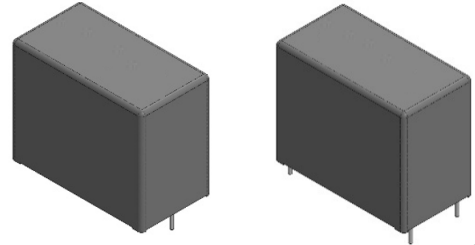


Metallized Polypropylene Film Capacitors (AC filtering)

PCPW 255

CONSTRUCTION

- | | |
|--------------|---|
| • Dielectric | : Metallized Polypropylene film
with segmented pattern |
| • Case | : PBT (UL94 V-0) |
| • Filling | : Epoxy resin (UL94 V-0) |
| • Terminals | : Tinned copper wire (2-pin / 4-pin) |



FEATURE

- | |
|---|
| <ul style="list-style-type: none"> . Supplied loose in box and arrange packing . Small dimensions . For PCB mounting . Potted in a flame retardant case . Consist of a low-inductive wound cell of Metallized(PP) film |
|---|

APPLICATION

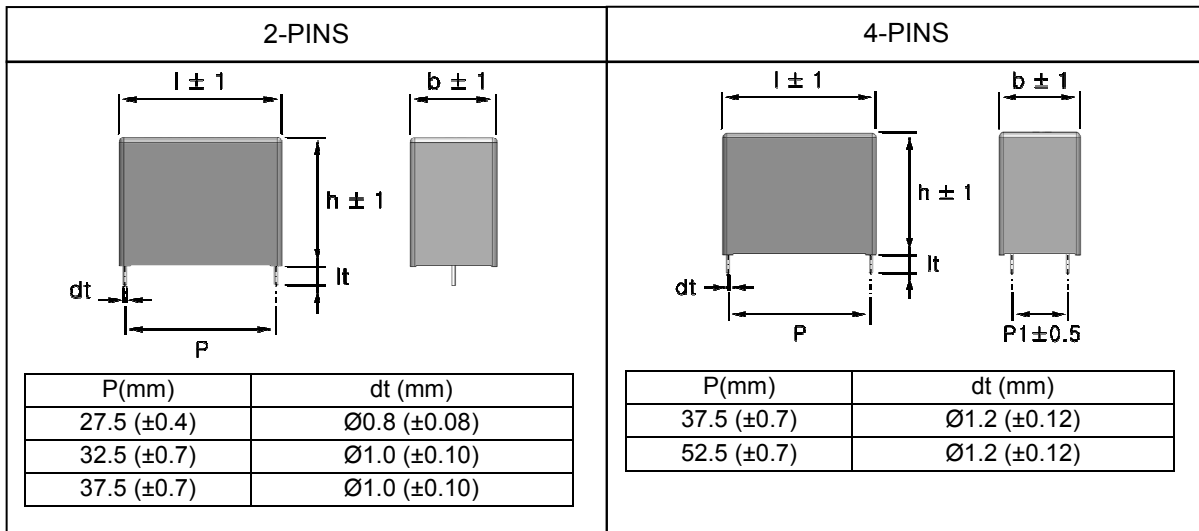
- | |
|---|
| <ul style="list-style-type: none"> . Output AC filtering for power converters UPS, solar inverters, motor drives . Motor applications |
|---|

QUICK REFERENCE DATA

Capacitance range	1 μ F to 55 μ F
Capacitance tolerance	\pm 5%, \pm 10%
Rated voltage (V _{Rac})	250, 310, 350, 400, 450
Climatic category	40/ 85 / 56
Temperature range	-40 ~ +105 ℃
Reference IEC specification	IEC 61071
Safety approvals	UL810, CSA C22.2 No.190 (Construction only / File No. E348397)
Potting & Encapsulation material	Qualified in accordance with UL94V-0

- Please refer to caution and warning at <http://www.pilkor.co.kr/download/Introductions.pdf> before using these products.

