

1. Part No. Expression

W I 3 2 2 5 2 2 - 0 1 0 M F
(a) (b) (c) (d) (e)

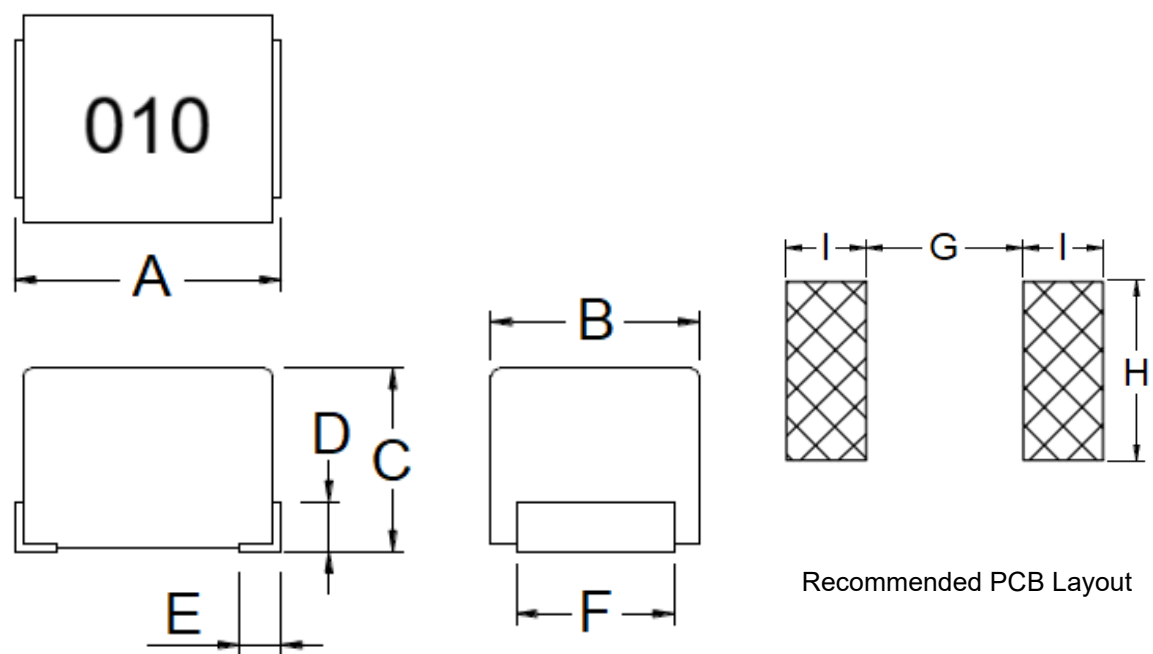
- (a) Series Code

(b) Dimension Code

(c) Inductance Code
- (d) Tolerance Code

(e) Packaging Code

2. Configuration & Dimensions (Unit: mm)

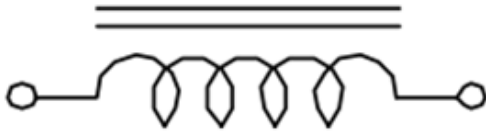


- Note:
- 1. The above PCB layout reference only.
 - 2. Marking: Inductance Code

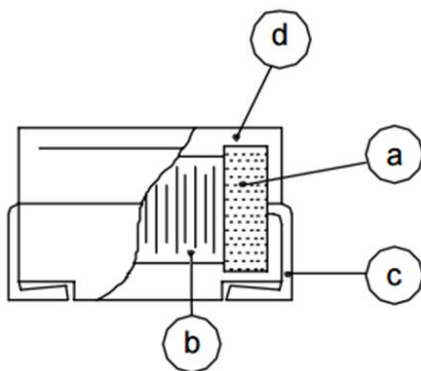
A	B	C	D	E	F	G	H	I
3.2±0.3	2.5±0.2	2.2±0.2	0.6 Ref	0.2 Min	1.9±0.1	2.0 Ref	2.0 Ref	1.2 Ref

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

5. General Specifications

- (a) Operating Temp.: - 40°C to + 125°C (including self-temperature rise)
- (b) Storage Temp.: -40°C to +125°C (on board)
- (c) All test data referenced to 25°C ambient.
- (d) Saturation Current (Isat) will cause inductance L0 to drop approximately 10%.
- (e) Storage Condition (Component in its packaging)
 - i) Temperature: Less than 40°C
 - ii) Humidity: Less than 60% RH

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6. Electrical Characteristics

