

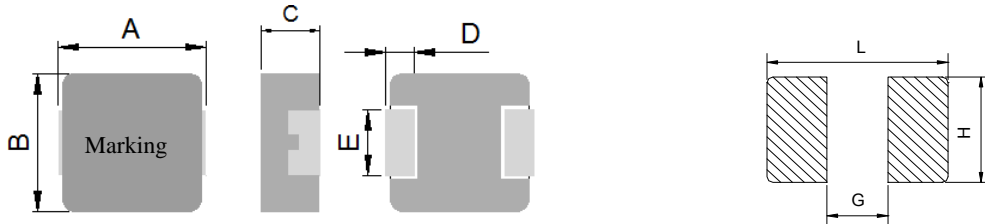
1. Part No. Expression:

PICQ0615HR10YF

(a) (b) (c) (d) (e)(f)

- a) Series Code
- b) Dimension Code
- c) Type Code
- d) Inductance Code
- e) Tolerance Code
- f) RoHS Compliant

2. Configuration & Dimensions:



Recommended PC Board Pattern

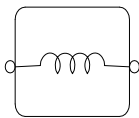
Note:

1. The above PCB layout is for reference only.
2. Solder paste thickness of 0.15mm and above is recommended.
3. Marking : Top row – Inductance code, Bottom row – Year/World week

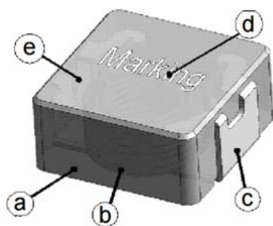
Unit: mm

A	B	C	D	E	L	G	H
7.0±0.3	6.6±0.3	1.3±0.2	1.8±0.3	3.0±0.3	7.7 Ref.	2.5 Ref.	3.5 Ref.

3. Schematic:



4. Material List:



- (a) Core
- (b) Wire
- (c) Terminal
- (d) Ink
- (e) Paint

NOTE: Specifications subject to change without notice. Please check our website for latest information.

5. General Specification:

- (a) Reliability test for this part meets AEC-Q200 standard
- (b) Operating Temp. : -55°C to +125°C(including self-temperature rise)
- (c) Storage Temp. : -55°C to +125°C (on board)
- (d) Humidity Range. : 85 ± 3% RH
- (e) Heat Rated Current (I_{rms}) will cause the coil temperature rise approximately Δt of 40°C
- (f) Saturation Current (I_{sat}) will cause L0 to drop approximately 30%.
- (g) Part Temperature (Ambient+Temp. Rise) : Should not exceed 125°C under worst case operating conditions.
- (h) Storage condition (component in its packaging)
 - i) Temperature: Less than 40°C
 - ii) Humidity : 60% RH

NOTE: Specifications subject to change without notice. Please check our website for latest information.



6. Electrical Characteristics:

Part Number	Inductance L0 (uH) @ 0 A	Test Frequency, L	I rms (A) Typ.	I sat (A) Typ.	DCR(mΩ) Typ.@25°C	DCR(mΩ) Max.@25°C
PICQ0615HR10YF	0.10	100KHz/1.0V	17.5	35.0	2.5	3.1
PICQ0615HR12YF	0.12	100KHz/1.0V	17.0	30.0	3.0	3.6
PICQ0615HR15YF	0.15	100KHz/1.0V	16.0	25.0	3.7	4.5
PICQ0615HR20YF	0.20	100KHz/1.0V	14.5	24.0	3.9	4.6
PICQ0615HR22YF	0.22	100KHz/1.0V	14.0	22.0	4.3	5.2
PICQ0615HR33MF	0.33	100KHz/1.0V	11.0	18.0	6.6	7.6
PICQ0615HR47MF	0.47	100KHz/1.0V	9.5	16.0	9.0	10.3
PICQ0615HR56MF	0.56	100KHz/1.0V	9.0	15.5	12.5	14.0
PICQ0615HR68MF	0.68	100KHz/1.0V	7.5	15.0	13.8	15.2
PICQ0615HR82MF	0.82	100KHz/1.0V	7.0	14.0	20.0	24.0
PICQ0615H1R0MF	1.00	100KHz/1.0V	6.5	12.0	23.0	25.8
PICQ0615H1R2MF	1.20	100KHz/1.0V	5.6	10.5	29.0	34.0
PICQ0615H1R5MF	1.50	100KHz/1.0V	5.0	9.5	37.0	42.5
PICQ0615H2R2MF	2.20	100KHz/1.0V	4.5	6.5	48.0	55.0
PICQ0615H3R3MF	3.30	100KHz/1.0V	4.2	6.0	62.0	74.0
PICQ0615H4R7MF	4.70	100KHz/1.0V	3.8	5.0	96.0	111
PICQ0615H5R6MF	5.60	100KHz/1.0V	3.0	4.5	115	138
PICQ0615H6R8MF	6.80	100KHz/1.0V	2.6	3.5	128	148
PICQ0615H8R2MF	8.20	100KHz/1.0V	2.4	3.2	153	184
PICQ0615H100MF	10.0	100KHz/1.0V	2.3	2.8	180	216
PICQ0615H220MF	22.0	100KHz/1.0V	1.5	2.5	420	504
PICQ0615H330MF	33.0	100KHz/1.0V	1.2	2.0	640	750

