

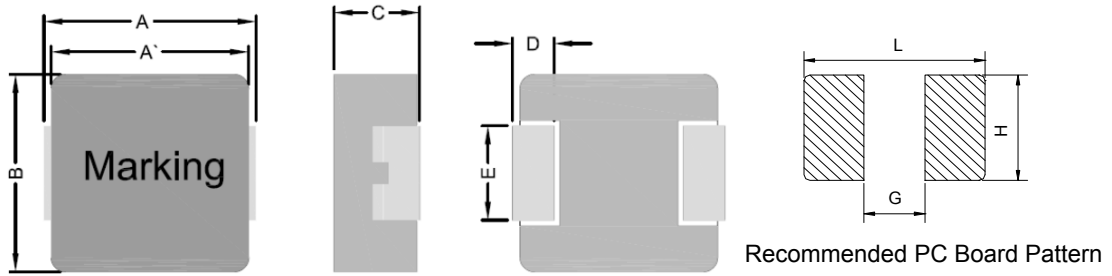
1. Part No. Expression:

P I C Q 0 6 0 5 H R 2 2 M F

(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:



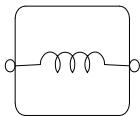
Note:

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

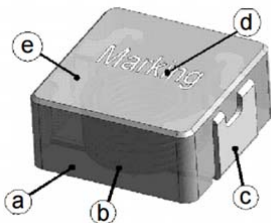
Unit: mm

A	A'	B	C	D	E	L	G	H
7.3±0.3	6.7±0.3	6.6±0.3	4.8±0.2	1.8±0.3	3.0±0.3	8.4 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
PICQ0605HR22MF	0.22	100KHz/1.0V	25.0	35.0	1.6	1.9
PICQ0605HR33MF	0.33	100KHz/1.0V	25.0	32.0	2.5	3.0
PICQ0605HR40MF	0.40	100KHz/1.0V	23.0	31.0	3.1	3.7
PICQ0605HR47MF	0.47	100KHz/1.0V	22.0	30.0	3.5	3.9
PICQ0605HR56MF	0.56	100KHz/1.0V	20.0	27.0	3.6	4.2
PICQ0605HR60MF	0.60	100KHz/1.0V	19.0	25.0	3.8	4.3
PICQ0605HR68MF	0.68	100KHz/1.0V	18.0	24.0	4.0	4.5
PICQ0605HR82MF	0.82	100KHz/1.0V	16.5	22.0	4.6	4.9
PICQ0605H1R0MF	1.00	100KHz/1.0V	15.0	20.0	6.1	6.5
PICQ0605H1R2MF	1.20	100KHz/1.0V	14.0	18.0	6.7	7.5
PICQ0605H1R5MF	1.50	100KHz/1.0V	12.0	16.5	8.6	9.0
PICQ0605H1R8MF	1.80	100KHz/1.0V	12.0	15.0	9.5	11.0
PICQ0605H2R2MF	2.20	100KHz/1.0V	10.0	14.0	11.2	12.0
PICQ0605H3R3MF	3.30	100KHz/1.0V	8.0	12.0	19.0	20.9
PICQ0605H4R7MF	4.70	100KHz/1.0V	6.5	10.0	28.0	30.8
PICQ0605H5R6MF	5.60	100KHz/1.0V	6.0	9.0	43.5	49.0
PICQ0605H6R8MF	6.80	100KHz/1.0V	5.5	8.5	46.0	51.5
PICQ0605H8R2MF	8.20	100KHz/1.0V	5.0	8.0	56.0	63.0
PICQ0605H100MF	10.0	100KHz/1.0V	4.0	7.5	60.0	69.0
PICQ0605H150MF	15.0	100KHz/1.0V	3.5	6.0	81.0	92.0
PICQ0605H220MF	22.0	100KHz/1.0V	2.5	5.5	140	170
PICQ0605H470MF	47.0	100KHz/1.0V	1.9	2.7	290	330
PICQ0605H560MF	56.0	100KHz/1.0V	1.6	2.1	342	396
PICQ0605H680MF	68.0	100KHz/1.0V	1.2	2.0	386	445

*Tolerance code : Y = ±30%; M = ±20%

Notes:

