

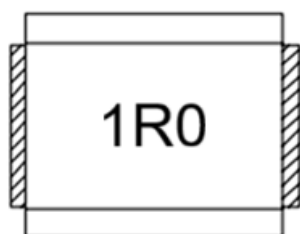
1. Part No. Expression

W I 5 6 5 0 5 0 - 1 R 0 M F

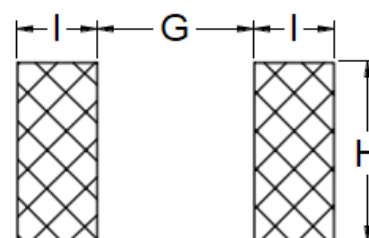
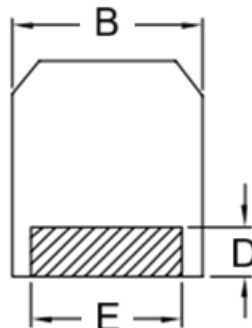
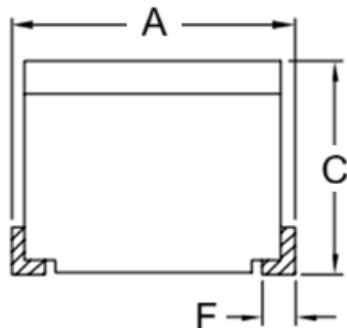
(a) (b) (c) (d) (e)

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

2. Configuration & Dimensions (Unit: mm)



Top View



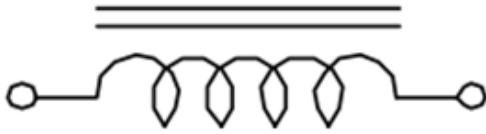
Recommended PCB Layout

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

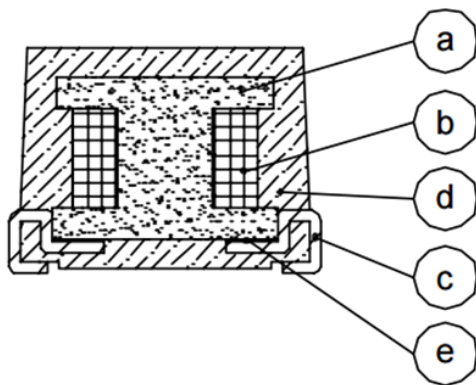
A	B	C	D	E
5.6±0.3	5.0±0.2	4.0±0.3	1.1 Ref	4.0±0.1
F	G	H	I	-
0.7±0.1	4.0 Ref	4.5 Ref	2.0 Ref	-

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

3. Schematic



4. Material List



- (a) Core
- (b) Wire
- (c) Terminal
- (d) Capsulate
- (e) Epoxy

5. General Specifications

- (a) Operating Temp.: - 40°C to + 105°C (including self-temperature rise)
- (b) All test data referenced to 25°C ambient.
- (c) Storage Condition (Component in its packaging)
 - i) Temperature: -10°C to 40°C
 - ii) Humidity: Less than 60% RH

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6. Electrical Characteristics

Part Number	Inductance (μH) @0A	Tolerance	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DCR (Ω) Max	IDC (mA) Max
WI565050-1R0□F	1.00	K,M	10	7.9600	95.0	0.030	1800
WI565050-1R2□F	1.20	K,M	10	7.9600	70.0	0.035	1700
WI565050-1R5□F	1.50	K,M	10	7.9600	55.0	0.040	1600
WI565050-1R8□F	1.80	K,M	10	7.9600	47.0	0.050	1400
WI565050-2R2□F	2.20	K,M	10	7.9600	42.0	0.060	1300
WI565050-2R7□F	2.70	K,M	10	7.9600	37.0	0.070	1200
WI565050-3R3□F	3.30	K,M	10	7.9600	34.0	0.080	1120
WI565050-3R9□F	3.90	K,M	10	7.9600	32.0	0.090	1050
WI565050-4R7□F	4.70	K,M	10	7.9600	29.0	0.110	950
WI565050-5R6□F	5.60	K,M	10	7.9600	26.0	0.130	880
WI565050-6R8□F	6.80	K,M	10	7.9600	24.0	0.150	810
WI565050-8R2□F	8.20	K,M	10	7.9600	22.0	0.180	750
WI565050-100□F	10.00	K,M	10	2.5200	19.0	0.210	690
WI565050-120□F	12.00	K,M	10	2.5200	17.0	0.250	630
WI565050-150□F	15.00	K,M	10	2.5200	16.0	0.300	580
WI565050-180□F	18.00	K,M	10	2.5200	14.0	0.360	530
WI565050-220□F	22.00	J,K	10	2.5200	13.0	0.430	480
WI565050-270□F	27.00	J,K	10	2.5200	11.5	0.520	440
WI565050-330□F	33.00	J,K	10	2.5200	10.5	0.620	400
WI565050-390□F	39.00	J,K	10	2.5200	9.5	0.720	370