*Tolerance code : Y = $\pm 30\%$; M = $\pm 20\%$

Notes:

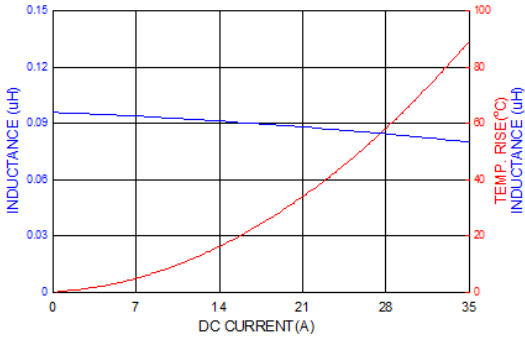
- 1) Isat Typ. and Irms Typ. value is derived based from accounting the upper limit tolerance into the inductance value.

NOTE: Specifications subject to change without notice. Please check our website for latest information.

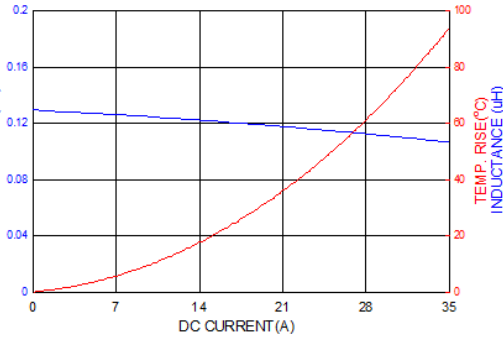


7. Characteristics Curves:

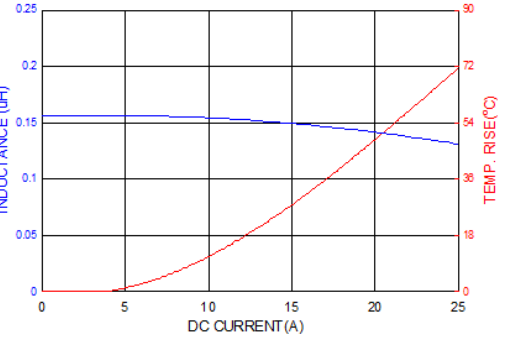
PICQ0615HR10YF



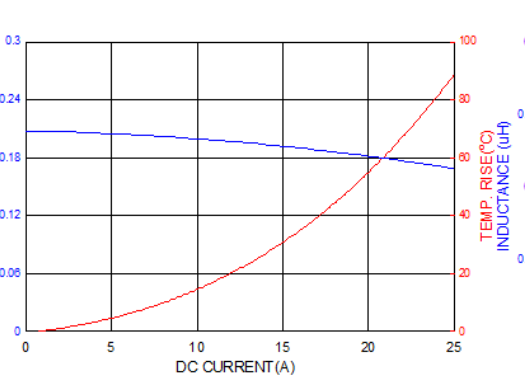
PICQ0615HR12YF



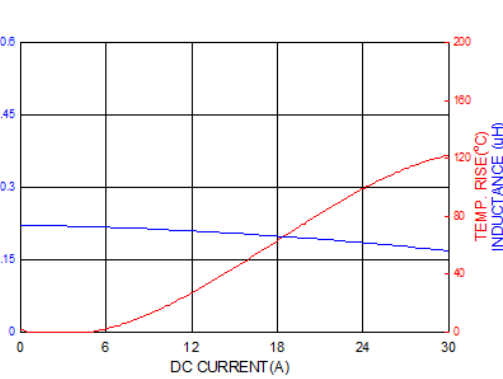
PICQ0615HR15YF



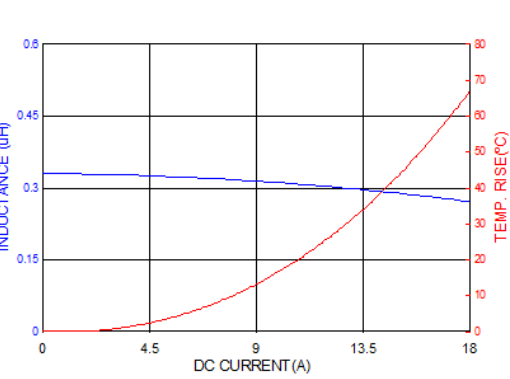
