

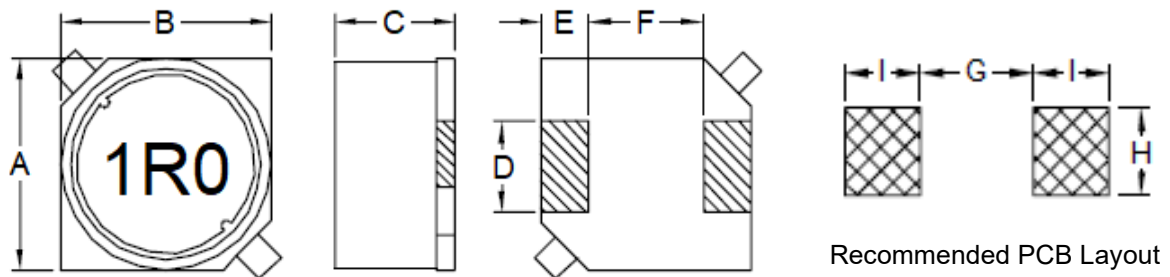
1. Part No. Expression

SSB06051R0MZF

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

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

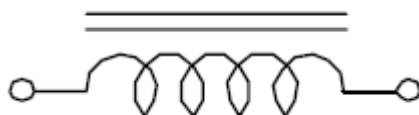
2. Configuration & Dimensions (Unit: mm)



Note: 1. The above PCB layout reference only.

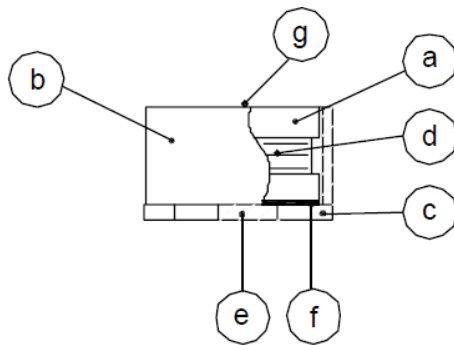
A	B	C	D	E
6.0±0.3	6.0±0.3	4.9±0.3	2.0±0.2	1.5±0.2
F	G	H	I	-
3.0±0.2	2.8 Ref	2.2 Ref	1.9 Ref	-

3. Schematic



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

4. Material List



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

5. General Specifications

- (a) Operating Temp.: -40°C to +85°C (including self-temperature rise)
- (b) All test data referenced to 25°C ambient.
- (c) Heat Rated Current (Irms) will cause the coil temperature rise ΔT of 40°C Max.
- (d) Saturation Current (Isat) will cause inductance L0 to drop 10% Max.
- (e) Rated Current: The lower value of Isat and Irms.
- (f) Resistance to Solder Heat: 260°C, 10Sec.
- (g) Storage Condition (Component in its packaging)
 - i) Temperature: -10°C to 40°C
 - ii) Humidity: Less than 60% RH

6. Electrical Characteristics

Part Number	Inductance (uH) ±20%	Test Frequency	RDC (mΩ) Max	IDC (A) Max
SSB06051R0MZ	1.0	1V/100KHz	23	2.70
SSB06051R5MZ	1.5	1V/100KHz	26	2.30
SSB06052R2MZ	2.2	1V/100KHz	28	1.90
SSB06053R3MZ	3.3	1V/100KHz	35	1.80
SSB06054R7MZ	4.7	1V/100KHz	40	1.40

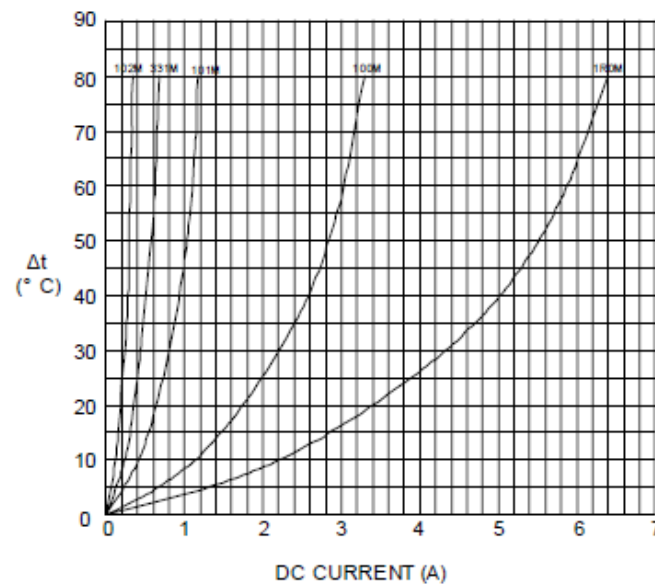
NOTE: Specifications subject to change without notice. Please check our website for latest information.