ORDERING INFORMATION



1	2	3	4	5	6	7	8	9	10	11	12	13	14
P	2	5	5	Q	3	1	1	5	6	J	A	S	2

Digits 1~4	
Code	Series name
P255	PCPW255

Digits 5	
Code	Pitch
L	27.5 mm
N	32.5 mm
Q	37.5 mm
T	52.5 mm

Digits 6~7	
Code	Voltage
25	250Vac
31	310Vac
35	350Vac
40	400Vac
45	450Vac

Digits 8~10	
Code	Capacitance
105	1uF
106	10uF
107	100uF

Digits 11	
Code	Cap. tolerance
J	5%
K	10%

Digits 12	
Code	Revision
A	Standard
M	Automotive
L	Low profile

Digits 13	
Code	Lead length
L	25.0 \pm 1.0mm
S	5.0 \pm 1.0mm
F	4.0 \pm 0.5mm
8	3.8 \pm 0.3mm
7	3.7 \pm 0.3mm
5	3.5 \pm 0.3mm
4	3.4 \pm 0.3mm
2	3.2 \pm 0.3mm
T	3.0 \pm 0.3mm

Digits 14		
Code	Lead type	Packing
2	2-PIN	Arrange
4	4-PIN	Arrange

ELETRICAL DATA AND ORDERING CODE

 $V_{Rac} = 250Vac$ $V_{Rdc} = 500Vdc$

Cap (μF)	b x h x l (mm)	P1 \pm 0.5 (mm)	dv/dt (V/us)	Ipk (A)	Ordering Code
		4-Pin			
Pitch = 27.5 \pm 0.4 mm					
2.5	11.0 x 21.0 x 31.0	-	25	62	P255L25255KA**
3.6	13.0 x 23.0 x 31.0	-	25	90	P255L25365KA**
5.0	15.0 x 25.0 x 31.0	-	25	125	P255L25505KA**
7.0	18.0 x 28.0 x 31.0	-	25	175	P255L25705KA**
10.0	21.0 x 31.0 x 31.0	-	25	250	P255L25106KA**
Pitch = 37.5 \pm 0.7 mm					
12	18.0 X 33.0 X 42.0	-	15	180	P255Q25126KA**
14	20.0 X 35.0 X 42.0	10.2	15	210	P255Q25146KA**
19	24.0 X 39.0 X 42.0	10.2	15	285	P255Q25196KA**
25	28.0 X 43.0 X 42.0	10.2	15	375	P255Q25256KA**
28	30.0 X 45.0 X 42.0	20.3	15	420	P255Q25286KA**
Pitch = 52.5 \pm 0.7 mm					
40	30.0 X 45.0 X 57.0	20.3	10	400	P255T25406KA**
55	35.0 X 50.0 X 57.0	20.3	10	550	P255T25556KA**

 $V_{Rac} = 310Vac$ $V_{Rdc} = 550Vdc$

Cap (μF)	b x h x l (mm)	P1 \pm 0.5 (mm)	dv/dt (V/us)	Ipk (A)	Ordering Code
		4-Pin			
Pitch = 27.5 \pm 0.4 mm					
2.0	11.0 x 21.0 x 31.0	-	30	60	P255L31205KA**
2.8	13.0 x 23.0 x 31.0	-	30	84	P255L31285KA**
3.5	15.0 x 25.0 x 31.0	-	30	105	P255L31355KA**
5.0	18.0 x 28.0 x 31.0	-	30	150	P255L31505KA**
7.5	21.0 x 31.0 x 31.0	-	30	225	P255L31755KA**
Pitch = 37.5 \pm 0.7 mm					
9	18.0 X 33.0 X 42.0	-	20	180	P255Q31905KA**
11	20.0 X 35.0 X 42.0	10.2	20	220	P255Q31116KA**
15	24.0 X 39.0 X 42.0	10.2	20	300	P255Q31156KA**
20	28.0 X 43.0 X 42.0	10.2	20	400	P255Q31206KA**
22	30.0 X 45.0 X 42.0	20.3	20	440	P255Q31226KA**
Pitch = 52.5 \pm 0.7 mm					
30	30.0 X 45.0 X 57.0	20.3	14	420	P255T31306KA**
45	35.0 X 50.0 X 57.0	20.3	14	630	P255T31456KA**

Metallized Polypropylene Film Capacitors (AC filtering)