PICQ0615HR20YF



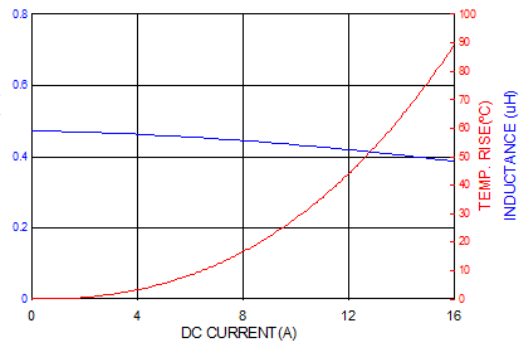
PICQ0615HR22YF



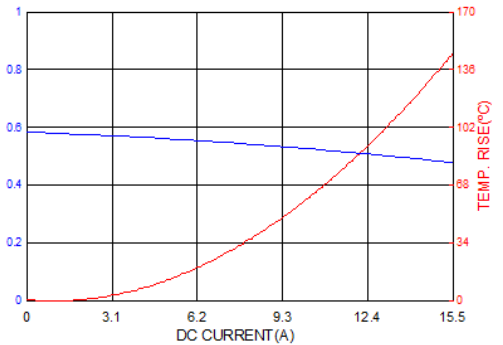
PICQ0615HR33MF



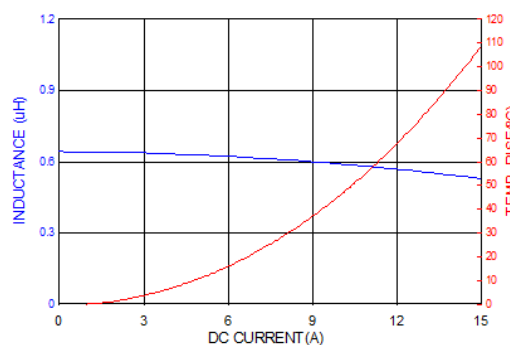
PICQ0615HR47MF



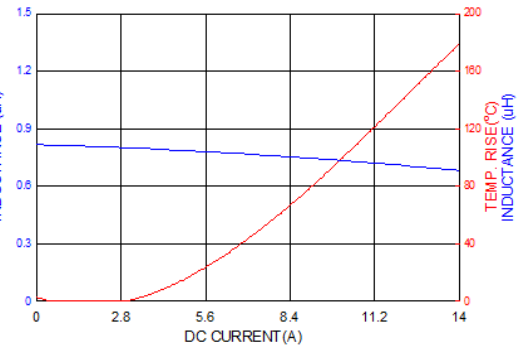
PICQ0615HR56MF



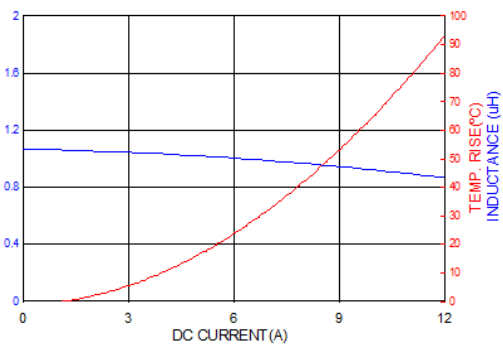
PICQ0615HR68MF



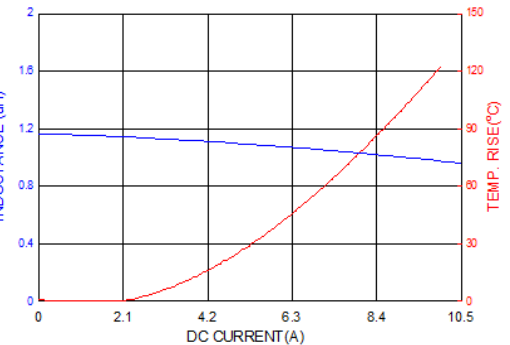
PICQ0615HR82MF



PICQ0615H1R0MF



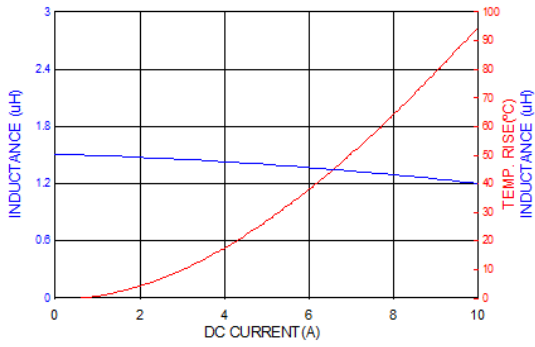
PICQ0615H1R2MF



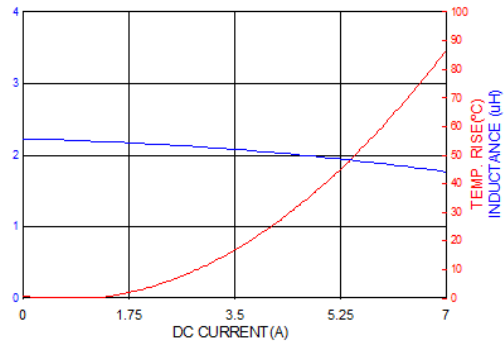
NOTE: Specifications subject to change without notice. Please check our website for latest information.