Part Number	Inductance (μ H) $\pm 20\%$	Test Frequency	RDC (m Ω) Max	IDC (A) Max
SSB06056R8MZF	6.8	1V/100KHz	45	1.20
SSB0605100MZF	10.0	1V/100KHz	60	1.00
SSB0605120MZF	12.0	1V/100KHz	65	0.90
SSB0605150MZF	15.0	1V/100KHz	70	0.80
SSB0605180MZF	18.0	1V/100KHz	95	0.70
SSB0605220MZF	22.0	1V/100KHz	110	0.65
SSB0605270MZF	27.0	1V/100KHz	120	0.60
SSB0605330MZF	33.0	1V/100KHz	165	0.55
SSB0605390MZF	39.0	1V/100KHz	180	0.48
SSB0605470MZF	47.0	1V/100KHz	200	0.45
SSB0605560MZF	56.0	1V/100KHz	255	0.40
SSB0605680MZF	68.0	1V/100KHz	285	0.37
SSB0605820MZF	82.0	1V/100KHz	390	0.35
SSB0605101MZF	100.0	1V/100KHz	420	0.30
SSB0605121MZF	120.0	1V/100KHz	470	0.28
SSB0605151MZF	150.0	1V/100KHz	630	0.25
SSB0605181MZF	180.0	1V/100KHz	720	0.22
SSB0605221MZF	220.0	1V/100KHz	820	0.20
SSB0605271MZF	270.0	1V/100KHz	1100	0.18
SSB0605331MZF	330.0	1V/100KHz	1200	0.17
SSB0605391MZF	390.0	1V/100KHz	1700	0.16
SSB0605471MZF	470.0	1V/100KHz	1900	0.14
SSB0605561MZF	560.0	1V/100KHz	2150	0.13
SSB0605681MZF	680.0	1V/100KHz	3300	0.12
SSB0605821MZF	820.0	1V/100KHz	3650	0.11
SSB0605102MZF	1000.0	1V/100KHz	4150	0.10

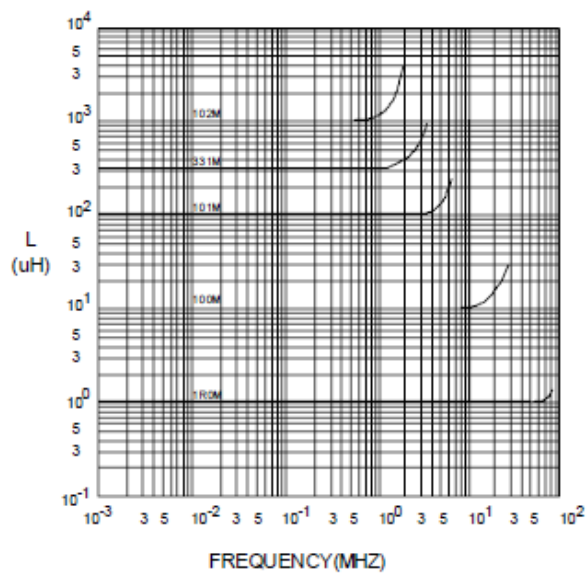
NOTE: Specifications subject to change without notice. Please check our website for latest information.

7. Characteristics Curves

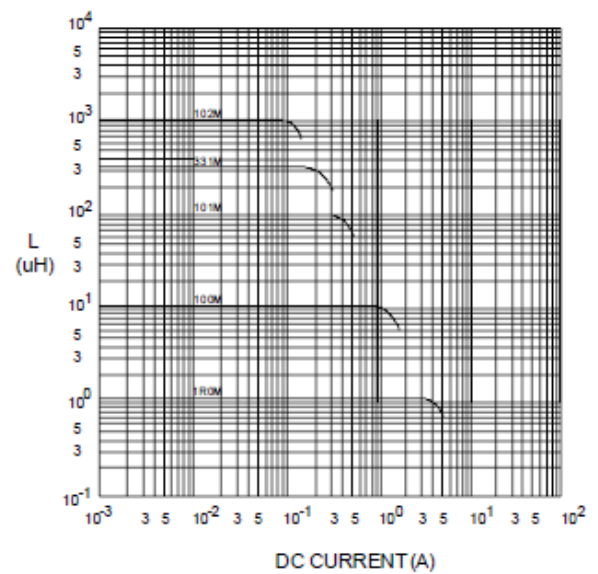
@ TEMP. RISE VS. DC SUPERPOSITION RESPONSE CURVE



@ 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

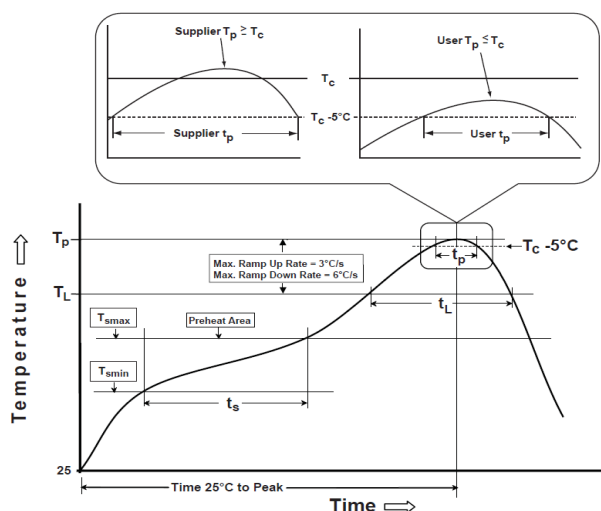
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

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).