 $V_{Rac} = 350Vac$ $V_{Rdc} = 630Vdc$

Cap (μF)	b x h x l (mm)	P1 \pm 0.5 (mm)	dv/dt (V/us)	Ipk (A)	Ordering Code
		4-Pin			
Pitch = 27.5 \pm 0.4 mm					
1.5	11.0 x 19.0 x 31.0	-	35	52	P255L35155KA**
2.2	13.0 x 23.0 x 31.0	-	35	77	P255L35225KA**
3.0	15.0 x 25.0 x 31.0	-	35	105	P255L35305KA**
4.0	18.0 x 28.0 x 31.0	-	35	140	P255L35405KA**
5.0	19.0 x 30.0 x 31.0	-	35	175	P255L35505KA**
6.0	21.0 x 31.0 x 31.0	-	35	210	P255L35605KA**
Pitch = 37.5 \pm 0.7 mm					
8.0	18.0 X 33.0 X 42.0	-	25	200	P255Q35805KA**
9.5	20.0 X 35.0 X 42.0	10.2	25	237	P255Q35955KA**
13	24.0 X 39.0 X 42.0	10.2	25	325	P255Q35136KA**
17	28.0 X 43.0 X 42.0	10.2	25	425	P255Q35176KA**
20	30.0 X 45.0 X 42.0	20.3	25	500	P255Q35206KA**
Pitch = 52.5 \pm 0.7 mm					
24	30.0 X 45.0 X 57.0	20.3	15	360	P255T35246KA**
35	35.0 X 50.0 X 57.0	20.3	15	525	P255T35356KA**

 $V_{Rac} = 400Vac$ $V_{Rdc} = 700Vdc$

Cap (μF)	b x h x l (mm)	P1 \pm 0.5 (mm)	dv/dt (V/us)	Ipk (A)	Ordering Code
		4-Pin			
Pitch = 27.5 \pm 0.4 mm					
1.0	11.0 x 19.0 x 31.0	-	45	45	P255L40105KA**
1.5	13.0 x 23.0 x 31.0	-	45	67	P255L40155KA**
2.0	15.0 x 25.0 x 31.0	-	45	90	P255L40205KA**
2.8	18.0 x 28.0 x 31.0	-	45	126	P255L40285KA**
4.0	21.0 x 31.0 x 31.0	-	45	180	P255L40405KA**
Pitch = 32.5 \pm 0.7 mm					
1.2	16.0 x 26.0 x 37.0	-	35	42	P255N40125KA**
1.5	16.0 x 26.0 x 37.0	-	35	52	P255N40155KA**
2.0	18.0 x 30.0 x 37.0	-	35	70	P255N40205KA**
2.5	20.0 x 34.0 x 37.0	-	35	87	P255N40255KA**
Pitch = 37.5 \pm 0.7 mm					
5.0	18.0 X 33.0 X 42.0	-	30	150	P255Q40505KA**
6.0	20.0 X 35.0 X 42.0	10.2	30	180	P255Q40605KA**
8.5	24.0 X 39.0 X 42.0	10.2	30	255	P255Q40855KA**
10	28.0 X 43.0 X 42.0	10.2	30	300	P255Q40106KA**
11	28.0 X 43.0 X 42.0	10.2	30	330	P255Q40116KA**
13	30.0 X 45.0 X 42.0	20.3	30	390	P255Q40136KA**
Pitch = 52.5 \pm 0.7 mm					
18	30.0 X 45.0 X 57.0	20.3	20	360	P255T40186KA**
25	35.0 X 50.0 X 57.0	20.3	20	500	P255T40256KA**

Metallized Polypropylene Film Capacitors (AC filtering)

 $V_{Rac} = 450Vac$ $V_{Rdc} = 900Vdc$

Cap (μF)	b x h x l (mm)	P1 \pm 0.5 (mm)	dv/dt (V/us)	Ipk (A)	Ordering Code
		4-Pin			
Pitch = 32.5 \pm 0.7 mm					
1.2	16.0 x 26.0 x 37.0	-	35	42	P255N45125KA**
1.5	16.0 x 26.0 x 37.0	-	35	52	P255N45155KA**
2.0	18.0 x 30.0 x 37.0	-	35	70	P255N45205KA**
2.5	20.0 x 34.0 x 37.0	-	35	87	P255N45255KA**
Pitch = 37.5 \pm 0.7 mm					
4.0	24.0 X 39.0 X 42.0	10.2	35	140	P255Q45405KA**
5.0	28.0 X 43.0 X 42.0	10.2	35	175	P255Q45505KA**
6.0	30.0 X 45.0 X 42.0	10.2	35	210	P255Q45605KA**

