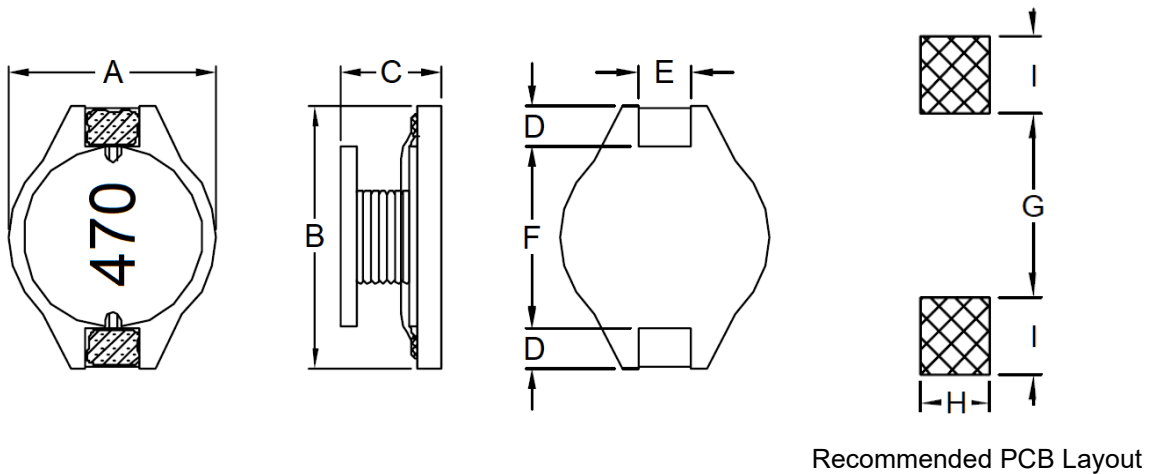


1. Part No. Expression

P D B 1 5 1 1 4 7 0 M Z F
 (a) (b) (c) (d) (e) (f)

- | | |
|---------------------|--------------------|
| (a) Series Code | (d) Tolerance Code |
| (b) Dimension Code | (e) Special Code |
| (c) Inductance Code | (f) Packaging Code |

2. Configuration & Dimensions (Unit: mm)

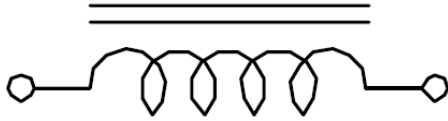


- Note: 1. The above PCB layout reference only.
 2. Marking: Inductance Code

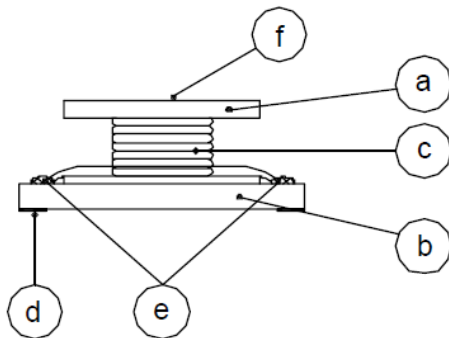
A	B	C	D	E
15.0±0.3	18.4±0.3	11.5 Max	2.4±0.2	2.2±0.2
F	G	H	I	-
13.3±0.3	12.7 Ref	2.8 Ref	3.0 Ref	-

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

3. Schematic



4. Material List



- (a) Core
- (b) Base
- (c) Wire
- (d) Terminal
- (e) Adhesive
- (f) Ink

5. General Specifications

- (a) Operating Temp.: -40°C to +125°C (including self-temperature rise)
- (b) All test data referenced to 25°C ambient.
- (c) Heat Rated Current (I_{rms}) will cause the coil temperature rise approximately ΔT of 40°C.
- (d) Saturation Current (I_{sat}) will cause inductance L_0 to drop approximately 10%.
- (e) Rated Current: The lower value of I_{sat} and I_{rms} .
- (f) Resistance to solder heat: 260° C.10 secs
- (g) Storage Condition (Component in its packaging)
 - i) Temperature: -10°C to 40°C
 - ii) Humidity: Less than 60% RH