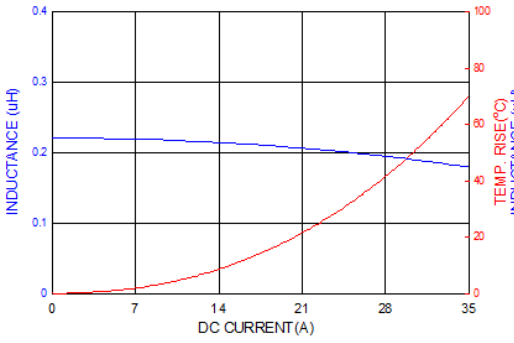
1) Isat Typ. and Irms Typ. value is derived based from accounting the upper limit tolerance into the inductance value.

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

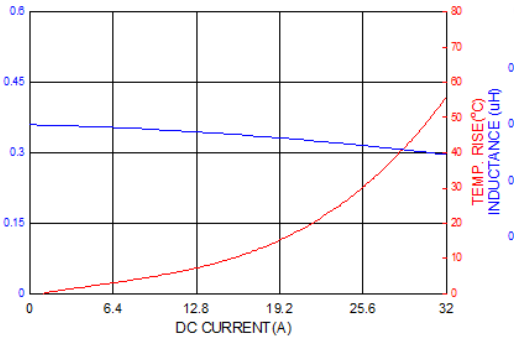


7. Characteristics Curves:

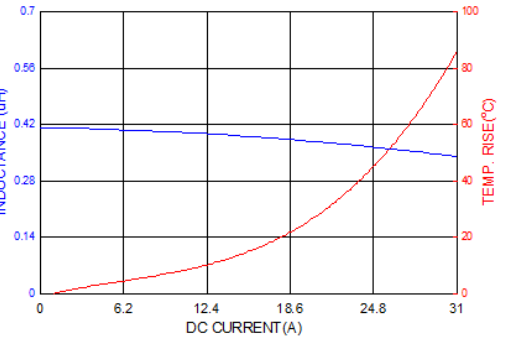
PICQ0605HR22MF



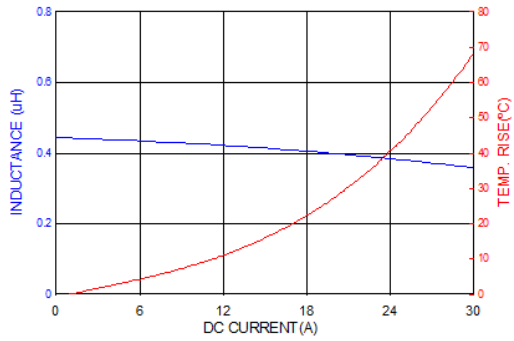
PICQ0605HR33MF



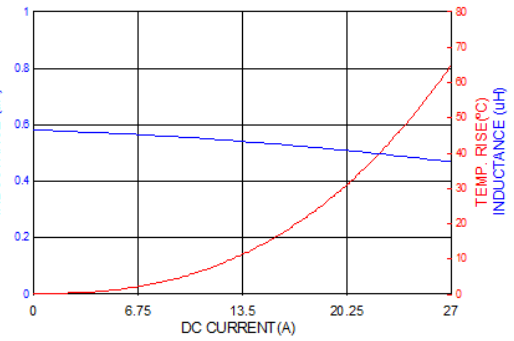
PICQ0605HR40MF



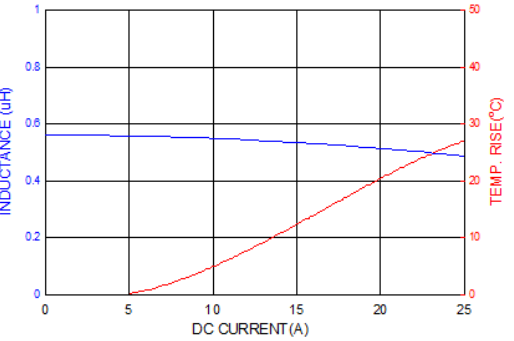
PICQ0605HR47MF



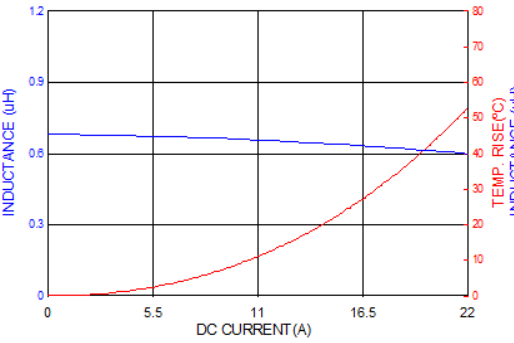
