

1. Part No. Expression:

**PIAQ1265HTR22MN**

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

(a) Series Code

(b) Dimension Code

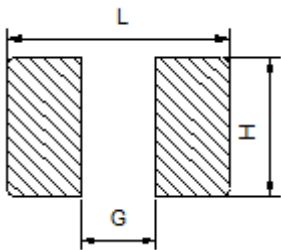
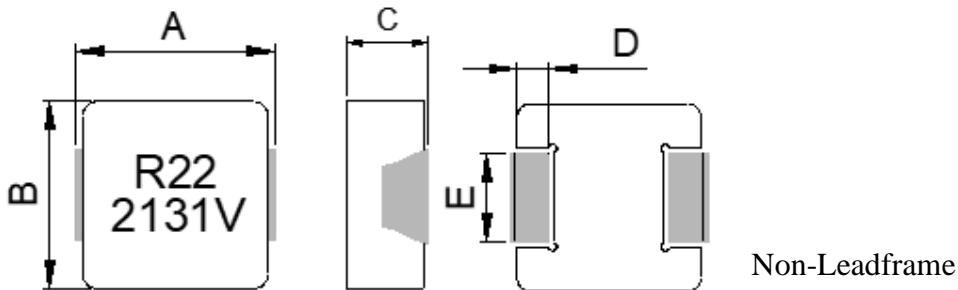
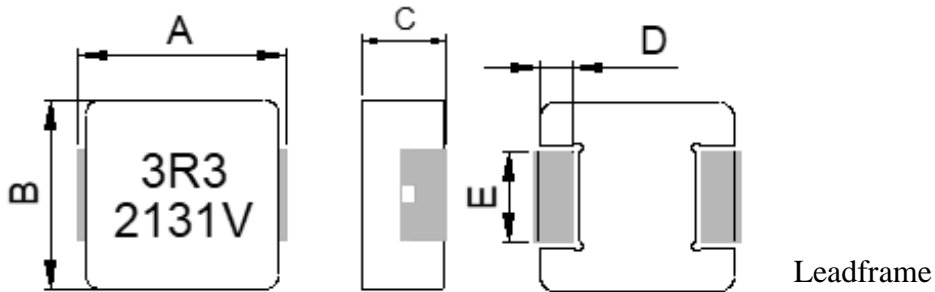
(c) Type Code

(d) Inductance Code

(e) Tolerance Code

(f) Special Code

2. Configuration & Dimensions (Unit: mm)



Recommended PCB Pattern

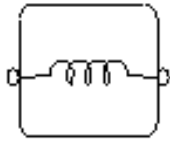
A(mm)	B(mm)	C(mm)	D(mm)	E
13.5±0.5	12.6±0.2	6.2±0.3	2.3±0.3	See Electrical Characteristics Table

L(mm)	G(mm)	H(mm)
14.5	8.0	5.0

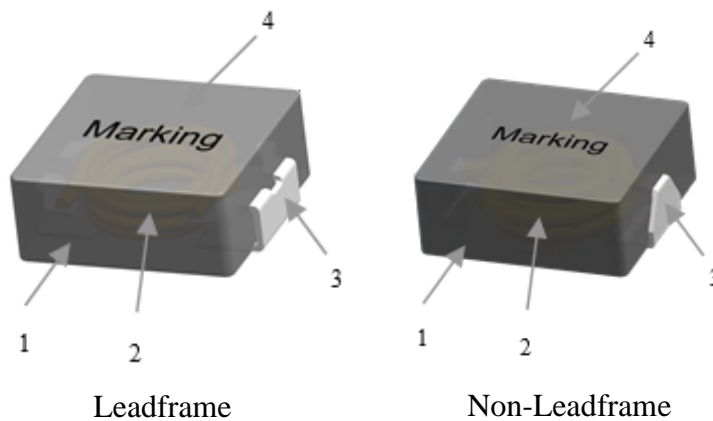
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### 3. Schematic:



### 4. Material List



- 1.Core
- 2.Wire
- 3.Clip
- 4.Ink

### 5. General Specification:

- (a) Recommend solder paste thickness at 0.15mm and above
- (b) Operating Temp.: -55°C to +180°C (Inclusive of coil temp rise).
- (c) Storage Temp.: -55°C to +180°C (on board).
- (d) Heat Rated Current (Irms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C.
- (e) Saturation Current (Isat) will cause L0 to drop approximately 30%.
- (f) Reliability test for this part meets AEC-Q200 standard.
- (g) Storage condition (component in its packaging)
  - i) Temperature: -10°C to +40°C
  - ii) Humidity: 50~60% RH