MOUNTING

NORMAL USE

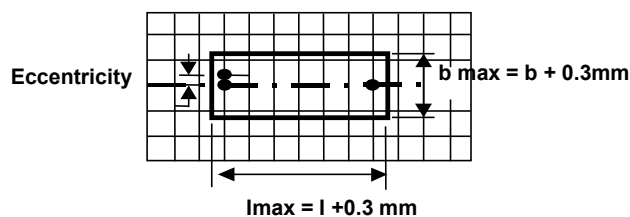
The capacitors are designed for mounting on printed-circuit boards. The capacitors packed in bandoliers are designed for mounting on printed-circuit boards by means of automatic insertion machines.

SPECIFIC METHOD OF MOUNTING TO WITHSTAND VIBRATION AND SHOCK

- . For pitches of 15 mm the capacitors shall be mechanically fixed by the leads
- . For larger pitches the capacitors shall be mounted in the same way and the body clamped.

SPACE REQUIREMENTS ON PRINTED-CIRCUIT BOARD

The maximum length and width of film capacitors are shown in the following drawing ;



- Eccentricity as in drawing.

The maximum eccentricity is smaller than or equal to the lead diameter of the product concerned.

- Product height with seating plane as given by IEC 60717 as reference : $h_{max} \leq h + 0.3 \text{ mm}$

STORAGE TEMPERATURE

- . Storage temperature : $T_{stg} = -25 \text{ to } +40 \text{ }^\circ\text{C}$ with RH maximum 80% without condensation.

RATINGS AND CHARACTERISTICS

Unless otherwise specified all electrical values apply at an ambient temperature of $23 \pm 1^\circ\text{C}$, an atmospheric pressure of 86 to 106 kPa and a relative humidity of $50 \pm 2\%$.

For reference testing a conditioning period shall be applied of 96 ± 4 hours by heating the products in a circulating air oven at the rated temperature and a relative humidity not exceeding 20%.

CHARACTERISTICS

• Test Voltage

- Cut off current 10mA / rise time 100V/sec.
- Test Voltage (between lead and lead) : $1.6 \times V_{Rdc}$, 1min.
- Test Voltage (between leads and case) : $2KV_{ac}$ (50 or 60Hz), 10sec.

• Capacitance

- . Capacitance : Within specified tolerance range when sine wave AC is applied at 1kHz \pm 200Hz and $5V_{rms}$

• Dissipation Factor(DF)

- . Dissipation factor: When sine wave AC is applied at 1kHz and $\leq 1 V_{rms}$

Pitch	Tangent of loss angle ($\times 10^{-4}$)
27.5mm	≤ 10
37.5mm	≤ 13
37.5mm	≤ 15
52.5mm	≤ 20