Part Number	Inductance (μ H) @0A	Tolerance	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DCR (Ω) Max	IDC (mA) Max
WI322522-010□F	0.010	M	15	100.000	2500	0.13	450
WI322522-012□F	0.012	M	17	100.000	2300	0.14	450
WI322522-015□F	0.015	M	19	100.000	2100	0.16	450
WI322522-018□F	0.018	M	21	100.000	1900	0.18	450
WI322522-022□F	0.022	M	23	100.000	1700	0.20	450
WI322522-027□F	0.027	M	23	100.000	1500	0.22	450
WI322522-033□F	0.033	M	25	100.000	1400	0.24	450
WI322522-039□F	0.039	M	25	100.000	1300	0.27	450
WI322522-047□F	0.047	M	26	100.000	1200	0.30	450
WI322522-056□F	0.056	M	26	100.000	1100	0.33	450
WI322522-068□F	0.068	M	27	100.000	1000	0.36	450
WI322522-082□F	0.082	M	27	100.000	900	0.40	450
WI322522-R10□F	0.100	K	28	100.000	700	0.44	450
WI322522-R12□F	0.120	K,M	30	25.200	500	0.22	450
WI322522-R15□F	0.150	K,M	30	25.200	450	0.25	450
WI322522-R18□F	0.180	K,M	30	25.200	400	0.28	450
WI322522-R22□F	0.220	J,M	30	25.200	350	0.32	450
WI322522-R27□F	0.270	K,M	30	25.200	320	0.36	450
WI322522-R33□F	0.330	K,M	30	25.200	300	0.40	450
WI322522-R39□F	0.390	K,M	30	25.200	250	0.45	450

Note:

Tolerance: J=±5%, K=±10%, M=±20%

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Part Number	Inductance (μ H) @0A	Tolerance	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DCR (Ω) Max	IDC (mA) Max
WI322522-R47□F	0.470	K,M	30	25.200	220	0.50	450
WI322522-R56□F	0.560	K,M	30	25.200	180	0.55	450
WI322522-R68□F	0.680	K,M	30	25.200	160	0.60	450
WI322522-R82□F	0.820	K,M	30	25.200	140	0.65	450
WI322522-1R0□F	1.000	J,K	30	7.960	120	0.70	400
WI322522-1R2□F	1.200	J,K	30	7.960	100	0.75	390
WI322522-1R5□F	1.500	J,K	30	7.960	85	0.85	370
WI322522-1R8□F	1.800	J,K	30	7.960	80	0.90	350
WI322522-2R2□F	2.200	J,K	30	7.960	75	1.00	320
WI322522-2R7□F	2.700	J,K	30	7.960	70	1.10	290
WI322522-3R3□F	3.300	J,K	30	7.960	60	1.20	260
WI322522-3R9□F	3.900	J,K	30	7.960	55	1.30	250
WI322522-4R7□F	4.700	J,K	30	7.960	50	1.50	220
WI322522-5R6□F	5.600	J,K	30	7.960	45	1.60	200
WI322522-6R8□F	6.800	J,K	30	7.960	40	1.80	180
WI322522-8R2□F	8.200	J,K	30	7.960	35	2.00	170
WI322522-100□F	10.000	J,K	30	2.520	30	2.10	150
WI322522-120□F	12.000	J,K	30	2.520	20	2.50	140
WI322522-150□F	15.000	J,K	30	2.520	20	2.80	130
WI322522-180□F	18.000	J,K	30	2.520	20	3.30	120

Note:

Tolerance: J=±5%, K=±10%, M=±20%

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Part Number	Inductance (μ H) @0A	Tolerance	Q Min	Test Frequency (MHz)	SRF (MHz) Min	DCR (Ω) Max	IDC (mA) Max
WI322522-220□F	22.0	J,K	30	2.520	20	3.70	110
WI322522-270□F	27.0	J,K	30	2.520	18	5.00	80
WI322522-330□F	33.0	J,K	30	2.520	17	5.60	70
WI322522-390□F	39.0	J,K	30	2.520	16	6.40	65
WI322522-470□F	47.0	J,K	30	2.520	15	7.00	60
WI322522-560□F	56.0	J,K	30	2.520	13	8.00	55
WI322522-680□F	68.0	J,K	30	2.520	12	9.00	50
WI322522-820□F	82.0	J,K	30	2.520	11	10.00	45
WI322522-101□F	100	J,K	20	0.796	10	10.00	40
WI322522-121□F	120	J,K	20	0.796	9	11.00	70
WI322522-151□F	150	J,K	20	0.796	7	15.00	65
WI322522-181□F	180	J,K	20	0.796	7	17.00	60
WI322522-221□F	220	J,K	20	0.796	6	21.00	50
WI322522-271□F	270	J,K	20	0.796	5	28.00	45
WI322522-331□F	330	J,K	20	0.796	5	34.00	40

Note:

Tolerance: J=±5%, K=±10%, M=±20%

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7. 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.