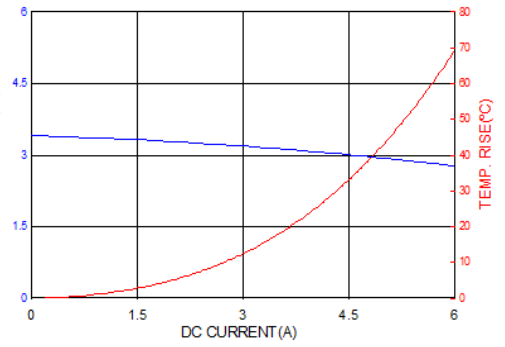
PICQ0615H1R5MF



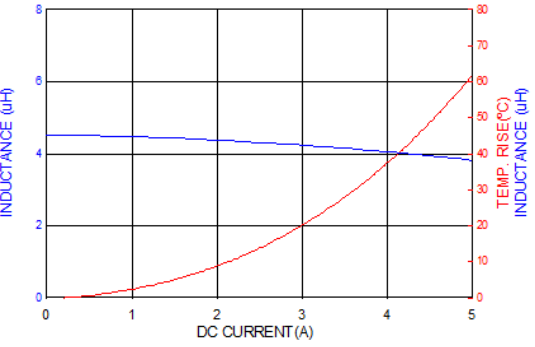
PICQ0615H2R2MF



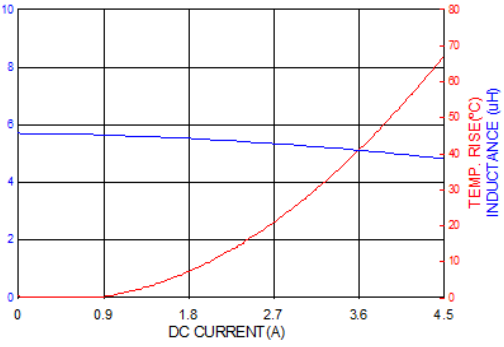
PICQ0615H3R3MF



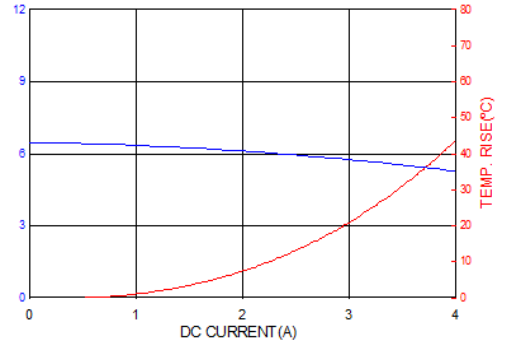
PICQ0615H4R7MF



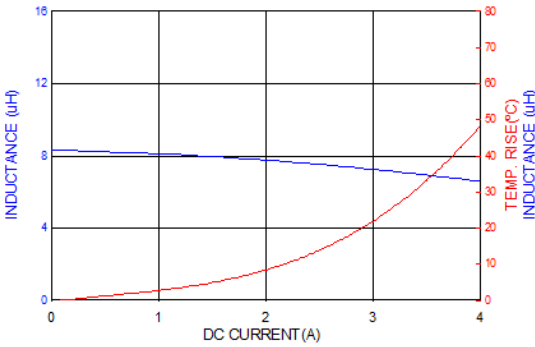
PICQ0615H5R6MF



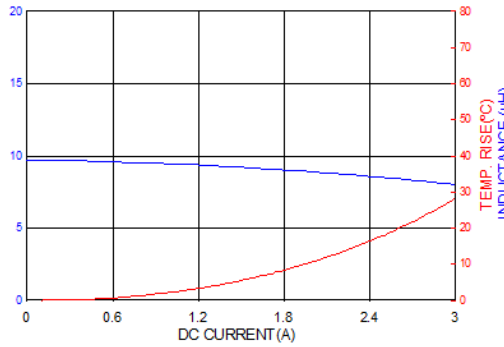
PICQ0615H6R8MF



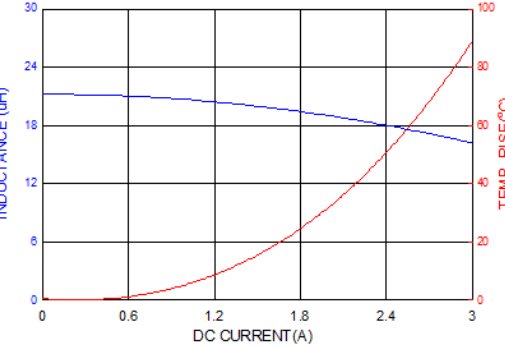
PICQ0615H8R2MF



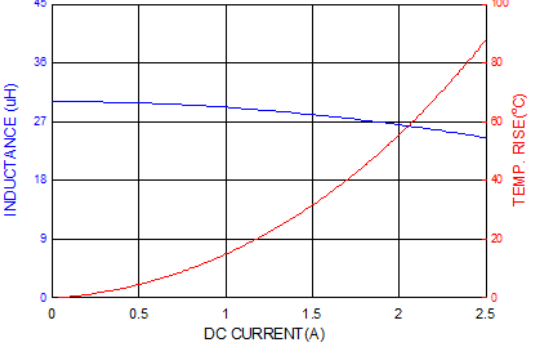
PICQ0615H100MF



PICQ0615H220MF



PICQ0615H330MF



NOTE: Specifications subject to change without notice. Please check our website for latest information.



8. Soldering:

Mildly activated rosin fluxes are preferred. The minimum amount of solder can lead to damage from the stresses caused by the difference in coefficients