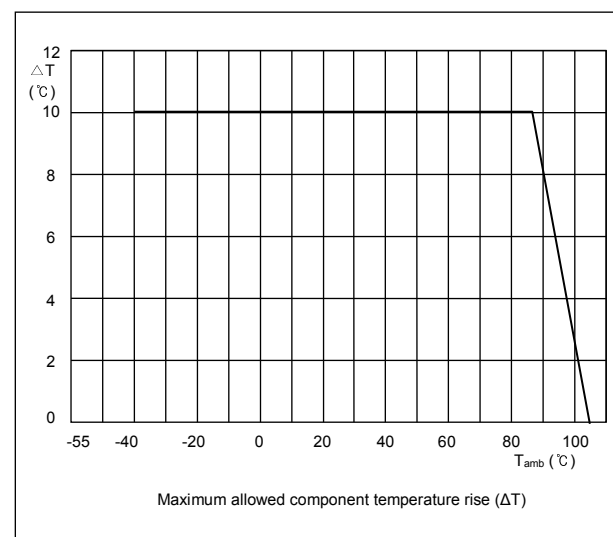
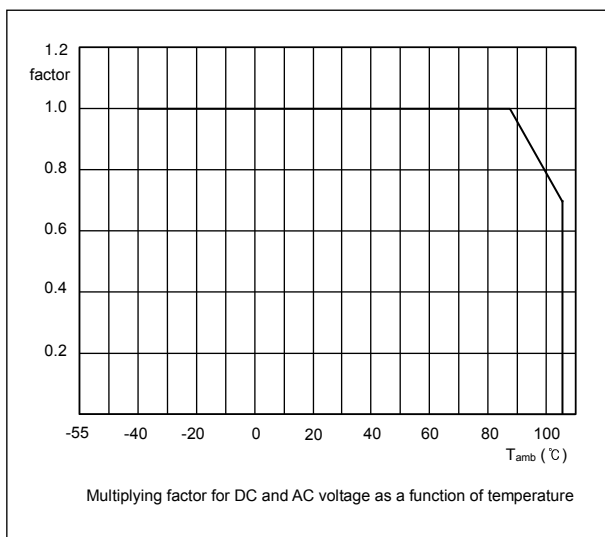
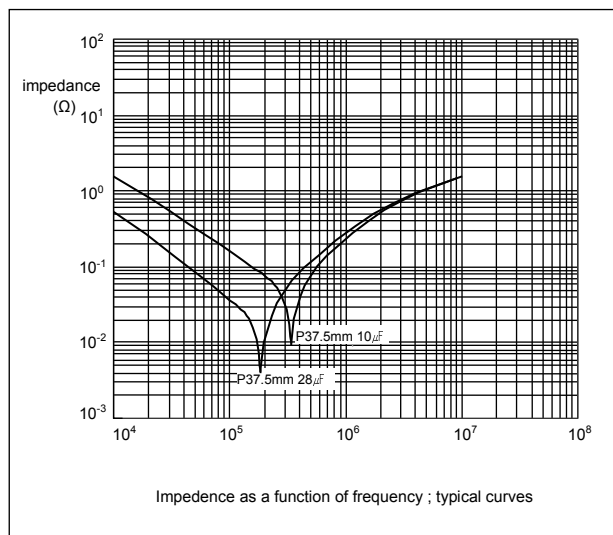
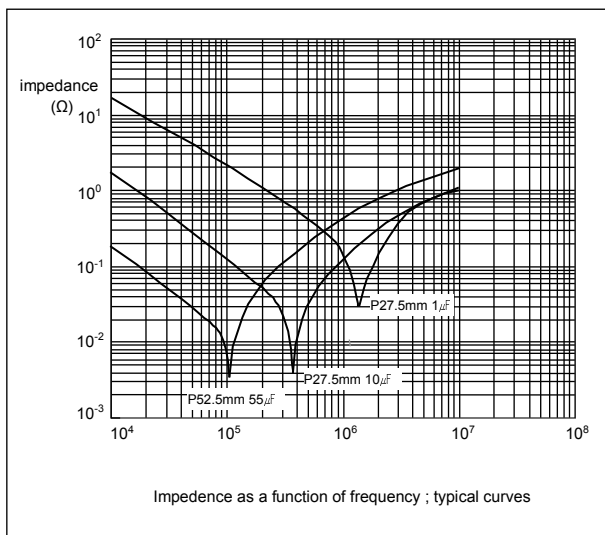
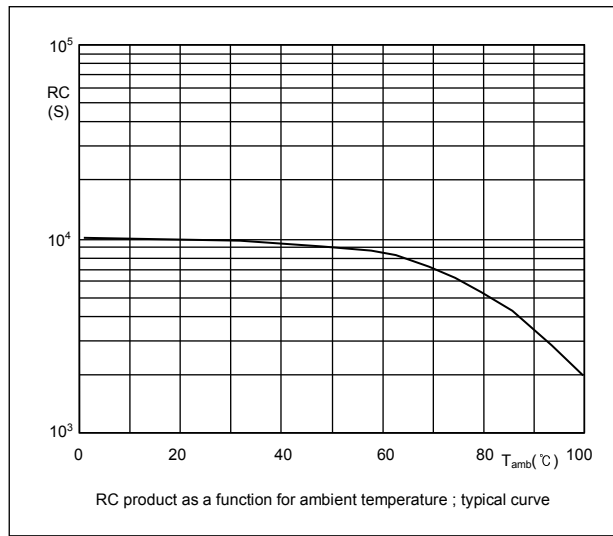
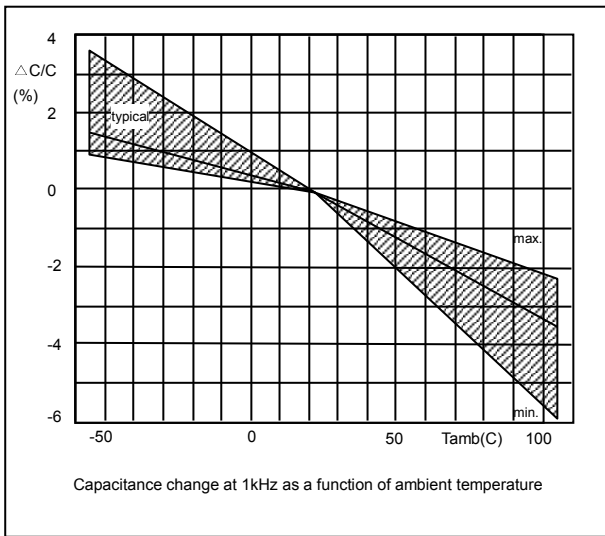
• Insulation Resistance