PICQ0605HR56MF



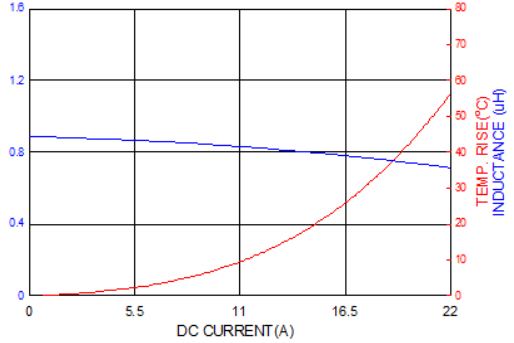
PICQ0605HR60MF



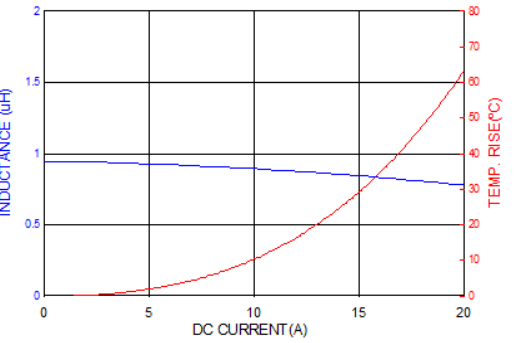
PICQ0605HR68MF



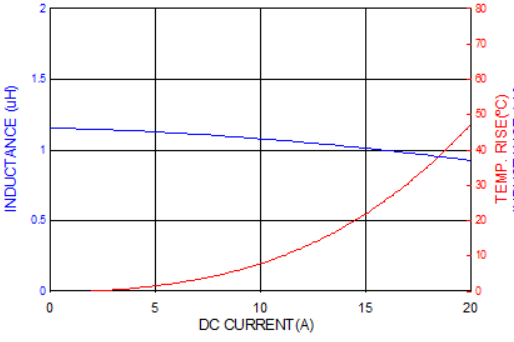
PICQ0605HR82MF



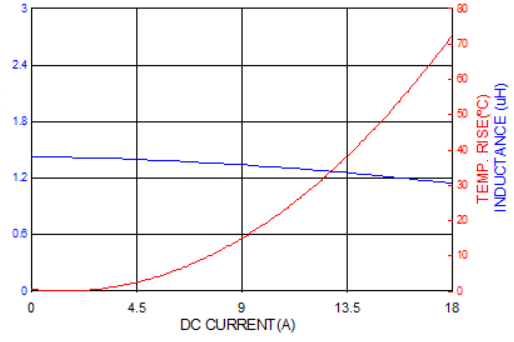
PICQ0605H1R0MF



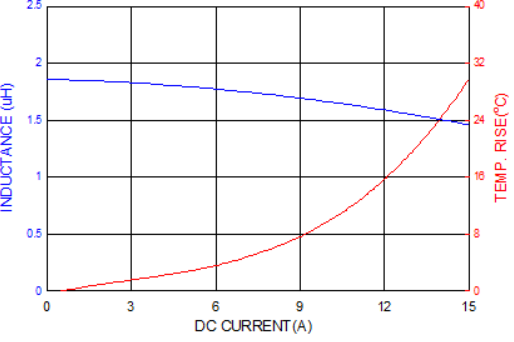
PICQ0605H1R2MF



PICQ0605H1R5MF



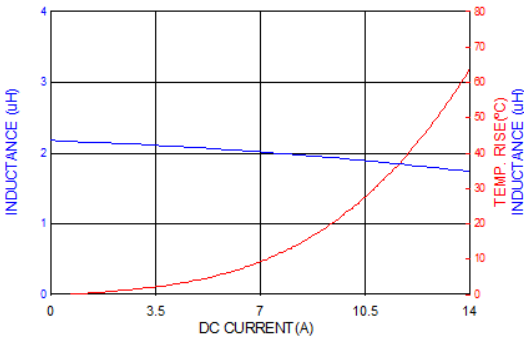
PICQ0605H1R8MF



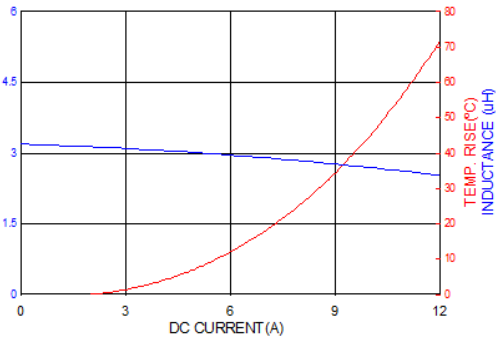
NOTE: Specifications subject to change without notice. Please check our website for latest information.