Note:

Tolerance: J=±5%, K=±10%, M=±20%

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Part Number	Inductance (μH) @0A	Tolerance	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DCR (Ω) Max	IDC (mA) Max
WI565050-470□F	47.00	J,K	10	2.5200	8.5	0.850	340
WI565050-560□F	56.00	J,K	10	2.5200	7.8	1.000	310
WI565050-680□F	68.00	J,K	10	2.5200	7.0	1.200	290
WI565050-820□F	82.00	J,K	10	2.5200	6.4	1.400	270
WI565050-101□F	100.00	J,K	20	0.7960	6.0	1.600	250
WI565050-121□F	120.00	J,K	20	0.7960	5.4	1.900	230
WI565050-151□F	150.00	J,K	20	0.7960	4.8	2.200	210
WI565050-181□F	180.00	J,K	20	0.7960	4.4	2.800	190
WI565050-221□F	220.00	J,K	20	0.7960	3.9	3.400	170
WI565050-271□F	270.00	J,K	20	0.7960	3.6	4.200	155
WI565050-331□F	330.00	J,K	20	0.7960	3.2	4.900	140
WI565050-391□F	390.00	J,K	20	0.7960	2.9	5.800	130
WI565050-471□F	470.00	J,K	20	0.7960	2.6	7.000	120
WI565050-561□F	560.00	J,K	20	0.7960	2.4	8.500	110
WI565050-681□F	680.00	J,K	20	0.7960	2.2	10.000	100
WI565050-821□F	820.00	J,K	20	0.7960	2.0	13.000	90
WI565050-102□F	1000.00	J,K	20	0.2520	1.8	15.000	85
WI565050-122□F	1200.00	J,K	20	0.2520	1.5	17.000	75
WI565050-152□F	1500.00	J,K	20	0.2520	1.4	20.000	70
WI565050-182□F	1800.00	J,K	20	0.2520	1.3	30.000	60

Note:

Tolerance: J=±5%, K=±10%, M=±20%

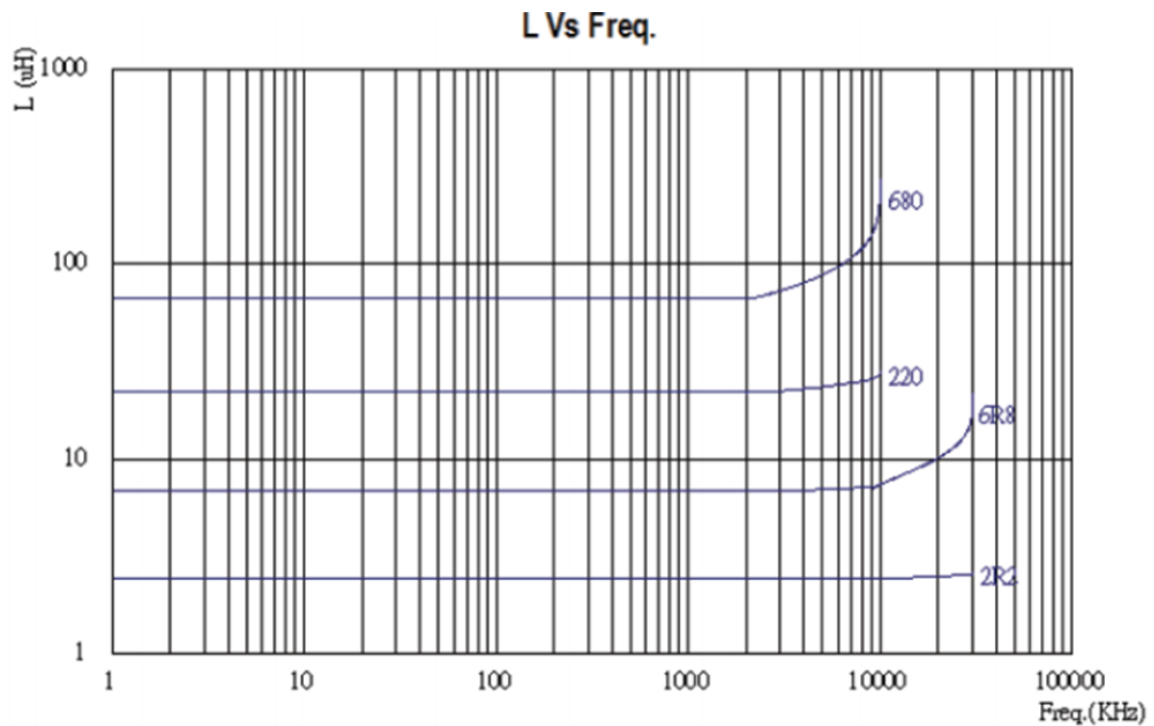
NOTE: Specifications subject to change without notice. Please check our website for latest information.

Part Number	Inductance (μH) @0A	Tolerance	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DCR (Ω) Max	IDC (mA) Max
WI565050-222□F	2200.00	J,K	20	0.2520	1.2	35.000	55
WI565050-272□F	2700.00	J,K	20	0.2520	1.1	55.000	45
WI565050-332□F	3300.00	J,K	20	0.2520	1.0	60.000	40
WI565050-392□F	3900.00	J,K	20	0.2520	1.0	70.000	38
WI565050-472□F	4700.00	J,K	20	0.2520	0.9	78.000	36
WI565050-562□F	5600.00	J,K	20	0.2520	0.8	85.000	33
WI565050-682□F	6800.00	J,K	20	0.2520	0.7	110.000	30
WI565050-822□F	8200.00	J,K	20	0.2520	0.6	125.000	28
WI565050-103□F	10000.00	J,K	15	0.0796	0.5	150.000	25

Note:

Tolerance: J=±5%, K=±10%, M=±20%

7. Characteristics Curve



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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

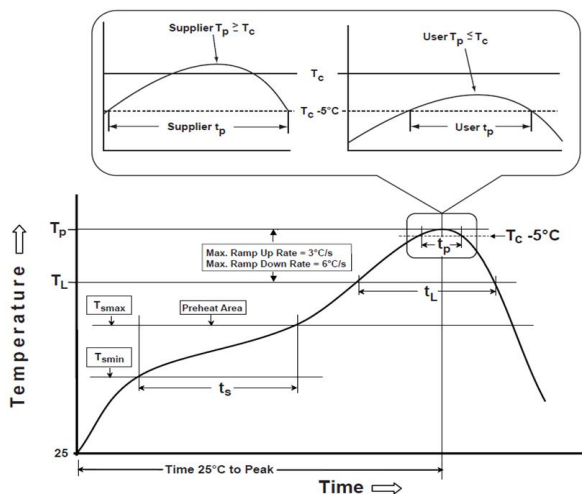
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

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).

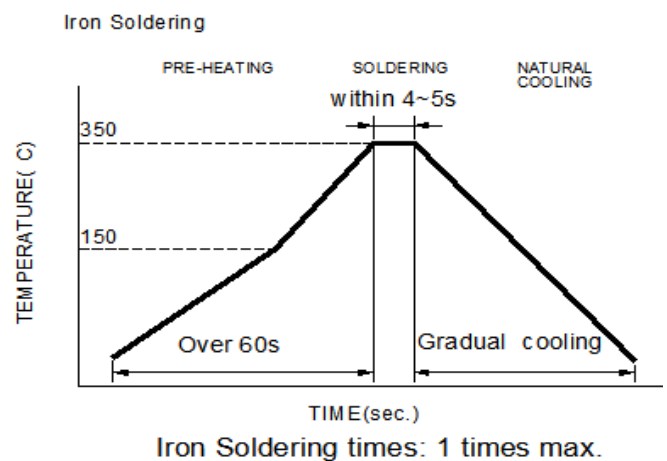
Note:

- 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

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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)

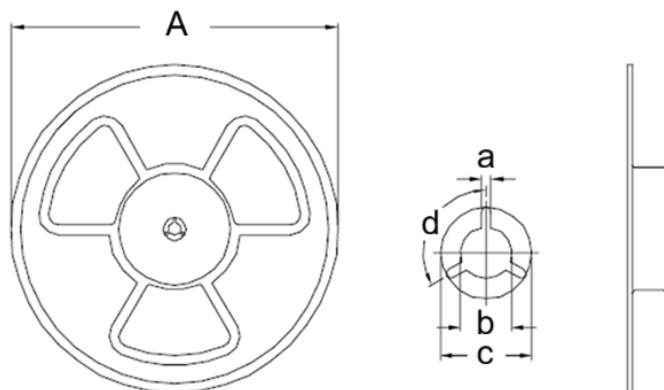
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

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

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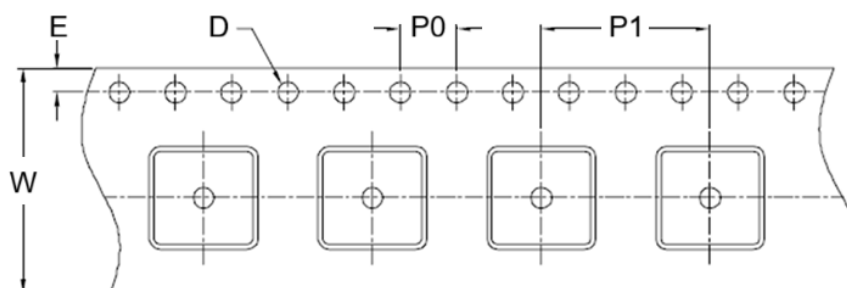
9. Packaging Information

9-1. Reel Dimension (Unit: mm)

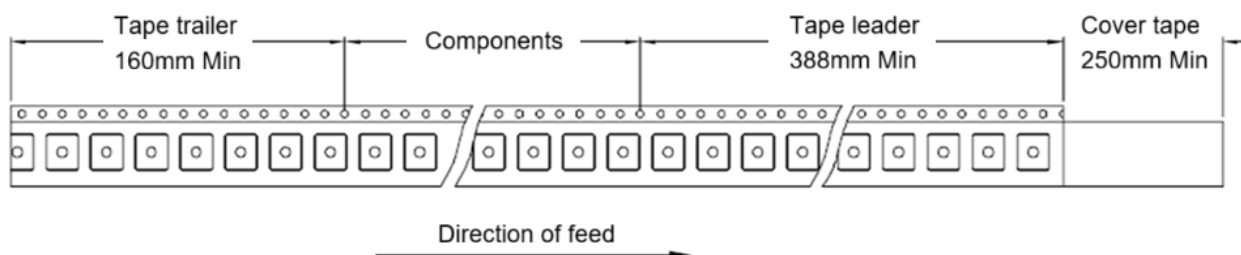


Type	A	a	b	c	d
13"x16mm	330.0 Ref	2.5 Ref	13.0 Ref	23.0 Ref	120°

9-2. Tape Dimension (Unit: mm)



W	E	D	P0	P1
16.00	1.75±0.10	1.50+0.10/-0.00	4.00±0.10	12.00

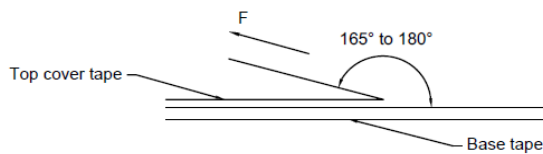


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9-3. Packaging Quantity (Unit: Pcs)

Inner: Reel		Outer: Carton		
Qty (Pcs)	G.W. (Kg)	Qty (Pcs)	G.W. (Kg)	Size (cm)
1,000	0.76	16,000	14	36 x 36 x 40

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.

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