- . The insulation resistance is measured for 1min. \pm 5sec. at 100V
- . Minimum RC ($\Omega \cdot F$) $> 10,0000s$
(R = insulation resistance between the terminations[Ω] , C= capacitance[Farad])

• Self heating temperature

- . Maximum allowable rise is 10 $^{\circ}C$

THE GRAPHS OF CHARACTERISTICS

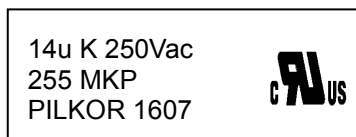


PRODUCT MARKING

Capacitors are marked with the following information :

- . Rated capacitance code in accordance with IEC 60062
- . Tolerance on rated capacitance : J : $\pm 5\%$ K : $\pm 10\%$
- . Rated (AC) Voltage (e.g. 250Vac)
- . Code for dielectric material (MKP)
- . Manufacturer's type designation (PCPW 255 or 255)
- . Manufacturer's name (PILKOR)
- . Year and week of manufacturing (1607)
- . Safety approvals
- . Marking color : White or Black

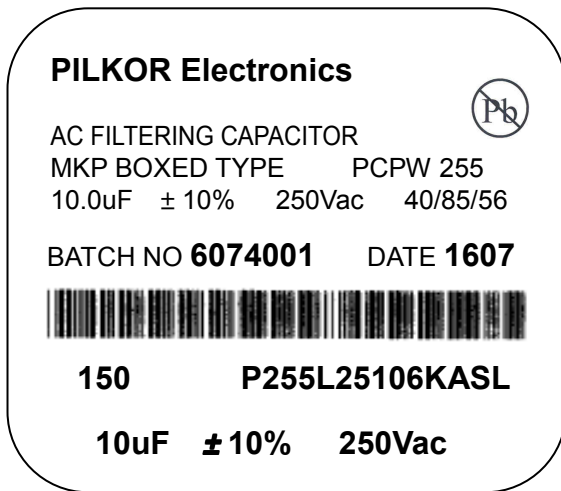
Example of marking



Marking on the top or side

PACKAGE MARKING

The package containing the capacitors is marked as shown.



LINE MARKING EXPLANATION

- 1 Manufacturer's name
- 2 Sub – family
3. Pb free marking(JEDEC-STD-97)
- 4 Type description
- 5 Capacitance value, tolerance,
Voltage and climatic category (IEC)
- 6 Batch no. & production period
year and week code
- 7 Quantity and Product code
- 8 Capacitance, tolerance and voltage

PACKING QUANTITY INFORMATION

SMALLEST PACKING QUANTITIES (SPQ)	Loose in box	Arrange Packing
	It = 5.0 ± 1.0mm	It = 5.0 ± 1.0mm
11.0 x 23.0 x 31.0	500	200
13.0 x 23.0 x 31.0	250	100
15.0 x 25.0 x 31.0	250	120
18.0 x 28.0 x 31.0	200	100
19.0 x 30.0 x 31.0	200	65
21.0 x 31.0 x 31.0	150	60
16.0 x 26.0 x 37.0	-	80
18.0 x 30.0 x 37.0	-	88
18.0 x 33.0 x 42.0	-	100
20.0 x 35.0 x 42.0	-	90
24.0 x 39.0 x 42.0	-	75
28.0 x 43.0 x 42.0	-	65
30.0 x 45.0 x 42.0	-	60
30.0 x 45.0 x 57.0	-	40
35.0 x 50.0 x 57.0	-	40