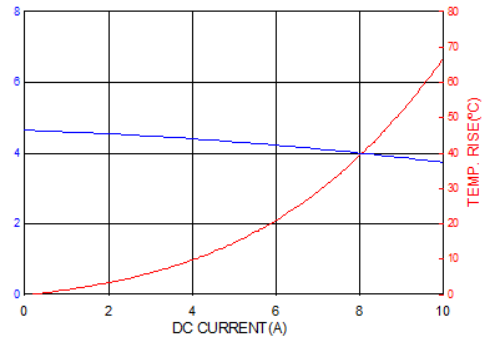
PICQ0605H2R2MF



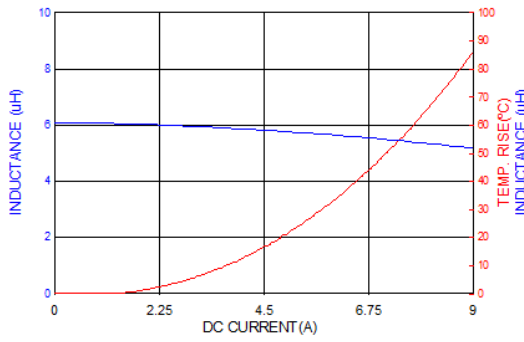
PICQ0605H3R3MF



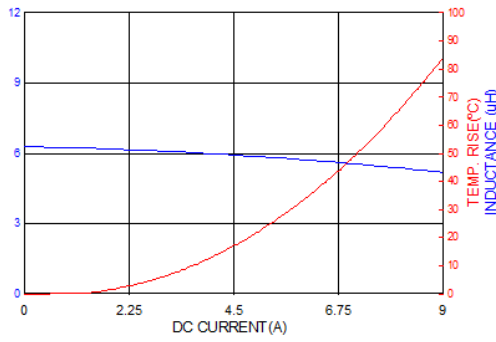
PICQ0605H4R7MF



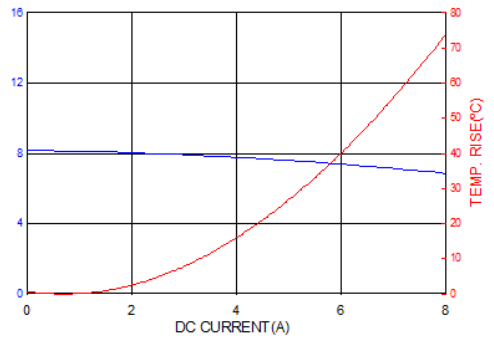
PICQ0605H5R6MF



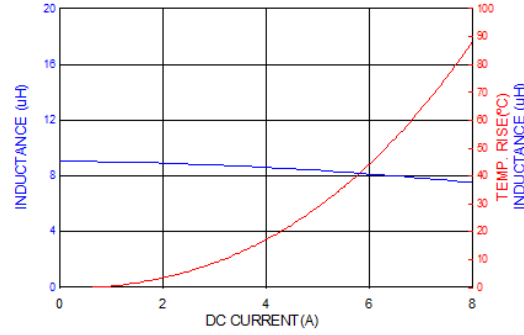
PICQ0605H6R8MF



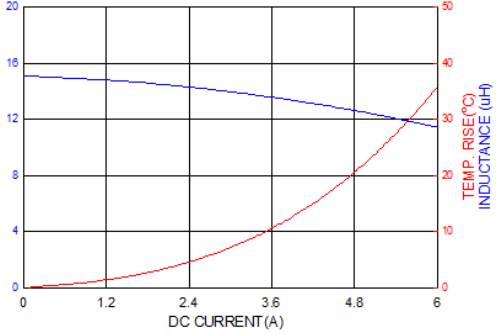
PICQ0605H8R2MF



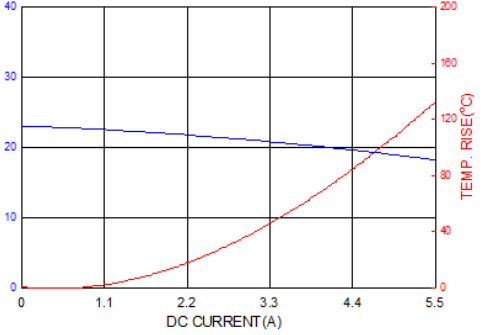
PICQ0605H100MF



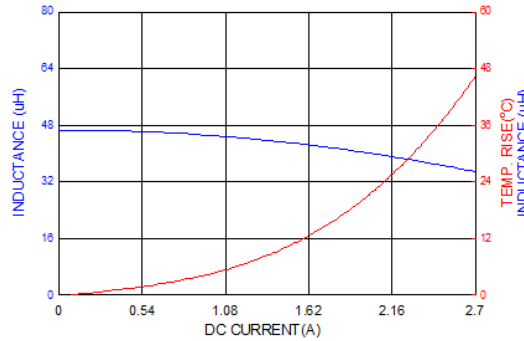
PICQ0605H150MF