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

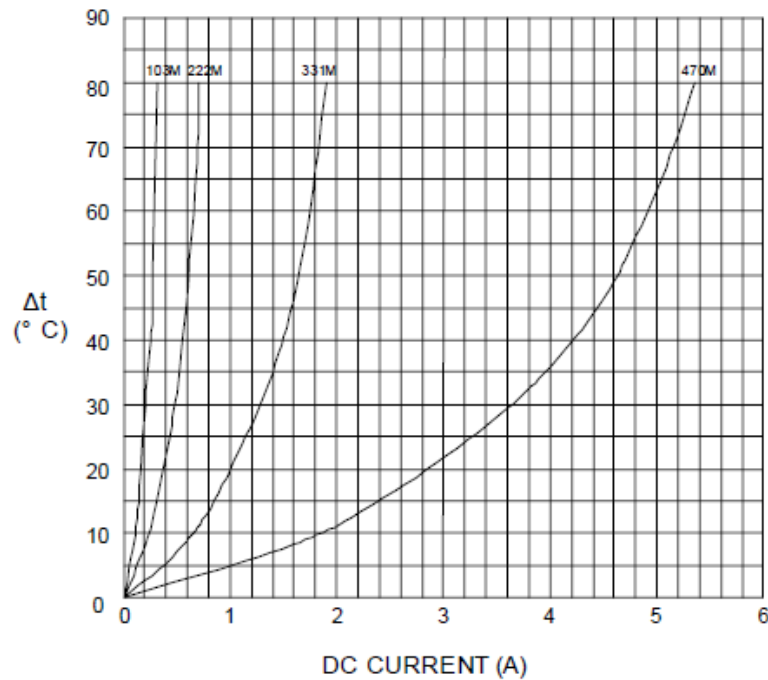
6. Electrical Characteristics

Part Number	Inductance (uH) @0A ±20%	Test Frequency	DCR (mΩ) Max	I _{sat} (A)	I _{rms} (A)
PDB1511470MZF	47	1V/100KHz	55	5.20	3.70
PDB1511680MZF	68	1V/100KHz	75	4.30	3.10
PDB1511101MZF	100	1V/100KHz	125	3.60	2.50
PDB1511151MZF	150	1V/100KHz	190	3.00	2.00
PDB1511221MZF	220	1V/100KHz	280	2.50	1.60
PDB1511331MZF	330	1V/100KHz	370	2.00	1.40
PDB1511471MZF	470	1V/100KHz	510	1.60	1.20
PDB1511681MZF	680	1V/100KHz	800	1.40	1.00
PDB1511102MZF	1000	1V/100KHz	1100	1.15	0.80
PDB1511152MZF	1500	1V/100KHz	1600	0.95	0.60
PDB1511222MZF	2200	1V/100KHz	2300	0.80	0.50
PDB1511332MZF	3300	1V/100KHz	3600	0.65	0.40
PDB1511472MZF	4700	1V/100KHz	5200	0.55	0.35
PDB1511682MZF	6800	1V/100KHz	7700	0.45	0.30
PDB1511103MZF	10000	1V/100KHz	11000	0.38	0.25

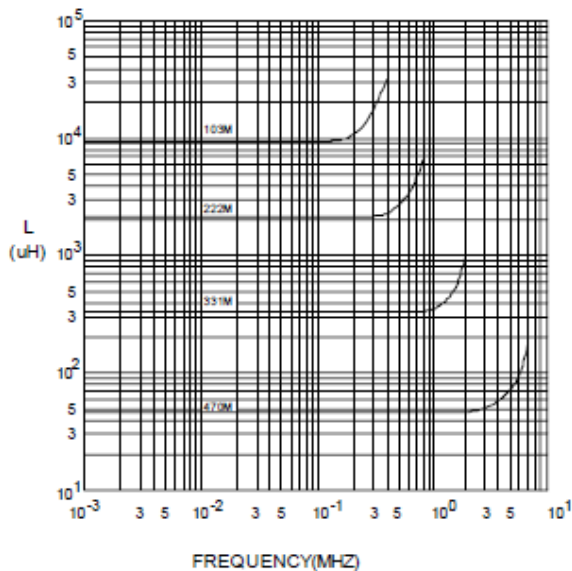
NOTE: Specifications subject to change without notice. Please check our website for latest information.