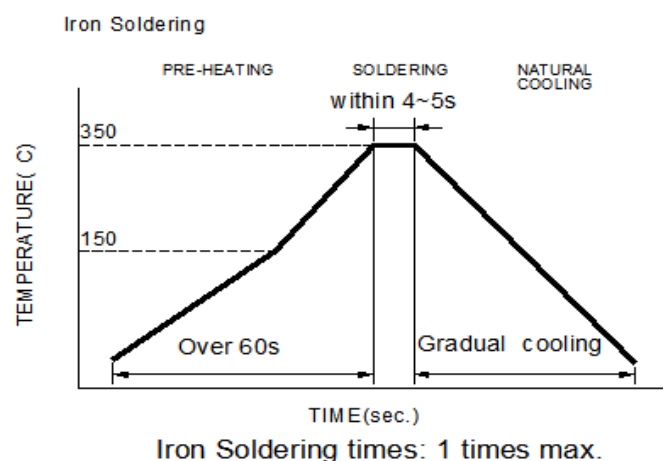
Note:

- 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_{\min})	150°C
-Temperature Max (T_{\max})	200°C
-Time (t_s) from (T_{\min} to T_{\max})	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)

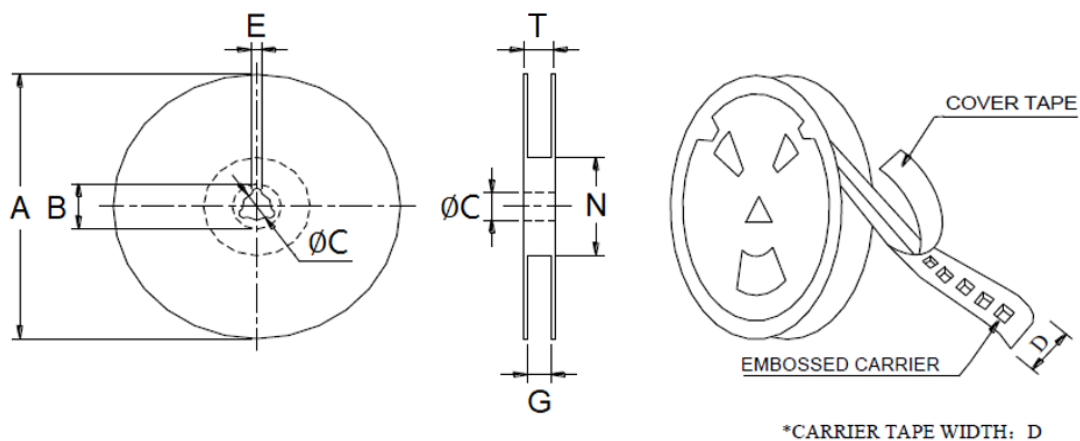
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

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

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

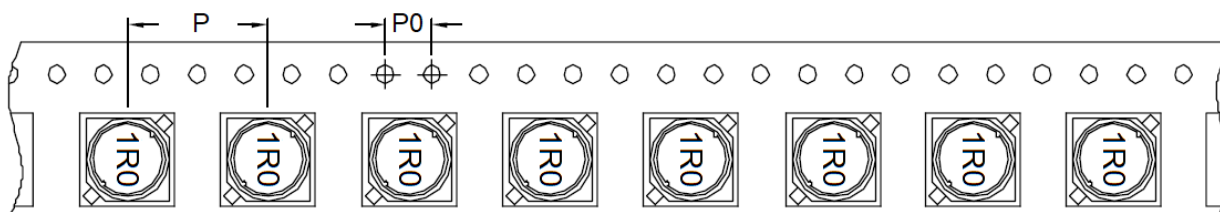
9. Packaging Information

9-1. Reel Dimension (Unit: mm)



Type	A	B	C	D	G	N	T
13"x16mm	330.0 Ref	21.0 Ref	13.0 Ref	16.0 Ref	18.0 Max	50.0 Min	22.4 Ref

9-2. Tape Dimension (Unit: mm)



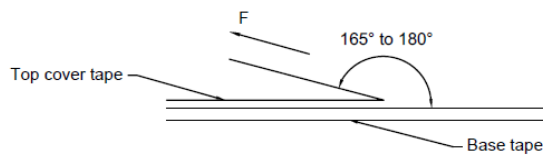
P	P0
12	4

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

9-3. Packaging Quantity (Unit: Pcs)

Inner: Reel			Outer: Carton		
Qty (pcs)	G.W (gw)	Style	Qty (pcs)	G.W(kg)	Size (cm)
1,000	1,100	13-16	6,000	10.1	40 x 40 x 24

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.