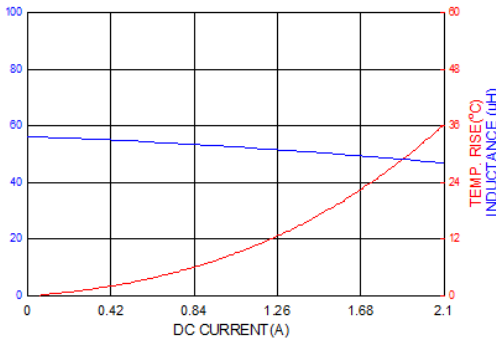
PICQ0605H220MF



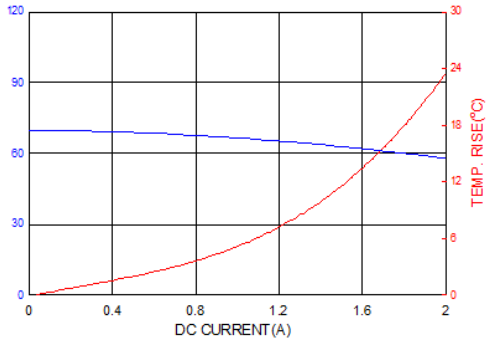
PICQ0605H470MF



PICQ0605H560MF



PICQ0605H680MF



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:

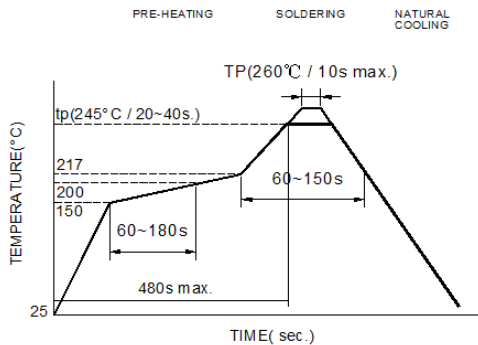
Recommended temperature profiles for re-flow soldering in Figure 1.

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.

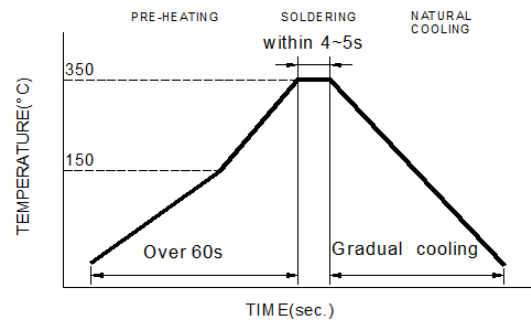
Note :

- 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.