of expansion between solder, chip and substrate. Our terminations are suitable for all re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air.

8-1 Solder Re-flow:

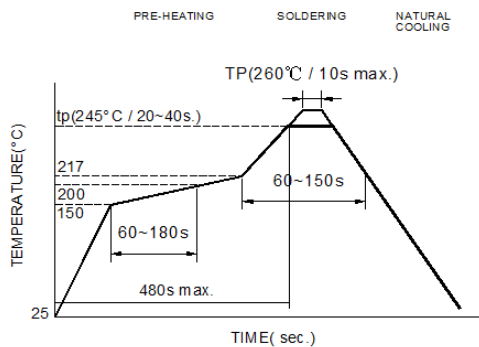
Recommended temperature profiles for re-flow soldering in Figure 1.

8-2 Soldering Iron (Figure 2):

Products attachment with soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended.

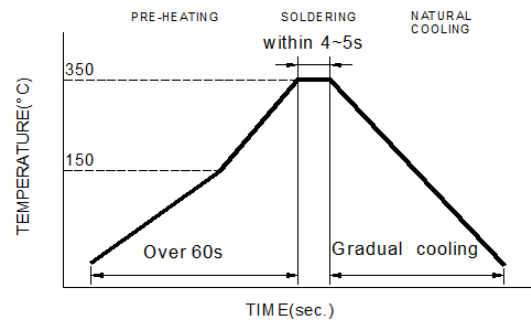
Note :

- a) Preheat circuit and products to 150°C.
- b) 355°C tip temperature (Max.)
- c) Never contact the ceramic with the iron tip
- d) 1.0mm tip diameter (Max.)
- e) Use a 20 watt soldering iron with tip diameter of 1.0mm
- f) Limit soldering time to 4~5 secs.



Reflow times: 3 times max.

Fig.1



Iron Soldering times: 1 times max.

