- Capacitance : See table at 1kHz
- Capacitance tolerance : \pm 5% (J), \pm 10% (K), \pm 20% (M) at 1kHz
- Rated voltage : 125VAC
- Withstand voltage (terminal-terminal) : 125VAC \times 230% for 60s
- (terminal-enclosure) : 1500VAC for 60s
- Insulation resistance : \geq 2000M Ω at 500VDC, 20°C for 60s
- Dissipation factor : \leq 1.0% at 1kHz, 20°C
- Category temperature range : \triangle From -40°C to +105°C (including temperature rise on unit surface)

MARKING EXAMPLE

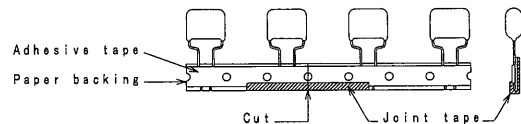


Reference

DESIGN	<i>The. Muroda</i>
CHECKED	<i>Z. Beahi</i>
APPROVAL	<i>Y. Takata</i>
ESTABLISHMENT	Sep. 24, 2008
TYPE NAME	ECQE1A***R () T
NAME	Metallized Polyester Film Capacitor
DRAWING NAME	PRODUCT DRAWING
DRAWING No.	8068M-J-E (1/2)

Toyama-Matsue Plant
Device Solutions Business Division
Panasonic Corporation

- Note 1. No more than 2 consecutive missing is permitted.
 Note 2. A tape conjunction and a tape discrepancy specify as follows.

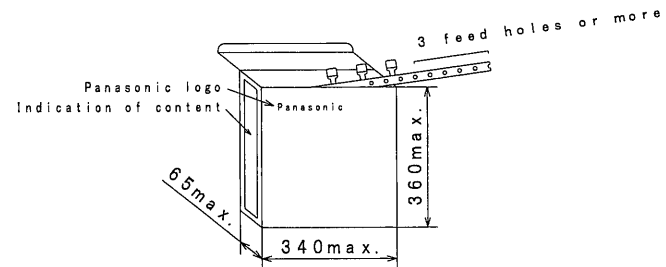


A tape sliding shall not exceed in an allowance of "P₀" dimension.
 A joint tape put on the back side of paper backing, and turn up the lower part to the front.

- Note 3. Marking on components may not be the same side.
 Note 4. The tape adhesion is more than 3.92N (400gf)/25mm.
 Note 5. A tape trailer having at least 3 feed holes is required at the end of the tape.

Packing specification

1. Case size
Ammo pack



2. Packing quantity

Capacitance range	Packing quantity
0.27 μ F	500
0.33~0.47 μ F	400

3. Handling notes

- 1) One package must be packed one product only.
- 2) The storage must be stacked 5 boxes or less (surface printed placing upward).
 (For prevention from displacement of capacitors and damage of lead crimping.)
- 3) The packing box must be handled with care and never thrown out.

Reference

TYPE NAME	ECQE1A***R () T
DRAWING No.	8068M-J-E (2/2)

Toyama·Matsue Plant
 Device Solutions Business Division
 Panasonic Corporation