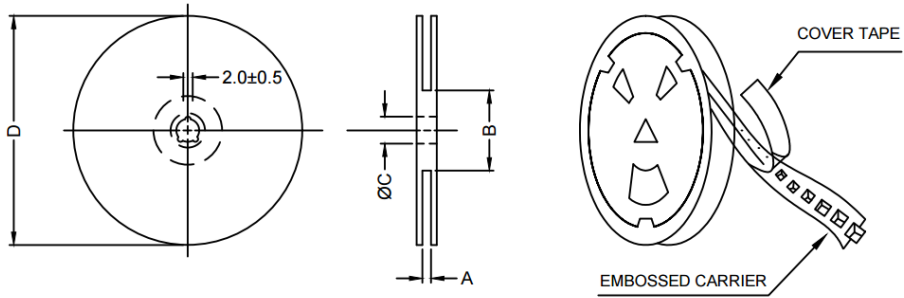
Fig.2

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



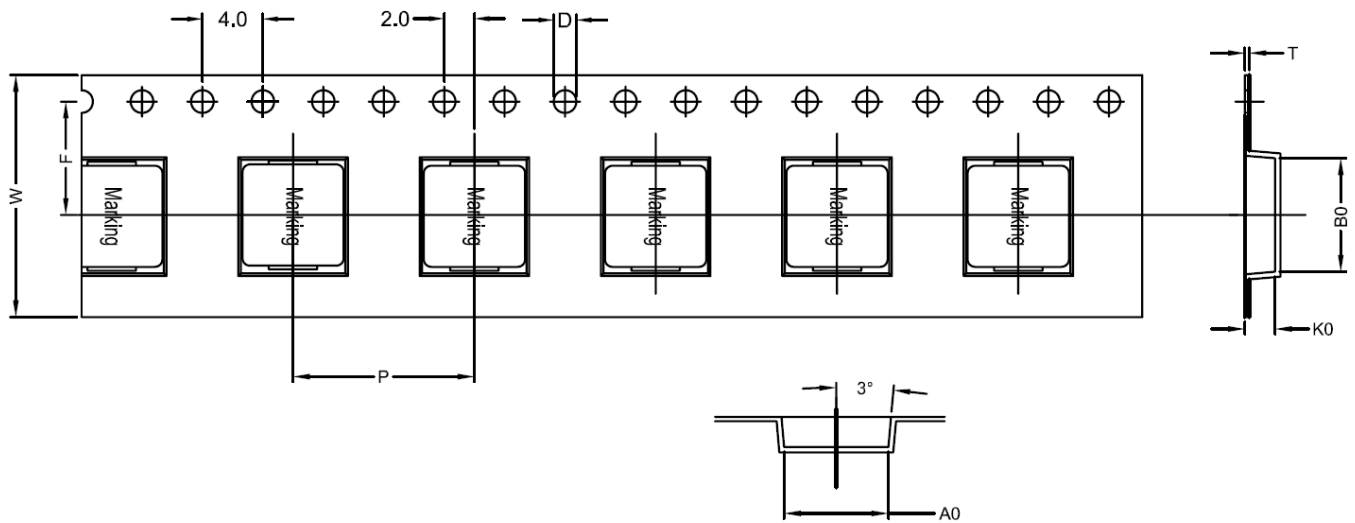
9. Packaging Information:

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



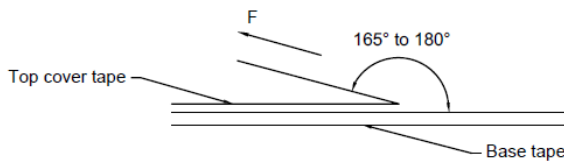
Series	Size	Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)	D(mm)
PICQ	0605	7.7 ± 0.1	7.0 ± 0.1	5.3 ± 0.1	12.0 ± 0.1	16.0 ± 0.3	7.5 ± 0.1	0.35 ± 0.05	1.5 ± 0.1

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

9-3 Packaging Quantity

PICQ	0605
Chip / Reel	800
Inner box	1,600
Carton	6,400

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.