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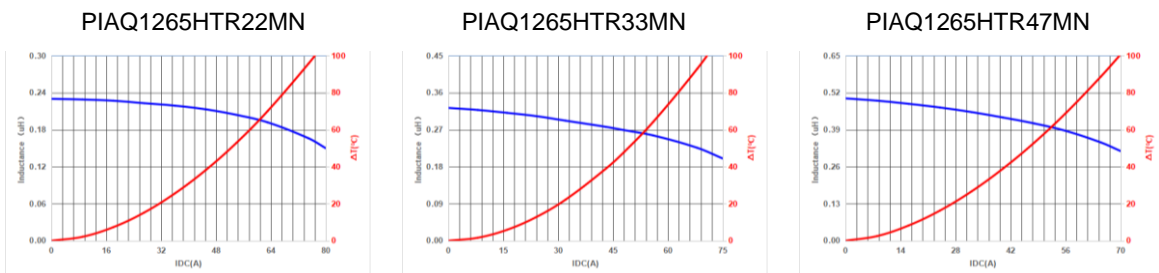
6. Electrical Characteristics:

Part No.	Inductance @ 0A (μH) ± 20%	I <sub>rms</sub> (A) Typ	I <sub>rms</sub> (A) Max	I <sub>sat</sub> (A) Typ	I <sub>sat</sub> (A) Max	DCR (mΩ) Typ	DCR (mΩ) Max	E (mm) ±0.3	Type	Operating Voltage (V) Max
PIAQ1265HTR22MN	0.22	45	40	75	70	0.40	0.46	4.7	non-leadframe	50.0
PIAQ1265HTR33MN	0.33	43	37	68	63	0.55	0.62	4.7	non-leadframe	50.0
PIAQ1265HTR47MN	0.47	40	35	65	60	0.80	0.90	4.7	non-leadframe	50.0
PIAQ1265HT1R0MN	1.00	35	30	37	33	1.40	1.70	4.0	non-leadframe	50.0
PIAQ1265HT1R2MN	1.20	30	25	35	32	1.70	2.00	4.0	non-leadframe	50.0
PIAQ1265HT1R5MN	1.50	27	23	31	27	2.20	2.53	4.0	non-leadframe	50.0
PIAQ1265HT2R2MN	2.20	25	22	27	23	3.2	3.7	4.7	leadframe	50.0
PIAQ1265HT3R3MN	3.30	22	20	24	21	4.8	5.6	4.7	leadframe	50.0
PIAQ1265HT4R7MN	4.70	19	17	22	20	6.7	7.7	4.7	leadframe	50.0
PIAQ1265HT5R6MN	5.60	17	15	20	18	8.0	9.2	4.7	leadframe	50.0
PIAQ1265HT6R8MN	6.80	15	13	17	15	10.3	12	4.7	leadframe	50.0
PIAQ1265HT8R2MN	8.20	13	12	16	14	11.8	13.6	4.7	leadframe	50.0
PIAQ1265HT100MN	10.0	12	11	15	13	13.8	16.0	4.7	leadframe	50.0
PIAQ1265HT120MN	12.0	11	10	12.5	11.5	17.3	20.0	4.7	leadframe	50.0
PIAQ1265HT150MN	15.0	9.5	8.5	12	11	21	25	4.7	leadframe	50.0
PIAQ1265HT220MN	22.0	8.5	7.5	9.0	8.0	30	35	4.7	leadframe	50.0
PIAQ1265HT330MN	33.0	7.6	6.5	8.0	7.0	46	55	4.7	leadframe	50.0

Note:

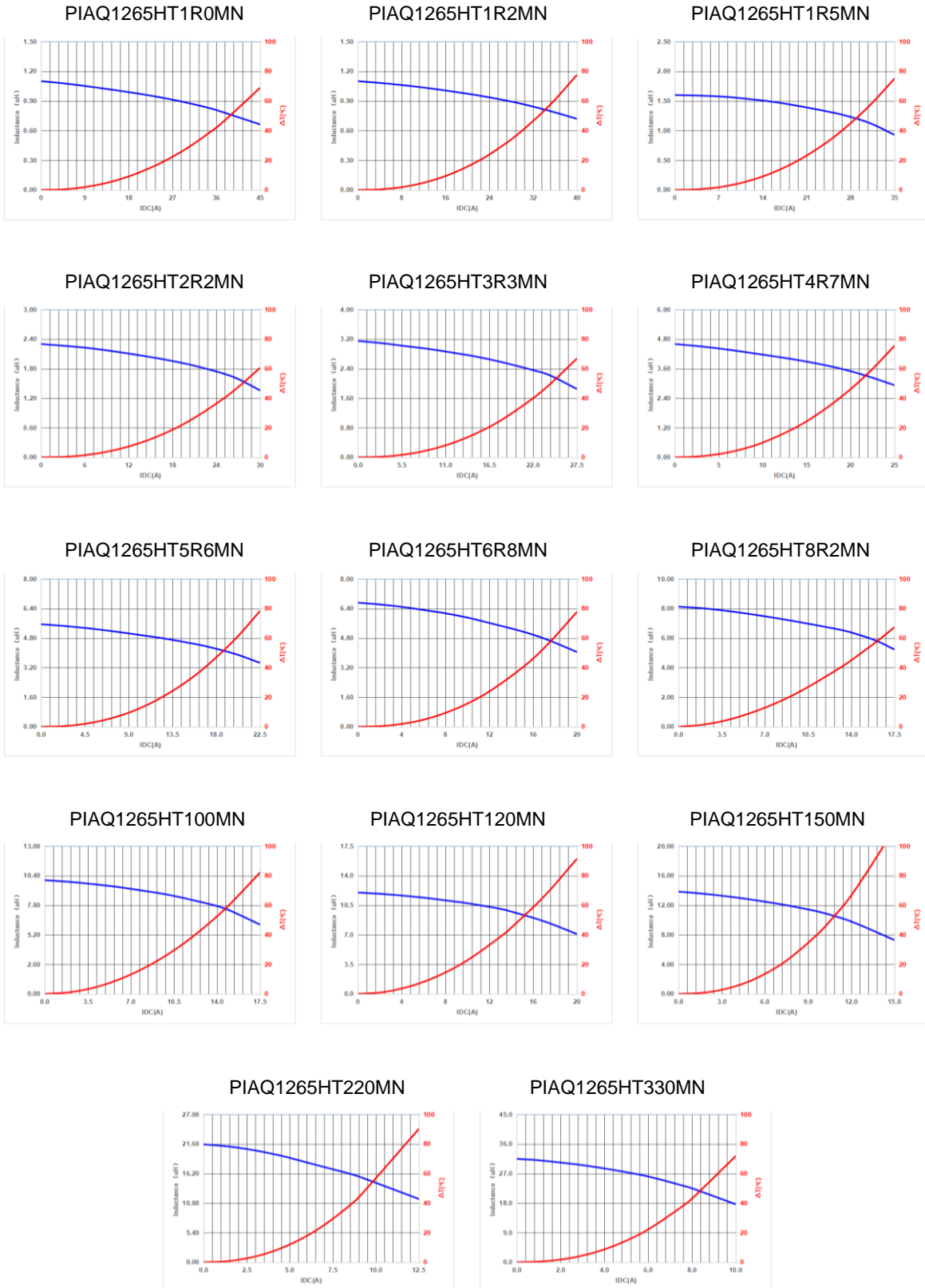
1. Test Frequency: 1.0V/100kHz
2. All test data referenced to 25°C ambient

7. Characteristics Curve



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**8. Soldering:**

Mildly activated rosin fluxes are preferred. The terminations are suitable for all wave and re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