7. Characteristics Curves

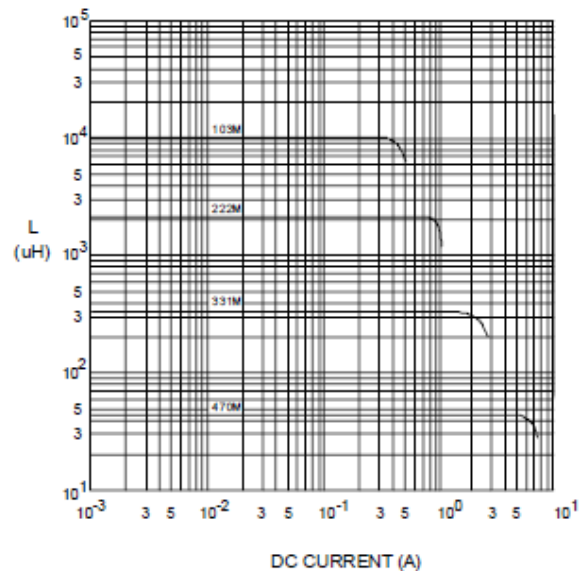
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ INDUCTANCE VS. FREQUENCY RESPONSE CURVE



@ INDUCTANCE VS. DC SUPERPOSITION RESPONSE CURVE



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

8. Soldering Specification

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

8-1. IR Soldering Reflow

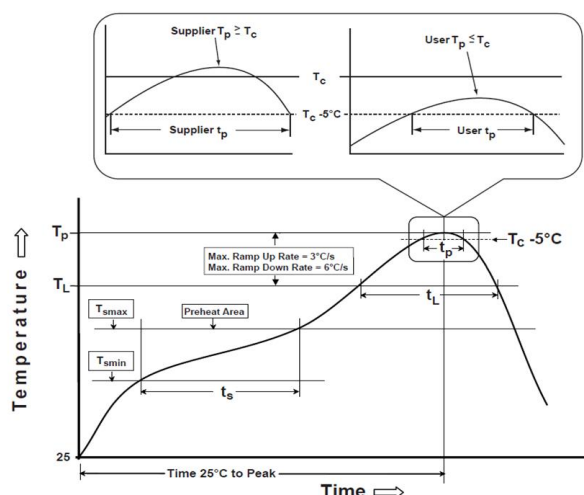
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

8-2. Iron Reflow

Products attachment with a 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 (Figure 2).

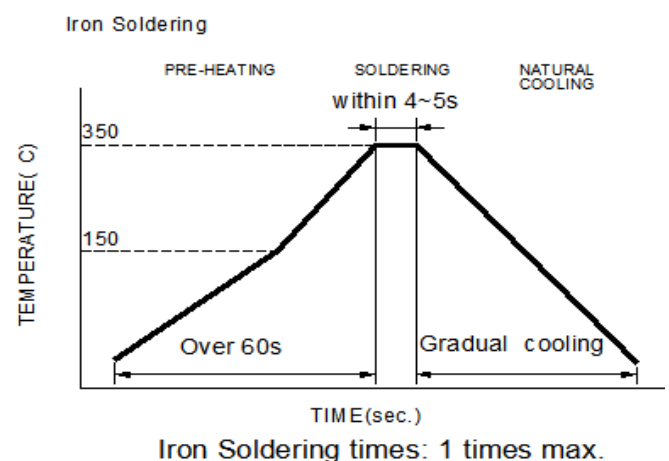
Note:

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



Reflow times: 3 times Max

Figure 1: IR Soldering Reflow



Soldering iron method: 350±5°C Max

Figure 2: Iron soldering temperature profiles

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

Table (1.1) Reflow Profiles

Profile Type:	Pb-Free Assembly
Preheat	
-Temperature Min (T_{smin})	150°C
-Temperature Max (T_{smax})	200°C
-Time (t_s) from (T_{smin} to T_{smax})	60-120seconds
Ramp-up rate (T_L to T_p)	3°C /second max.
Liquids temperature (T_L)	217°C
Time (t_L) maintained above T_L	60-150 seconds
Classification temperature (T_c)	See Table (1.2)
Time (t_p) at $T_c - 5^\circ\text{C}$ (T_p should be equal to or less than T_c .)	* < 30 seconds
Ramp-down rate (T_p to T_L)	6°C /second max.
Time 25°C to peak temperature	8 minutes max.

T_p : maximum peak package body temperature, **T_c** : the classification temperature.