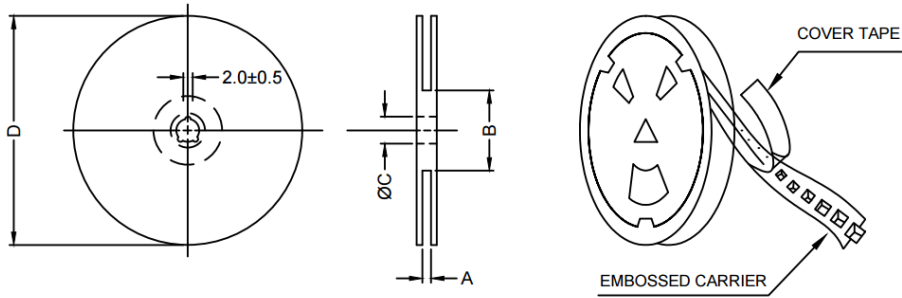
Fig.2

NOTE: Specifications subject to change without notice. Please check our website for latest information.



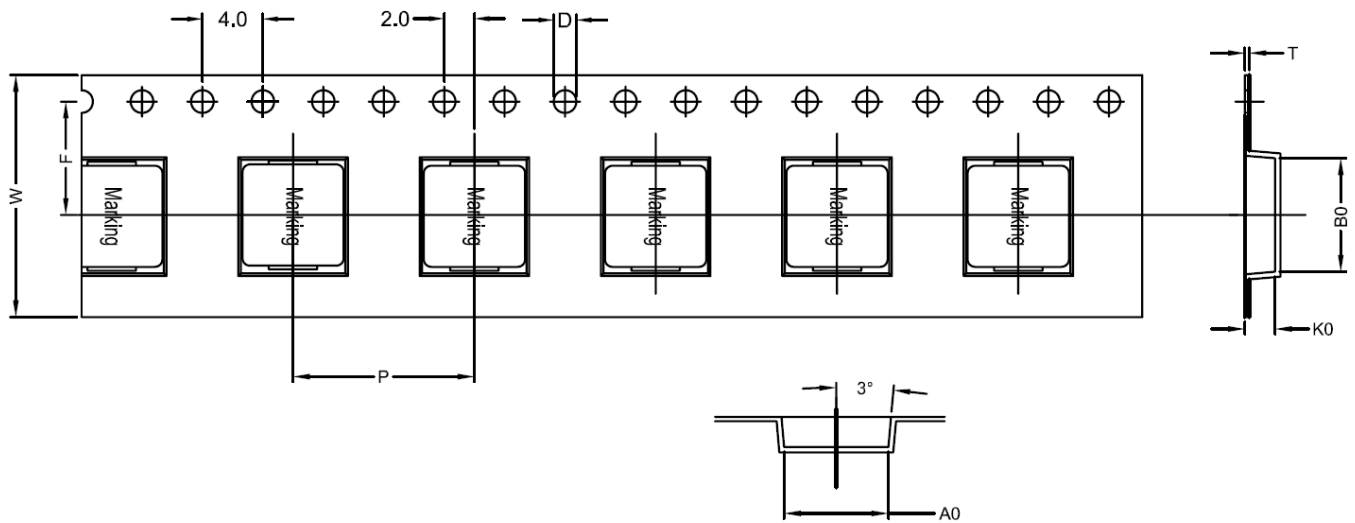
9. Packaging Information:

9-1 Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x16mm	16.4+2/-0	100±2	13.0+0.5/-0.2	330

9-2 Tape Dimension



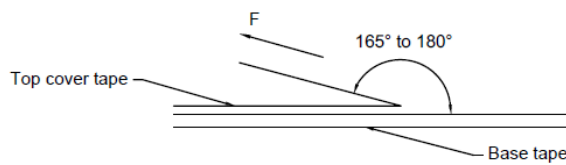
Series	Size	Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)	D(mm)
PICQ	0615	7.7±0.1	7.0±0.1	1.8±0.1	12.0±0.1	16.0±0.3	7.5±0.1	0.35±0.05	1.5±0.1

NOTE: Specifications subject to change without notice. Please check our website for latest information.

9-3 Packaging Quantity

PICQ	0615
Chip / Reel	2,000
Inner box	4,000
Carton	16,000

9-4 Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

Application Notice:

1. Storage Conditions:

To maintain the solderability of terminal electrodes:

- a) Recommended products should be used within 12 months from the time of delivery.
- b) The packaging material should be kept where no chlorine or sulfur exists in the air.

2. Transportation:

- a) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- b) Vacuum pick up is strongly recommended for individual components.
- c) Bulk handling should ensure that abrasion and mechanical shock are minimized.

NOTE: Specifications subject to change without notice. Please check our website for latest information.