**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.

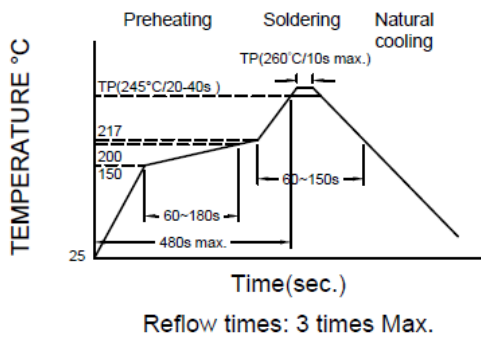


Fig.1

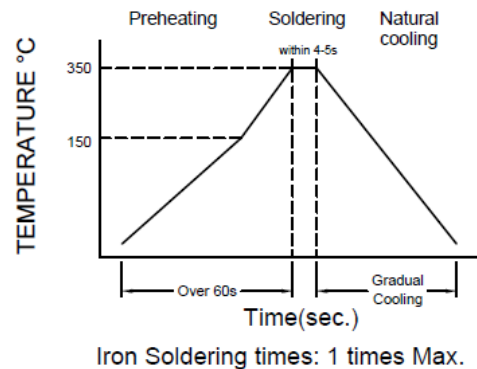


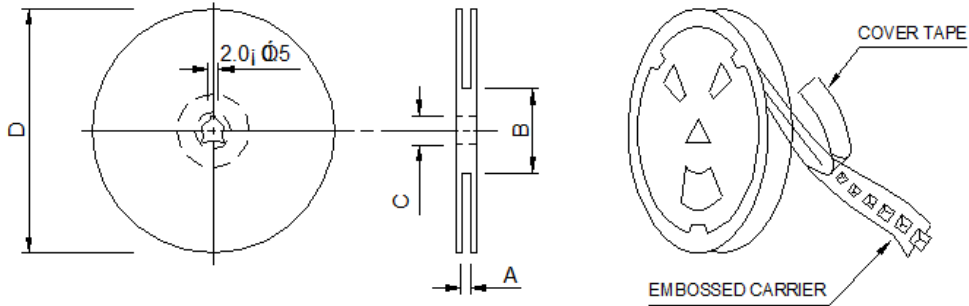
Fig.2

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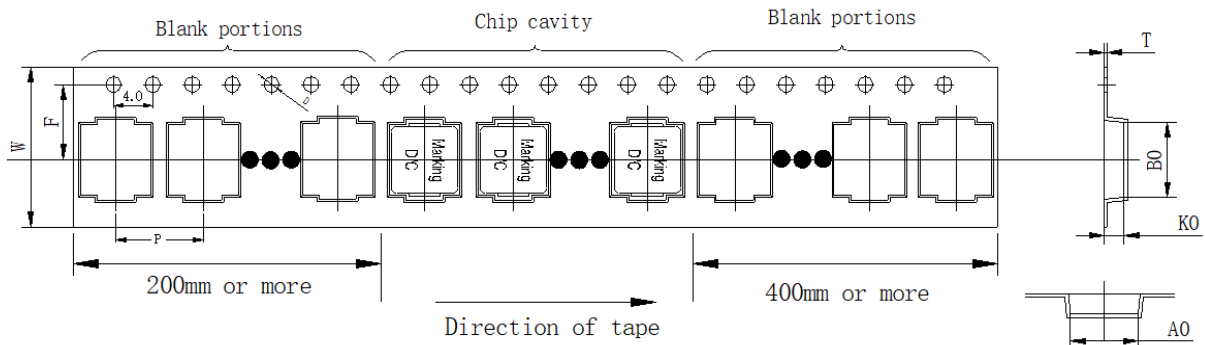
9. Packaging Information:

9-1. Reel Dimension (Unit : mm)



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x24mm	24.4+2/-0	100±2	13+0.5/-0.2	330

9-2. Tape Dimension (Unit : mm)



Bo(mm)	Ao(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)	D(mm)
14.1±0.1	12.9±0.1	7.0±0.1	16.0±0.1	24.0±0.3	11.5±0.1	0.35±0.1	1.5±0.1

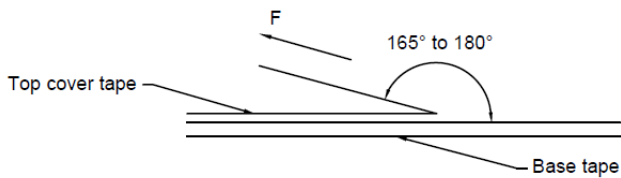
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### 9-3. Packaging Quantity

Size	PIAQ1265HT
Chip/ Reel	500

### 9-4. Tearing Off Force



The force for tearing off cover tape is 15 to 80 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.

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