For user (customer) **T_p** should be equal to or less than **T_c** .

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Table (1.2) Package Thickness/Volume and Classification Temperature (T_c)

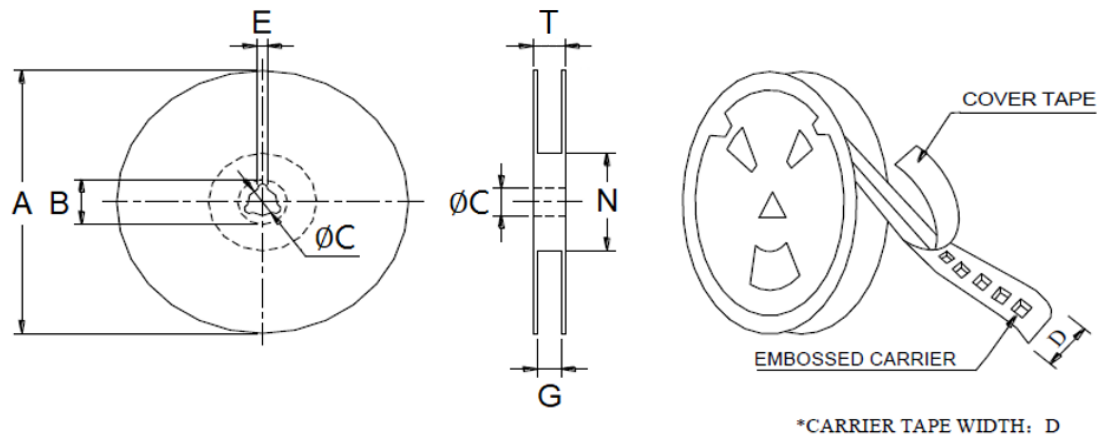
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020E.

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

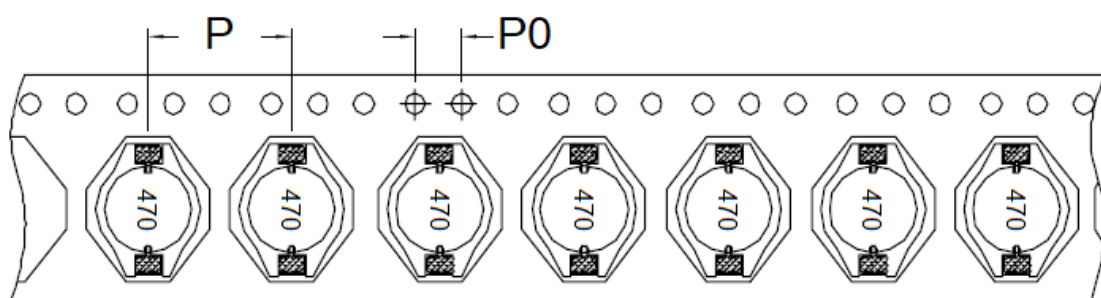
9. Packaging Information

9-1. Reel Dimension (Unit: mm)



Type	A	B	C	D
	330.0 Ref	21.0 Ref	13.0 Ref	32.0 Ref
13"x32	E	G	N	T
	2.0 Ref	34.0 Max	100.0 Min	38.4 Ref

9-2. Tape Dimension (Unit: mm)



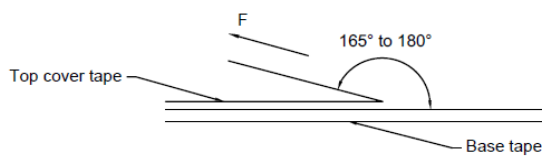
P	P0
20	4

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

9-3. Packaging Type

INNER : REEL			OUTER : CARTON		
Q'TY(PCS)	G.W. (gw)	STYLE	Q'TY(PCS)	G.W. (Kg)	SIZE(cm)
200	1,370	13-32	800	9.0	38 x 36.5 x 21

9-4. Tearing Off Force



The force for tearing off cover tape is according to the follow table, in the arrow direction under the following conditions.

(Referenced ANSI/EIA-481-D-2008 of 4.11 standard)

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed (mm/min)
5~35	45~85	860~1060	300±10

Tape Size	8 mm	12 to 56 mm	72 mm or Wider
Tearing Off Force (grams)	10~100	10~130	10~150

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.