7-1. IR Soldering Reflow

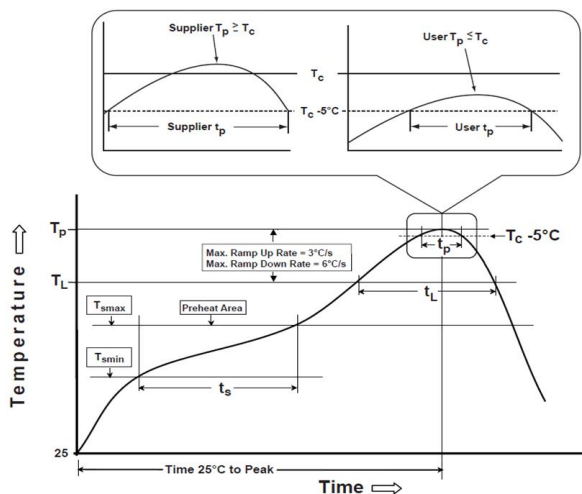
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

7-2. 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).

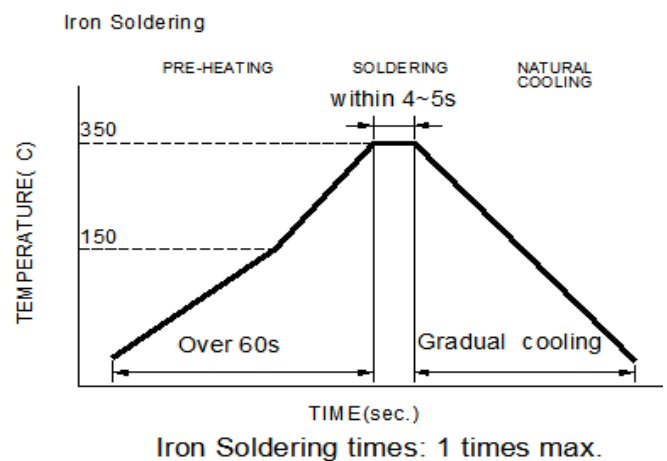
Note:

- 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_{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)

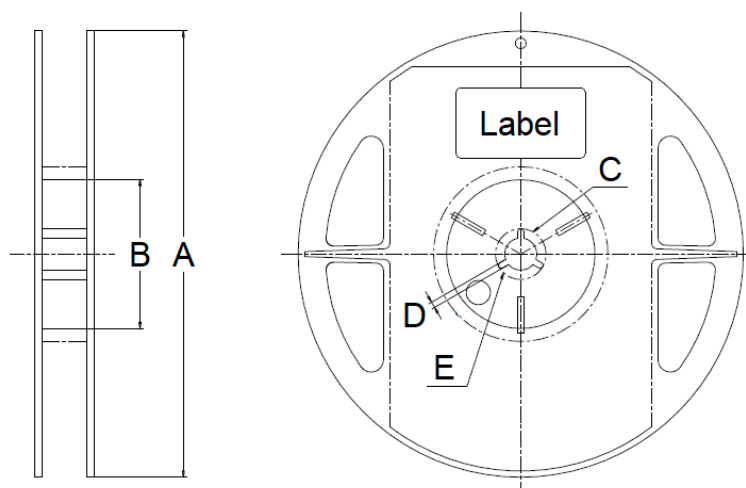
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

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

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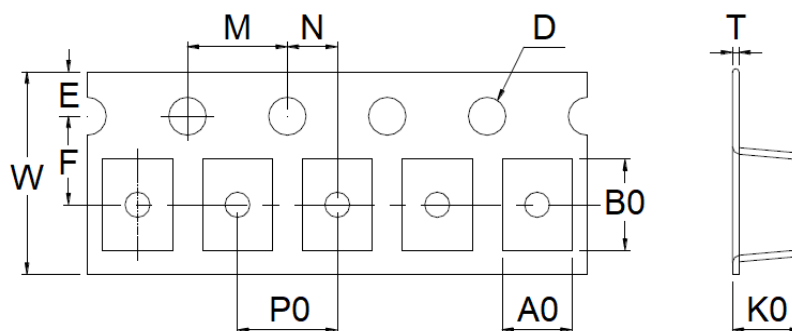
8. Packaging Information

8-1. Reel Dimension (Unit: mm)



Type	A	B	C	D	E
7"x8mm	180.0	60.0	13.0	21.0	2.4

8-2. Tape Dimension (Unit: mm)



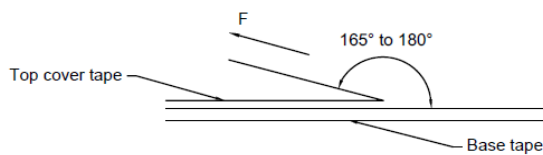
B0	A0	K0	W	P0	T
3.50	2.80	2.45	8.00	4.00	0.30
E	F	M	N	D	-
1.75	3.50	4.00	2.00	1.50	-

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8-3. Packaging Quantity (Unit: Pcs)

Chip/ Reel	2,000
Inner Box	10,000
Carton	50,000

8-4. 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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